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INDURENT PARK, NEWPORT – PHASE 6b Units 15-18

**ECOLOGICAL MANAGEMENT PLAN
REV1**

Prepared for: Indurent Management Limited

Date: June 2025 (REV 1 October 2025)

Report Reference: SK/JN00741/EMP Phase 6b
Units 15-18

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Appendix 2	JN00474 D03 Great Crested Newt Survey Report
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Appendix 4	JN00474 D05 Water Vole Survey Report
Appendix 5	JN00474 D06 Preliminary Ecological Appraisal Report
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DRAWINGS

JN00474 DW01	Water Vole Location and Receptor Site Plan
JN00474 DW02	Shrill Carder Bee Location Plan

1 INTRODUCTION

Background

- 1.1 In 2010, St. Modwen Developments Limited was granted outline planning consent (ref: 06/0471) for the redevelopment of land, which formed part of the former Llanwern Steelworks, near Newport, Wales. The overall Glan Llyn development will include a mixed-use urban extension and will comprise housing, community facilities, commercial and industrial facilities, transport links and an extensive network of open spaces, as well as the retention of ecological features of interest including two Sites of Importance for Nature Conservation (SINC).
- 1.2 The proposed development will include the creation of a network of open spaces, including terrestrial habitats and blue wetland habitats comprising waterbodies / watercourses (ponds and reens), associated with drainage features, as well as landscape corridors at this former heavy industrial site, and as such is considered to offer good potential for nature conservation and biodiversity enhancement.
- 1.3 SK Environmental Solutions Limited (SKE) was commissioned by Indurent Management Limited, to prepare an Ecological Management Plan (EMP) to accompany an application to discharge Condition 23 (EMP) of the Outline Planning Permission 06/0471 for Phase 6b of the Indurent Park, Newport site, concerning units 15-18.
- 1.4 The EMP has been produced in accordance with BS 42020:2013 Biodiversity – Code of Practice for Planning and Development Section 11.1.

Definition of Terms

- 1.5 The term 'Phase 6b' refers to the upcoming phase of the Indurent Park, Newport development and is denoted by the habitat plan on Figure 1 (below).

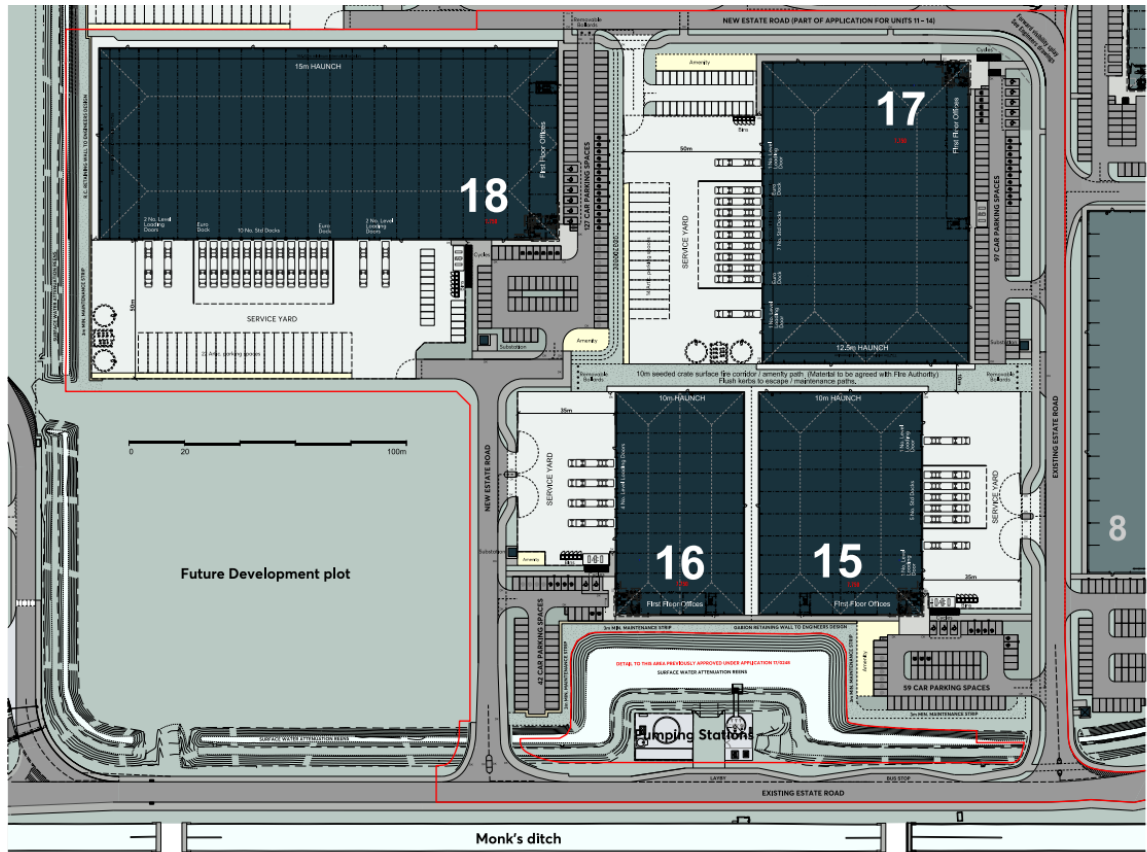


Figure 1 - Phase 6b site boundary

- 1.6 The term '*wider commercial park*' refers to all other land within the Indurent Park, Newport site (i.e., commercial area).
- 1.7 The term '*adjacent Glan Llyn development*' refers to all other land subject to the 2010 outline planning permission, outside of the wider commercial park.
- 1.8 Numerous iterations of EMPs for previous phases of the Indurent Park, Newport development have been produced previously by Atkins and these documents have been reviewed prior to the production of this new EMP.
- 1.9 An updated ecological appraisal of the wider commercial park was undertaken between September 2020 and June 2021 by SKE in order to gain a clear understanding of the potential ecological constraints present and the need for any further ecological survey work to inform this EMP (see Appendix 5 JN00474 D07 Preliminary Ecological Appraisal).
- 1.10 As a result of the updated ecological appraisal the following survey work and Ecological Clerk of Works (ECoW) presence was recommended prior to and during ground preparation and site clearance works across the undeveloped, permitted red line boundary to ensure no ecological receptors were deleteriously impacted by the proposed works:
 - Reptile Surveys (carried out in 2021);
 - Water vole surveys (carried out in 2021);

- Great crested newt surveys (carried out in 2021); and
- Continued ECoW presence to monitor nesting birds, particularly ground nesting bird species such as oystercatcher *Haematopus ostralegus*, lapwing *Vanellus vanellus*, ringed plover *Charadrius hiaticula* and little ringed plover *Charadrius dubius* (maintained between March and August 2021), these being species of disturbed open ground, which took advantage of the site being cleared of scrub. These opportunistic species benefitted from a temporary mitigation area that was set up in the northern part of the Indurent Park, Newport development area.

1.11 The accompanying reports for the above survey work and ECoW presence can be seen in Appendices 1, 2, 3 & 4)

Aims of the EMP

1.12 The fundamental aims of the EMP are as follows:

- Provide a baseline assessment of any ecological survey work and / or ECoW advice undertaken across Phase 6b at the location of proposed units 15-18;
- Identify any features considered to be of importance for nature conservation on Phase 6b and means to protect and enhance these;
- Identify ecological trends and constraints that may influence management;
- Identify the strategies that will ensure the protection of any features of ecological interest during ground preparation / construction works;
- Define what mitigation measures and biodiversity enhancement measures will be incorporated into the Phase 6b site design;
- Identify the responsible bodies for implementing and funding the management and monitoring; and
- Provide details of a five-year management plan for monitoring enhanced / created habitats and outline mechanisms for feedback to ensure management of habitats or protected / notable species are protected long term.

2 SCOPE OF THE EMP

Management Period

- 2.1 In accordance with Condition 03 the management period of this plan is 10 years.

Management Responsibilities

- 2.2 The implementation of this management plan will be the responsibility of the landowner (Indurent Management Limited). Any transference of responsibility of this plan should be undertaken with the appropriate appointment of a competent organisation capable of delivering the detailed measures within this document.

Ecological Trends

- 2.3 No significant ecological trends have been identified that are likely to influence or constrain the management prescriptions set out in this document.
- 2.4 Climate change could influence future ecological trends if changes in temperature were to put stress on local ecosystems. However, changes resulting from climate change will be gradual and over a long period of time. Therefore, within the lifeline of this management plan, changes would be predicted to be negligible.

Document Review

- 2.5 This document should be reviewed every five years to determine whether the management prescriptions are still relevant, appropriate and effective. If during the review it is found that the conservation aims of the EMP are not being met, then remedial action will be implemented to ensure that the development delivers the biodiversity and landscape objectives of the approved scheme. The review will include information gathered during habitat monitoring surveys which will aim to ensure newly created habitats are successfully established and that management measures ensure the habitats are maintained in a favourable condition in the long term.

Biodiversity

- 2.6 With regards to biodiversity the scope of the management proposals covers habitats that are to be created as part of the proposal. Previous ecological survey work, undertaken by SK Environmental Solutions, together with the proposed habitat creation measures have been used to identify the following biodiversity receptors discussed below within Section 3.

Landscape

- 2.7 With regards to landscape, the scope of the management proposals covers the retained habitats and the habitats that are created as part of the proposal. The details of the proposed planting are set out in Appendix 6 Detailed Soft Landscaping Plans – JSL45124-RPS-XX-EX-DR-L-9002_P02, 9003_P02, 9004_P02 and 9005_P02) and Appendix 7 (Landscape Management Plan Ref: JSL5124-RPS-XX-EX-RP-L-9006_P02).

3 BASELINE ASSESSMENT

Updated Ecological Appraisal

3.1 During the recent updated site visit, the following habitats were identified as being present on Phase 6b:

- u1a – Open mosaic on previously developed land;
- u1b – Developed land, sealed surface; and
- u1c – Artificial unvegetated.

3.2 The wider undeveloped areas of the commercial park, including Phase 6b, are considered to have the potential to support the following protected / notable species:

- Ground nesting birds;
- Shrill carder bee *Bombus sylvarum*; and
- Brown-banded carder bee *Bombus humilis*.

Previous Survey Work

Great Crested Newt Surveys

3.3 A presence/absence survey, comprising four separate survey visits, for great crested newt was undertaken across the commercial park as well as the adjacent Glan Llyn development, on the following dates:

- 23rd March 2021;
- 15th April 2021;
- 19th April 2021; and
- 17th May 2021.

3.4 The surveys were undertaken by two experienced surveyors and two assistants using the appropriate methods for the site including torching, bottle trapping, sweep netting and egg searching.

3.5 Surveys were led by licensed ecologist Matthew Pickard, who has over 20 years' experience surveying for great crested newts. Matthew was supported by Barry Stewart, an ecologist with over 30 years' experience.

- 3.6 No great crested newts were recorded during any of the four presence / absence surveys within Phase 6b, the wider commercial park or across the adjacent Glan Llyn development (see Appendix 2).
- 3.7 As such, great crested newts are not anticipated to pose a constraint to development at either the Indurent Park, Newport site or the adjacent Glan Llyn development area.

Reptile Surveys

- 3.8 Presence/absence surveys for reptiles were undertaken across Phase 6b site, the wider commercial park and the adjacent Glan Llyn development during April, May, June and September 2021.
- 3.9 A total of nine surveys were undertaken during suitable weather conditions. Supplementary survey effort was also regularly undertaken by the ECoWs who were on site at least twice a week between March and August (inclusively) and regularly checked the reptile mats during the ECoW work.
- 3.10 No evidence of any reptile species was recorded during the survey work (see Appendix 1).
- 3.11 As such, reptiles are not anticipated to pose a constraint to the development of Phase 6, the wider commercial park or the adjacent Glan Llyn development.

Ground Nesting Birds

- 3.12 SKE provided an ECoW presence across Phase 6b, the wider commercial park and the adjacent Glan Llyn development during the breeding bird season. Presence comprised two experienced ECoW / ornithologists for between 2-3 days a week.
- 3.13 Presence was maintained in order to inform Indurent Management Limited (and their contractors) of nesting birds, particularly ground nesting species such as oystercatcher, lapwing, ringed plover and little ringed plover, as well passerine species such as reed warbler *Acrocephalus scirpaceus*.
- 3.14 Weekly meetings were undertaken between Indurent Management Limited (previously St Modwen Logistics), Cumming Group, Rogers Leask, ACS Construction, McCarthy's and SKE. These meetings primarily focused upon the potential ecological constraints across the site and the mitigation measures to be implemented.
- 3.15 Regular constraints plans were produced by SKE to identify any areas where nesting birds were considered to be a constraint and advice was provided to Indurent Management Limited and the wider team as to how these potential constraints were to be mitigated for.
- 3.16 Where ground nesting bird species were encountered a novel approach was undertaken, carried out by experienced ornithologists Barry Stewart and Paul Roberts. This comprised the use of small gabion cages / baskets, being placed over a nest once eggs were present. The bars to the cage

were widened slightly, enough to allow the species in question to easily enter and leave the cage, but too small to allow predators such as corvid species (i.e. crows, jackdaws, magpies etc), gulls or foxes to predate the eggs.

- 3.17 Little ringed plover, being a Schedule 1 species, were also caged, under a licence issued by NRW to Barry Stewart.
- 3.18 This technique worked successfully on the vast majority of occasions (see below). Monitoring of the nests once caged, continued two – three times a week, until it could be demonstrated that the young had hatched successfully and were mobile enough for the cage to be removed.

Water Vole Surveys

- 3.19 Surveys for water vole were undertaken within the reen system adjacent to the northern boundary of Phase 6b, during surveys of the wider commercial park and across the adjacent Glan Llyn development site, within any habitat considered suitable to support them (see Appendix 4) during 2022.
- 3.20 No water voles were identified within the reen system to the northern and western boundary of Phase 6b (see Figure 1- above).
- 3.21 **N.B.** although the reen system to the northern boundary of Phase 6b is not to be planted as part of this application, it should be noted that all reen systems within the commercial park will be planted with the specified food plants for water voles as per the detailed planting specifications agreed within the water vole licence granted by NRW.
- 3.22 Water voles were identified in two areas across the wider site during survey work undertaken in 2021 / 2022 (see Drawing JN00474 DW06 Water Vole Survey Location Plan):
- Firstly in the northeastern corner of the Glan Llyn residential development; and
 - the second in the southwestern corner of the Indurent Park, Newport.
- 3.23 In March 2023 an NRW derogation licence was granted to allow the capture and subsequent translocation of the species from the donor sites (as described above) into newly prepared receptor areas, primarily within the northern part of the Glan Llyn residential development.
- 3.24 As discussed above, the conditions of the NRW water vole licence stipulate that all subsequent reen planting on both the Glan Llyn residential development and the Indurent Management Limited, Newport commercial development will follow the planting specification devised for water voles which comprises primarily of food plants such as reed sweet grass *Glyceria maxima*, greater pond-sedge *Carex riparia* etc.
- 3.25 In 2024, it became clear that water voles had once again begun to establish in the southernmost of the original donor sites. As such, a new receptor site was prepared, along the reen at the northern

boundary of phase 6. A derogation license was applied for and granted in March 2025, however the relocation effort from this area proved unsuccessful as no individuals were caught, likely due to the animals having died over winter, similar as to what occurred during the 2023 license.

Carder Bees

3.26 No formal survey methodology was followed to ascertain the presence / likely absence of the shrill carder bee and the brown banded carder bee, both of which are Section 7 Welsh Priority Species and listed as nationally rare and nationally scarce respectively. However, during the ECoW works and other survey work on Phase 6b, suitable habitat for these species was searched by experienced ecological surveyors Barry Stewart and Paul Roberts. Records of these species were observed across several visits (see Table 1 below).

Table 1. Carder Bee Observations							
Taxon	Vernacular	Site	No.	Date	Recorder	Method	Comment
<i>Bombus humilis</i>	Brown-banded Carder Bee	Llanwern (ST353865)	1	06-May-21	Barry Stewart (BS)	Field Observation	
<i>Bombus sylvarum</i>	Shrill Carder Bee	Llanwern (ST353865)	1	06-May-21	Barry Stewart (BS)	Field Observation	
<i>Bombus sylvarum</i>	Shrill Carder Bee	Llanwern (ST368870)	2	12-May-21	N.P. Roberts (NPR)	Field Observation	
<i>Bombus humilis</i>	Brown-banded Carder Bee	Llanwern (ST368870)	3	17-May-21	N.P. Roberts (NPR)	Field Observation	
<i>Bombus sylvarum</i>	Shrill Carder Bee	Llanwern (ST368870)	2	17-May-21	N.P. Roberts (NPR)	Field Observation	
<i>Bombus sylvarum</i>	Shrill Carder Bee	Llanwern (ST369870)	2	26-May-21	N.P. Roberts (NPR)	Field Observation	
<i>Bombus sylvarum</i>	Shrill Carder Bee	Llanwern (ST368869)	1	26-May-21	N.P. Roberts (NPR)	Field Observation	
<i>Bombus humilis</i>	Brown-banded Carder Bee	Llanwern (ST351866)	1	27-May-21	Barry Stewart (BS)	Field Observation	Avenue verges (1 on <i>Vicia sativa</i> ssp. <i>segetalis</i>)
<i>Bombus humilis</i>	Brown-banded Carder Bee	Llanwern (ST354871)	1	07-Jun-21	Barry Stewart (BS)	Field Observation	
<i>Bombus sylvarum</i>	Shrill Carder Bee	Llanwern (ST368868)	1	29-Jul-21	Barry Stewart (BS)	Field Observation	
<i>Bombus sylvarum</i>	Shrill Carder Bee	Llanwern (ST368866)	1	29-Jul-21	Barry Stewart (BS)	Field Observation	
<i>Bombus sylvarum</i>	Shrill Carder Bee	Llanwern (ST354869)	1	Aug-21	Anon.	Field Observation	Reported by Resident
<i>Bombus humilis</i>	Brown-banded Carder Bee	Llanwern (ST348865)	1	16-Sep-21	Barry Stewart (BS)	Field Observation	

3.27 Shrill carder bee was not recorded within Phase 6, but it was recorded in the area adjacent to the

west of Phase 6b, along with the brown banded carder bee Both species were recorded across the adjacent Glan Llyn development site, but only in small numbers.

4 HABITAT MANAGEMENT AND MONITORING PRESCRIPTIONS

- 4.1 The proposed scheme includes a detailed landscape masterplan which has been produced sympathetically to compliment the requirements of the ecological receptors present on the wider site. The management and monitoring prescriptions for the landscape planting are set out below. Details of the five-year aftercare plan can be found in Appendix 7.

Hedgerows

Protection

- 4.2 There are no existing hedgerows within the Phase 6b site. Therefore, no protective measures are proposed.

Enhancement

- 4.3 It is proposed that new native hedgerows will be planted across Phase 6b. The new hedgerows will be planted at 250mm centers in a double staggered row, with rows 500mm apart at height of approximately 600-800mm. Species in the new native hedgerows will comprise:

Table 1 – Proposed Native Hedgerow		
No	Scientific Name	Common Name
632	<i>Cornus sanguinea</i>	Common dogwood
1050	<i>Crataegus monogyna</i>	Hawthorn
632	<i>Corylus avellana</i>	Hazel
632	<i>Ilex aquifolium</i>	Holly
632	<i>Rosa arvensis</i>	Field rose
632	<i>Viburnum opulus</i>	Guelder ros

Management and Monitoring of New Native Hedgerows

- 4.4 The management of newly planted native hedgerows will be as follows:
- In the first five years, new native hedgerows to be trimmed / faced up so as to promote healthy growth and effective screening. Allow for 1 No. cut total. New hedge planting to be maintained at a height of 1.2m. Check that there are no nesting birds present prior to any hedgerow works. Invasive species (e.g. bramble) should be controlled to allow new planting to establish, taking care not to damage new hedgerow plants
- 4.5 See Appendix 7 for further details.

Trees

Protection

- 4.6 There are currently no trees present within Phase 6b, as no protection measures are recommended.

Enhancement

- 4.7 It is proposed that an extra 100 trees are planted as part of the proposal. Species planted will include a mix of native and cultivar species and are listed below in Table 2.

Table 2 – Proposed Tree Planting		
No.	Scientific Name	Common Name
4	<i>Acer campestre</i>	Field maple
19	<i>Acer campestre</i> 'Streetwise'	Field maple 'Streetwise'
13	<i>Acer platanoides</i> 'Crimson Sentry'	Norway maple 'Crimson Sentry'
5	<i>Carpinus betulus</i> 'Fastigiata'	Hornbeam 'Fastigiata'
4	<i>Alnus glutinosa</i>	Black alder
3	<i>Betula pendula</i>	Silver birch
11	<i>Prunus avium</i>	Wild cherry
3	<i>Prunus avium</i> 'Plena'	Double flowered wild cherry
12	<i>Pyrus calleryana</i> 'Chanticleer'	Callery pear
26	<i>Tilia x europaea</i> 'Pallida'	Common lime

Management and Monitoring of New Trees

- 4.8 The management of newly planted trees will be as follows:
- Check all trees with regard to public safety. Report any trees that appear to pose a risk to public safety and carry out remedial work as necessary in accordance with good arboricultural practice; and
 - Prune trees / shrubs only to remove vandalised, dead / dangerous branches or to promote healthy growth / natural shape. Remove all cuttings from site. Confirm which trees are covered by Tree Preservation Orders, and seek appropriate permission, prior to carrying out any arboricultural work. All trees to be checked for safety by a suitably trained arboricultural specialist. Pruning shall be carried out by skilled labour only. Do not apply growth retardants, fungicide or sealant unless instructed otherwise.

- 4.9 See Appendix 7 for further details.

Shrub

Protection

- 4.10 There is no existing shrub habitat located within Phase 6b. Therefore, no protective measures are proposed.

Enhancement

- 4.11 It is proposed that new shrub planting will be implemented as part of the proposed scheme. Shrubs will provide shelter and foraging opportunities for birds and invertebrates. Proposed shrub species comprises those listed in Table 3, below.

Table 3 – Proposed Shrub Planting		
No.	Scientific Name	Common Name
1294	<i>Aucuba japonica</i> 'Rozannie'	Japanese laurel 'Rozannie'
1142	<i>Aucuba japonica</i> 'Salicifolia'	Japanese long-leaved laurel
275	<i>Brachyglottis</i> 'Sunshine'	Brachyglottis 'Sunshine'
632	<i>Cornus sanguinea</i>	Dogwood
632	<i>Coryllus avellanaria</i>	Hazel
1508	<i>Euonymus fortune</i> 'Emerald Gaiety'	Evergreen bittersweet
74	<i>Hebe</i> 'Amy'	Hebe 'Amy'
183	<i>Hebe rakaiensis</i>	Rakai hebe
632	<i>Ilex aquifolium</i>	Holly
975	<i>Lonicera nitida</i> 'Maigreen'	Honeysuckle Maygreen
235	<i>Lavandula angustifolia</i>	Lavender
82	<i>Photinia x fraserii</i> 'Red Robin'	Christmas berry 'Red robin'
1729	<i>Prunus laurocerasus</i> 'Otto Luyken'	Cherry Laurel Otto Luyken'
3	<i>Hedera helix</i>	Common ivy
715	<i>Skimmia confusa</i> 'Kew Green'	Skimmia
46	<i>Skimmia japonica</i> 'Rubella'	Skimmia
87	<i>Spiraea japonica</i> 'Fire Light'	Japanese spiraea
159	<i>Spiraea japonica</i> 'Candlelight'	Japanese spiraea
632	<i>Rosa arvensis</i>	Field rose
266	<i>Viburnum davidii</i>	David viburnum
424	<i>Viburnum tinus</i> 'Eve Price'	Laurustinus 'Eve Price'
632	<i>Viburnum opulus</i>	Guelder rose

Management and Monitoring of Shrub

4.12 The management and monitoring of the newly created shrub areas will be undertaken as follows:

- Prune trees / shrubs only to remove vandalised, dead / dangerous branches or to promote healthy growth / natural shape. Remove all cuttings from site.

4.13 See Appendix 7 for further details.

5 SPECIES MANAGEMENT AND MONITORING

5.1 Following on from the survey work undertaken in 2021 / 2022 it was confirmed that both the wider commercial park and the adjacent Glan Llyn development support the following protected / notable species:

- Water vole;
- Breeding birds; and
- Shrill carder bee and brown-banded carder bee.

5.2 The adjacent Glan Llyn development area is also known to support:

- Cetti's warbler *Cettia cetti*.

Water Vole

5.3 The retained reën system adjacent to the northern and western boundary of Phase 6b (as well as wider reens and waterbodies which are either retained or created across the wider commercial park and the adjacent Glan Llyn development area), provide a focus for the development of habitat suitable for water vole. As discussed above, a condition of the NRW derogation licence granted to capture and translocate the species dictated that all reens and waterbodies in future phases are to be planted with 'water vole friendly' food plants. Approximately half of the northern reën section has already been planted with these food plants, the remainder is scheduled to be carried out prior to March 2026. Therefore, although the reën will not be planted for water voles as part of Phase 6b, the condition within the licence necessitates that it will need to be done as part of the overall Indurent Park, Newport development.

5.4 As such, the planting specifications for the reens will follow those of the most recent schemes across the wider site to increase the potential carrying capacity for the species and thus ensure that the species is able to increase its range from the receptor site locations within the Glan Llyn residential development.

5.5 This will be undertaken by incorporating the relevant food plant species into the landscape design proposals, which will promote site wide, connective habitat suitable for supporting an expanding population of breeding water vole – see Figure 3 below.

5.6 Food plant species to be incorporated to the landscape design of the reens within Phase 6b, the wider commercial and the adjacent Glan Llyn development will comprise:

- Reed Sweet-grass *Glyceria maxima*;
- Lesser Pond-sedge *Carex acutiformis*;

- Reed Canary-grass *Phalaris arundinacea*;
- Yellow Flag *Iris pseudacorus*; and
- Purple Loosestrife *Lythrum salicaria*.

5.7 It is the aim of Indurent Management Limited to promote this species across the Indurent Park, Newport commercial site. As well as for Revantage on the adjacent Glan Llyn development area, supporting the recovery of the species across the Gwent Levels following the species' reintroduction. Once the population has become established across the wider site, it is anticipated the species will spread as each phase creates newly enriched reed and waterbody habitats.

5.8 No evidence of American mink *Neovison vison*, was recorded across the site during the of 2021 and 2022, however this species is one of the main threats to the survival of the water voles across the Gwent levels and control measures are known to be in place. If any evidence of mink is identified during the ongoing water vole monitoring surveys, then advice will be sought from Gwent Wildlife Trust (who are leading the reintroduction and management program across the Gwent levels) as to what methods should be employed across the entire development area to ensure American mink do not gain a foothold.

Breeding Birds

5.9 None of the ground nesting bird species recorded as breeding across the wider site, such as oystercatcher (one pair) lapwing (three pairs), ringed (four pairs) and little ringed plover (six pairs) were recorded utilising Phase 6b for breeding during the 2021 / 2022 nesting season.

5.10 Species such as oystercatcher (one pair) lapwing (three pairs), ringed (four pairs) and little ringed plover (six pairs) as well as reed warbler and reed bunting, which both bred within the wider commercial park in 2021 / 2022 in small numbers, have the potential to utilise the current habitats in Phase 6b for breeding.

5.11 As such, prior to works commencing within Phase 6, a check for nesting birds will be undertaken to ensure that no deleterious impacts occurs as a result of the works.

5.12 Raptor species such as kestrel *Falco tinnunculus* and marsh harrier *Circus aeruginosus* were observed during previous survey work. Opportunities to provide nesting habitat for marsh harriers are limited, however the erection of kestrel nest boxes on the sides of the new buildings within Phase 6b should be undertaken.

5.13 Future habitat management of any suitable breeding habitat will be undertaken outside of the breeding bird season where possible. If this is not practical, then an experienced ECoW will be present on site to guide contracts staff with regard to active nests and any necessary 'stand-off / no go' areas.

Carder Bees

- 5.14 Both the scarce, brown-banded carder bee and the rarer shrill carder bee have been identified by SKE within the wider commercial site during previous surveys. These species of bee, particularly the shrill carder bee, are found in a very limited number of places in Wales.
- 5.15 As such, there is an ideal opportunity to promote the wider Indurent Park, Newport commercial site, including within Phase 6b through the planting of associated food plants along reens, during the completion of the ongoing development phases.
- 5.16 Favourite forage food plants, which will be incorporated into the landscape design for reens and waterbodies include:
- white dead-nettle *Lamium album*;
 - hedge woundwort *Stachys sylvatica*; and
 - black horehound *Ballota nigra*;
 - narrow-leaved everlasting-pea *Lathyrus sylvestris*;
 - red clover *Trifolium pratense*;
 - common birds-foot trefoil *Lotus corniculatus*; and
 - meadow vetchling *Lathyrus pratensis*.
- 5.17 Important late flowering species include:
- red bartsia *Odontites vernus*;
 - common knapweed *Centaurea nigra*,
 - burdock *Arctium sp*,
 - common thistle *Cirsium vulgare*; and
 - devils-bit scabious *Succisa pratensis*.
- 5.18 Management regimes for shrill and brown banded carder bee habitat management include:
- Avoid cutting important 'bee areas' between the period mid-April to mid-September. This not only ensures that plant communities are allowed to flower for the full flight period of the bees, but also so that they are left to set seed for the following season;
 - Late-flowering stands of key species such as knapweed, burdock, clovers or thistle still

flowering should be protected to provide food for queen bees;

- Plan grassland cutting regimes to ensure flowers are available throughout the flight period of these species. If cutting between April and September is necessary, cut areas on a small scale and in sections or on rotation to ensure some flowers remain, and ideally leave some areas uncut until September;
- Nectar flower mixes should contain at least four pollen and nectar rich plants ideally including red clover. Other useful species are bird's-foot-trefoils, red bartsia, Lucerne and knapweeds. It is important that these mixes are combined with other uncut sections of suitable habitat (primarily reed banks) to provide spring foraging for queens. It is considered appropriate to liaise with Gwent Wildlife Trust to purchase locally sourced seed which contains only targeted species which will aim to provide optimum food sources for the species;
- Sow nectar mixes in strips or blocks of 0.5ha, with at least one block every 20ha. Encourage late flowering by cutting half of the sown area at the end of May then the whole area to 10cm between mid-September and the end of October. Ensure cuttings are removed to assist in the depletion of nutrients from the land which will encourage a diversity of flora on site;
- A combination of a trial of seeding on some areas of the site and allowing other areas to naturally recover their floristic diversity by appropriate management;
- Encourage brambles adjacent to flower-rich habitat to provide late season pollen and nectar provisions; and
- Allow grassy areas at the edges of scrubby patches to develop to provide potential nesting sites. Nesting areas should be created within a kilometre of flower-rich sites, ideally on south facing slopes with a sunny aspect and with a mix of habitats present. Cut these areas no more than bi-annually to allow a thatch, or litter and moss layers to develop.

5.19 Condition 03 states that 'provisions for a 10-year period' for management should be considered and that 'clear mechanisms for feedback' should be incorporated into the EMP to assist with the evaluation of the management plan and provide means to rectify anything that does not seem to be successful.

Water Vole

- 5.20 In spring 2023 a conservation licence was granted by NRW to translocate water voles from the northeastern corner of the Glan Llyn residential development and the southwestern corner of the Indurent Park, Newport (see Drawing JN00474 DW06 Water Vole Survey Location Plan).
- 5.21 The translocation has been completed within the wider Glan Llyn site and the commercial park, however water voles subsequently re-established themselves within the commercial park and as such a further NRW licence was applied for and granted, in order to translocate the remaining voles to a suitable receptor site in April 2025. Unfortunately, the water voles present had perished over the winter, so no water voles were translocated.
- 5.22 The retained reen system on the northern boundary of Phase 6b is not associated with this particular phase, however it has been planted up with suitable plant species (see above), as part of upcoming works. This will increase and enhance the provision of suitable habitat for water vole across the wider commercial park. This will tie in with similar works which will be ongoing across the adjacent Glan Llyn development area on a phased basis following the completion of construction, with the ultimate goal being the provision of suitable habitat across the entire outline boundary for water vole.
- 5.23 **Monitoring** has been specified and will be undertaken as per the specifications of the method statement associated with the license. Monthly monitoring is to be carried out during the active season from April to September in years 0,1,2 and 5, with 2025 being year zero. Following this, an annual inspection will be carried out in May every five years, unless otherwise stipulated in the dedicated habitat management plan after one of its reviews. If no evidence is found during the May visit, a repeat survey will be carried out in August. Absence surveys will trigger a review of the management plan and a more in-depth monitoring of the vegetation composition and habitat in general.

Carder Bees

- 5.24 The shrill carder bee is a late-emerging bumblebee in the UK, with new colonies being established by a single queen usually in late May (although in some years there are sightings in April). Workers are seen from June to October, and males and daughter queens appear from late August. New queens enter hibernation from late September.
- 5.25 There is currently little data on or knowledge of shrill carder bee nesting and hibernation sites. Nests appear to be associated with rough long grass with a litter layer and have been found on the surface or just below ground. There is some evidence that there is a preference for sunny exposure and a south/southeast facing slope.
- 5.26 The reen system on the northern boundary of Phase 6 will be planted up with suitable pollinator species as a part of upcoming works to attract a variety of invertebrates including both the shrill carder bee and brown-banded carder bee. A management regime will be implemented to maximise the potential for the created habitats along the reen to support a healthy population of shrill carder

bees.

- 5.27 **Monitoring** for this species will be carried out annually in 2026 and 2027, then in line with each five year review of the habitat management plan. Both the quality of the habitat for carder bees and the existing population will be monitored in a single visit in August. At the end of the 2027 visit, a baseline number will be established, numbers below this baseline will trigger a review of the management plan.

Breeding Birds

- 5.28 Annual monitoring of kestrel boxes installed onto the completion buildings within the Phase 6b will be undertaken or ten years during the breeding bird season. Surveys will comprise a visual assessment of each box using binoculars to identify any activity occurring and to ensure the box remains structurally intact and useable by the birds. Any failures will be replaced following the inspection.

6 REFERENCES

Anon (2003) Handbook for Extended Phase 1 Habitat Survey – A Technique for Environmental Audit (Revised reprint). Joint Nature Conservancy Council, Peterborough

Dean, M., Strachan, R., Gow, D. and Andrews, R. (2016) The Water Vole Mitigation Handbook (Mammal Society Mitigation Guidance Series). Eds Fiona Mathews and Paul Chanin. Mammal Society, London.

Page, S., Lynch S., Wilkins, V. and Cartwright, B (2020) A Conservation Strategy for the Shril carder bee *Bombus sylvarum* in England and Wales, 2020–2030. Bumblebee Conservation Trust, Stirling, Scotland UK

Stace, C. (1997) New Flora of the British Isles (2nd edition). Cambridge University Press, Cambridge

UK Habitat Classification Working Group (2018). UK Habitat Classification User Manual at <http://ecountability.co.uk/ukhabworkinggroup-ukhab>

APPENDIX 1



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ST MODWEN PARK, NEWPORT

REPTILE SURVEY REPORT

Prepared for: St Modwen Developments Limited

Date: October 2021

Report Reference: JN00474/D02

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APPENDICIES

Appendix 1 JN00474/D06 Preliminary Ecological Appraisal Report

DRAWINGS

JN00474 / DW03 Reptile Artificial Cover Object Location Plan

1. INTRODUCTION

Background

- 1.1 SK Environmental Solutions Limited was commissioned by St Modwen Developments Limited to undertake a suite of reptile surveys at St Modwen Park, Newport. The surveys were undertaken across the both the St Modwen Park, Newport commercial area as well as the wider Glan Llyn development site within a variety of suitable habitats, which had previously been identified as having potential to support reptile species (see Appendix 1 – JN00474 D06 Preliminary Ecological Appraisal Report).
- 1.2 Reptile surveys had been undertaken previously by Halcrow in 2005, as part of the original outline planning application. In total eight surveys were carried out between April and September (avoiding July and August). During these surveys no reptile species were recorded.
- 1.3 As the site had not been surveyed for reptiles in the intervening period (2014 – 2019), St Modwen Developments Limited considered it prudent to update the survey work in order to ensure that up to date data was available to inform any future reserved matters applications for future phases at the site.

Aims and Objectives

- 1.4 The aim of the reptile surveys undertaken in 2021 was to determine the presence / likely absence of reptile species, within the red line boundary as identified on Artificial Cover Object Location Plan, Drawing Number (JN00474 DW03).

Definition of Terms

- 1.5 For the purposes of this report the term 'site' refers to the St Modwen Park, Newport commercial area, which is identified as the land within the red line boundary on the Artificial Cover Object Location Plan (JN00474/DW03).
- 1.6 The term 'wider Glan Llyn development' refers to the land denoted by the blue line on JN00474/DW03 Reptile Artificial Cover Location plan (JN00474/DW03).

Description of Survey Area

- 1.7 The site comprises an area of brownfield land formerly occupied by a steel works. The site is partially developed, with units to the north and south of it already constructed. The wider Glan Llyn residential development (which was also surveyed as part of the reptile surveys in 2021) lies to the west of the site, to the south is the main A4180 Queens Way road running east to

west, to the west lies remnants of the former steel works and to the north runs the south wales mainline railway and parallel to that a smaller rail line associated with the former steel works..

- 1.8 The site itself contains a mosaic of habitats comprised primarily of bare ground, open water, scrub and hardstanding.
- 1.9 Stockpiled material from the adjacent site is present in piles around the site and piles of stone and debris, suitable refugia, are also present.
- 1.10 The site is considered to provide suitable habitat for common reptile species such as common lizard *Zootoca vivipara* and grass snake *Natrix natrix*.

Development Proposals

- 1.11 St Modwen Park, Newport is a phased development comprising the construction of industrial units, drainage (through the use of the existing / newly created reens) and habitat creation. The current reserved matters application is for the construction of three industrial storage units (Units 11, 12 & 14).

2. LEGISLATIVE FRAMEWORK

UK Legislation

2.1 All British reptiles are protected from intentional killing, injuring and sale under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). These are as follows:

- Adder *Vipera berus*;
- Grass snake;
- Slow worm; and
- Common lizard .

2.2 This legislation aims to protect reptiles from persecution and also from exploitation in the pet trade.

2.3 Our rarest terrestrial reptile, the sand lizard (*Lacerta agilis*), and all our marine turtles also receive protection under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) from the following:

- disturbing whilst occupying a place of shelter or protection;
- obstructing access to a place of shelter or protection; and / or
- sale / offering for sale.

2.4 Furthermore, all reptile species are designated as Species of Principal Importance under Section 41 of the Natural Environment and Rural Communities Act (2006). This sets out a duty for decision makers to contribute towards maintaining, and where possible enhancing, the conservation status of any Section 41 Species of Principal Importance found on a site.

European Legislation

2.5 Sand lizard and marine turtles are protected under the Conservation of Habitats and Species Regulations 2017. This is because they have declined throughout Europe in recent decades.

2.6 Under the Habitats Regulations, it is an offence if you:

- Deliberately capture, injure or kill any wild animal of a European protected species (EPS);

- Deliberately disturb wild animals of any such species;
- Deliberately take or destroy the eggs of such an animal; or
- Damage or destroy a breeding site or resting place of such an animal
- Disturbance is defined as that which is likely:
 - to impair their ability –
 - To survive, to breed or reproduce, or to rear or nurture their young, or
 - In the case of animals of a hibernating or migratory species, to hibernate or migrate; or
 - To affect significantly the local distribution or abundance of the species to which they belong.

3. SURVEY METHODOLOGY

Field Survey

- 3.1 Survey methodology has been devised in accordance with the requirements of all relevant legislation and good practice guidance, including the Herpetofauna Workers' Manual (Gent & Gibson, 1998; 2003) and reptile survey guidance (Froglife, 1999; Sewell et al, 2013).
- 3.2 The survey involved the placement and subsequent checking of Artificial Cover Objects (ACO's), together with direct observation to determine whether reptiles were present or likely absent.
- 3.3 In late February / early March 2021, 150 ACO's were deployed across the site in suitable habitat. The ACO's were set out in piles of ten, spaced between 1-2m apart. This gave a coverage of six and a half ACO's per hectare (150 ACO's over 22.5 hectares = 6.66 ACO's / ha) as per the guidelines set out within Froglife.
- 3.4 The ACO's were placed within habitats that were considered to provide suitable habitat for use by reptiles (i.e. south facing slopes, sun breaks in vegetation). The locations of the artificial refugia are shown on Drawing Number JN00474/DW03 –Artificial Cover Object Location Plan.
- 3.5 In addition, natural refugia (such as piles of stones etc) and semi-natural refugia (anthropogenic material that has been in place for a significant time to allow complete homogeneity with their surroundings such as old carpets, waste / refuse bags) were identified as potentially suitable for use by reptiles.
- 3.6 During the survey visits, each potential refugia was first checked for basking individuals from a distance before being slowly approached and searched for sheltering reptiles. Terrestrial habitat between artificial refugia was also searched for reptile species on each visit.
- 3.7 Refugia were left to settle and "bed in" to their surrounding habitat for a period of twenty days before being first checked. Refugia were visited nine times formally during the survey period. However, the refugia were checked and inspected on a more regular basis whilst an Ecological Clerk of Works (ECoW) was on site between 2-3 days a week (March – August) undertaking a watching brief for ground nesting birds. The formal surveys were undertaken between late March 2021, through May, June and September.
- 3.8 Surveys were carried out during optimum temperature and weather conditions (intermittent sunshine, temperatures over 9°C and with low winds). The ideal time to carry out surveys is between the hours of 9am to 11am and 4pm to 7pm when the reptiles have not reached their

optimum temperature and so are more easily observed; however sunshine immediately after rain is also suitable at any time of the day so long as the temperature is greater than 9°C. Conditions and timings can be seen below in Table 1.

Table 1 – Reptile Survey Timings					
Date	Temp. (°C)	Start and Finish	Rain	Wind (Score 1-5)	Cloud (Score 1 -5)
10/05/21	12 / 14	07.30 – 10.45	Dry, Overcast	1	1
18/05/21	15 / 17	07:45-11:00	Dry	2	1
30/05/21	17 / 19	07:30-10:10	Dry	1	1
17/06/21	18 / 17	16:00-18:50	Dry	2	4
26/06/21	18 / 18	16:00-19:00	Dry	2	4
30/06/21	18 / 18	16.45 – 18.45	Dry, bright	1	1
03/09/21	13 / 15	07:50-10:30	Dry	2	4
18/09/21	16 / 18	08:00-11:00	Dry	1	1
25/09/21	14 / 17	08:10-11:00	Dry	1	1

Wind is scored 1-5: 1 = calm or light air (max wind speed <3mph) 2 = light breeze (max wind speed <7mph) 3 = gentle breeze (max wind speed <12mph) 4 = moderate/fresh breeze (max wind speed <24mph) 5 = Strong breeze or higher (max wind speed >25mph)	Cloud is scored 1-5: 1 = 0-20% cover 2 = 21-40% cover 3 = 41-60% cover 4 = 61-80% cover 5 = 81-100% cover
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4. RESULTS

4.1 No reptiles were recorded during any of the seven surveys. A summary survey results are shown below in Table 2.

Table 2 – Reptile Survey Results				
Visit	Date	Surveyor(s)	Reptiles Recorded	Notes
1	10/05/21	PR / BS / TW	No reptiles recorded	n/a
2	18/05/21	PR / BS	No reptiles recorded	n/a
3	30/05/21	PR / TW	No reptiles recorded	n/a
4	17/06/21	BS / TW	No reptiles recorded	1 smooth newt, 1 juv. frog, 4 common toad
5	26/06/21	BS / TW / PR	No reptiles recorded	1 juv. common frog, 4 common toad
6	03/09/21	PR / TW	No reptiles recorded	n/a
7	18/09/21	PR / TW	No reptiles recorded	n/a
8	30/06/21	PR / TW	No reptiles recorded	n/a
9	25/09/21	PR / TW	No reptiles recorded	n/a

5. CONCLUSIONS AND RECOMMENDATIONS

- 5.1 During the previous survey work undertaken by Halcrow in 2005, no reptiles were identified.
- 5.2 The desktop study identified no records of reptiles within 2km of the proposed development site.
- 5.3 Although there is a mosaic of habitats present across the site that are considered to be suitable to support the common reptile species, no evidence of the taxa were recorded during any of the surveys. The reptile survey followed standard best practice survey methods and were undertaken by suitably experienced ecologists, during optimum survey periods.
- 5.4 As the surveys undertaken in 2021 recorded no reptile species present on the site, it is considered unlikely that reptiles utilise the site and as such pose no constraint to the development.

6. REFERENCES

Froglife (1999). Reptile Survey; an introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Advice Sheet 10.

Gent A. H. & Gibson S. D. (1998). Herpetofauna Workers' Manual. Peterborough, Joint Nature Conservation Committee.

Gent A. H. & Gibson S. D. (2003). Herpetofauna Workers' Manual 2nd Edition, Peterborough, Joint Nature Conservation Committee.

Sewell D, Griffiths R. A., Beebee T. J. C., Foster J. and Wilkinson J. W. (2013). Survey protocols for the British herpetofauna (Version 1.0). Survey 4 – 23rd August.

DRAWINGS



TITLE: Artificial Cover Object Location Plan

CLIENT: St Modwen Developments Ltd

JOB NUMBER: JN00474

DATE: November 2021

DRAWN/CHECKED: JW/MK

DRAWING NUMBER: JN00474/DW03

Key:

- Glan Llyn Development boundary
- St Modwen Park, Newport boundary
- Reptile ACO areas



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APPENDIX 2



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ST MODWEN PARK, NEWPORT

GREAT CRESTED NEWT SURVEY REPORT 2021

Prepared for: **St Modwen Developments Ltd**

Prepared by: **SK Environmental Solutions Ltd**

Date: **October 2021**

Reference: **JN00474/D03**

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DRAWINGS

JN0474 DW04 GCN Survey Location Plan

1 INTRODUCTION

Background

- 1.1 SK Environmental Solutions Limited was commissioned to undertake great crested newt *Triturus cristatus* (GCN) surveys at St Modwen Park, Newport. This report details the results of surveys undertaken in 2021.
- 1.2 GCN surveys had been undertaken previously by Halcrow in 2005, as part of an earlier planning application. During these surveys no GCN were recorded.
- 1.3 As the site had not been surveyed for GCN in the intervening period (2005-2021), St Modwen Developments Limited considered it prudent to update the survey work in order to ensure that up to date data was available to inform any future planning applications at the site.

Definition of Terms

- 1.4 For the purposes of this report the term 'site' refers to the St Modwen Park, Newport commercial area, which is identified as the land within the red line boundary on the GCN Survey Location Plan (JN00474/DW04).
- 1.5 The term 'wider Glan llyn development' refers to the land denoted by the blue line on GCN Survey Location Plan (JN00474/DW04).

Site Description

- 1.6 St Modwen Park is located immediately north of the A4810, connecting Newport to the west with the M4 at Magor, to the east. The site is situated at the eastern edge of the urban area of Newport and is primarily surrounded to the north and south by agricultural grazing pasture.
- 1.7 The site was formerly the location of the western section of Llanwern Steel Works, the remainder of which is now operated by Tata Steel to the east.
- 1.8 A total of sixteen waterbodies were identified and targeted for survey across the wider Llanwern site. Ten of these were located within the commercial area and six within the wider Glan Llyn development. Habitat Suitability Index (HSI) scores were not used to target surveys, instead all waterbodies with potential for breeding amphibians were surveyed (except for main drainage channels such as the Monks Ditch).

- 1.9 The rationale for this approach being that warm and shallow waterbodies within the site were more likely to support significant amphibian populations than interconnected fish-populated reens. In addition, if amphibians were present in reens it is considered they would also be found in adjacent waterbodies that were much easier to survey than the sheers sided reens. Furthermore, water within the reens was noted to be constantly flowing, which is not ideal GCN habitat

2 LEGISLATION

2.1 Great crested newts are protected under Regulation 41 of The Conservation of Habitats and Species Regulations 2010 and Section 9 of the Wildlife and Countryside Act 1981 (as amended), being listed in Schedule 5 of the act. Under the legislation it is an offence to:

- Intentionally kill, take or injure a great crested newt;
- Damage, destroy or obstruct a place a great crested newt uses for breeding, resting, shelter or protection or to disturb a great crested newt in such a place;
- Possess or control a great crested newt alive or dead, or any part of them, or anything derived from them;
- Sell, offer for sale, advertise for sale or offer to buy a great crested newt, or a part of them or anything derived from them; and
- Deliberately disturb or deliberately take or destroy the eggs of a great crested newt.

3 SURVEY METHODOLOGY

Field Survey

- 3.1 The ponds were all assessed for their suitability to support great crested newt and for the viability of standard great crested newt field survey techniques to be employed.
- 3.2 Where possible, each of the ponds were then surveyed using standard survey techniques described in the Great Crested Newt Mitigation Guidelines (English Nature, 2001).
- 3.3 Where pond conditions allowed, the ponds were surveyed using three different techniques at each pond (as detailed below). At least one Natural Resources Wales licenced surveyor was present for each survey.
- 3.4 The ponds were surveyed within 2021 during suitable survey conditions on:
- 23rd March 2021;
 - 15th April 2021;
 - 19th April 2021; and
 - 17th May 2021.
- 3.5 The locations of the waterbodies across the whole site are shown on JN00474 DW04 GCN Survey Location Plan.

Bottle Trapping

- 3.6 Bottle traps (converted two litre drinks bottles) are placed at 2m intervals around the margins of the pond, depth allowing. Each bottle is attached to a cane and positioned at an angle with an air pocket retained within the bottle. Traps are set in accordance with the above guidance (*English Nature, 2001*) and must be collected before 11:00am the following morning. 17 hours is the maximum time between setting and collection, but 12 hours is more typical. Upon collection of the traps, great crested newts and other amphibians are identified, sexed and counted (only being handled with wet gloved hands). They are then immediately returned to the location at which they are caught.

Egg Searching

- 3.7 Great crested newt lay eggs singly, usually on the underside of pliable leaves of submerged plants which they then fold around the egg. The searches involved examining submerged vegetation for folded leaves. Once unfolded, leaves will not re-adhere to eggs and when exposed there is a risk of UV damage and predation.

Therefore, once a great crested newt egg was identified and breeding confirmed, no further searches took place within that particular pond.

Torchlight Searches

- 3.8 Torchlight surveys were undertaken in all three receptor ponds between dusk and midnight following egg searches and the installation of bottle traps. The method involves walking slowly around the pond edge with a high-powered torch (Clulight CB2), searching for newts in the torch beam.

Constraints to Survey

- 3.9 A decision was made to cease use of bottle traps following the capture of water shrew (*Neomys fodiens*) during the first survey. The decision was made easier given extremely clear and shallow water conditions within most of the waterbodies which made torch surveying simple.
- 3.10 No other significant constraints were encountered.

Surveyors

- 3.11 The lead surveyor was Matthew Pickard (BSc., MSc.), a GCN licensed ecologist in both England And Wales with over 20 years environmental consultancy experience, a Chartered Environmentalist (CEnv), full member of the Chartered Institute of Ecology and Environmental Management (MCIEEM). He was assisted by Barry Stewart and Tom Wright.

4 RESULTS

4.1 The results of the surveys for each pond are provided below.

Table 1 2021 GCN Survey Results				
Date	Air (°C)	Weather Description	Torch	GCN Eggs
P1				
23 rd March	9	Cloudy, dry & cool with a light breeze (8mph SSW)	Common toad Sticklebacks	N
15 th April	8	Dry & partly cloudy with a light breeze (6mph ENE)	1 m SN Sticklebacks	N
19 th April	10	Dry & clear with a light breeze (4mph SSW)	Sticklebacks	N
17 th May	9	Partly cloudy, dry & cool with a light breeze (8mph W)	1 f SN Sticklebacks	N
P2				
23 rd March	9	Cloudy, dry & cool with a light breeze (8mph SSW)	1 m SN 2 f SN	N
15 th April	8	Dry & partly cloudy with a light breeze (6mph ENE)	4 m SN 6 f SN	N
19 th April	10	Dry & clear with a light breeze (4mph SSW)	3 m SN 9 f SN	N
17 th May	9	Partly cloudy, dry & cool with a light breeze (8mph W)	7 m SN 13 f SN	N
P3				
23 rd March	9	Cloudy, dry & cool with a light breeze (8mph SSW)	8 m SN 9 f SN	N
15 th April	8	Dry & partly cloudy with a light breeze (6mph ENE)	17 m SN 14 f SN	N

Great Crested Newt Survey Report

Table 1 2021 GCN Survey Results				
Date	Air (°C)	Weather Description	Torch	GCN Eggs
19 th April	10	Dry & clear with a light breeze (4mph SSW)	23 m SN 24 f SN	N
17 th May	9	Partly cloudy, dry & cool with a light breeze (8mph W)	7 m SN 8 f SN	N
P4				
23 rd March	9	Cloudy, dry & cool with a light breeze (8mph SSW)	5 m SN 1 f SN	N
15 th April	8	Dry & partly cloudy with a light breeze (6mph ENE)	25 m SN 7 f SN	N
19 th April	10	Dry & clear with a light breeze (4mph SSW)	21 m SN 12 f SN	N
17 th May	9	Partly cloudy, dry & cool with a light breeze (8mph W)	23 m SN 14 f SN Common frog	N
P5				
23 rd March	9	Cloudy, dry & cool with a light breeze (8mph SSW)	1 m SN 2 f SN Sticklebacks	N
13 th May	8	Dry & partly cloudy with a light breeze (6mph ENE)	Sticklebacks	N
2 nd June	10	Dry & clear with a light breeze (4mph SSW)	Sticklebacks	N
11 th June	9	Partly cloudy, dry & cool with a light breeze (8mph W)	Common frog Sticklebacks	N
P6				
23 rd March	9	Cloudy, dry & cool with a light breeze (8mph SSW)	6 m SN 7 f SN	N

Great Crested Newt Survey Report

Table 1 2021 GCN Survey Results				
Date	Air (°C)	Weather Description	Torch	GCN Eggs
15 th April	8	Dry & partly cloudy with a light breeze (6mph ENE)	1 m SN 2 f SN	N
19 th April	10	Dry & clear with a light breeze (4mph SSW)	3 f SN	N
17 th May	9	Partly cloudy, dry & cool with a light breeze (8mph W)	14 m SN 24 f SN	N
P7				
23 rd March	9	Cloudy, dry & cool with a light breeze (8mph SSW)	3 m SN 4 f SN	N
15 th April	8	Dry & partly cloudy with a light breeze (6mph ENE)	3 m SN 2 f SN	N
19 th April	10	Dry & clear with a light breeze (4mph SSW)	6 m SN 4 f SN	N
17 th May	9	Partly cloudy, dry & cool with a light breeze (8mph W)	Nil	N
P8				
23 rd March	9	Cloudy, dry & cool with a light breeze (8mph SSW)	Common toad Sticklebacks	N
15 th April	8	Dry & partly cloudy with a light breeze (6mph ENE)	Sticklebacks	N
19 th April	10	Dry & clear with a light breeze (4mph SSW)	Sticklebacks	N
17 th May	9	Partly cloudy, dry & cool with a light breeze (8mph W)	Sticklebacks	N
P9				

Great Crested Newt Survey Report

Table 1 2021 GCN Survey Results				
Date	Air (°C)	Weather Description	Torch	GCN Eggs
23 rd March	9	Cloudy, dry & cool with a light breeze (8mph SSW)	Sticklebacks	N
15 th April	8	Dry & partly cloudy with a light breeze (6mph ENE)	Sticklebacks	N
19 th April	10	Dry & clear with a light breeze (4mph SSW)	1 f SN Sticklebacks	N
17 th May	9	Partly cloudy, dry & cool with a light breeze (8mph W)	1 m SN Sticklebacks	N
P10				
23 rd March	9	Cloudy, dry & cool with a light breeze (8mph SSW)	Sticklebacks	N
15 th April	8	Dry & partly cloudy with a light breeze (6mph ENE)	Sticklebacks	N
19 th April	10	Dry & clear with a light breeze (4mph SSW)	Sticklebacks	N
17 th May	9	Partly cloudy, dry & cool with a light breeze (8mph W)	Sticklebacks	N
P11				
23 rd March	9	Cloudy, dry & cool with a light breeze (8mph SSW)	4 m SN 3 f SN	N
15 th April	8	Dry & partly cloudy with a light breeze (6mph ENE)	12 m SN 4 f SN	N
19 th April	10	Dry & clear with a light breeze (4mph SSW)	10 m SN 5 f SN	N
17 th May	9	Partly cloudy, dry & cool with a light breeze (8mph W)	5 m SN 7 fSN	N

Great Crested Newt Survey Report

Table 1 2021 GCN Survey Results				
Date	Air (°C)	Weather Description	Torch	GCN Eggs
P12				
23 rd March	9	Cloudy, dry & cool with a light breeze (8mph SSW)	Nil	N
15 th April	8	Dry & partly cloudy with a light breeze (6mph ENE)	Dry	N
19 th April	10	Dry & clear with a light breeze (4mph SSW)	Nil	N
17 th May	9	Partly cloudy, dry & cool with a light breeze (8mph W)	Nil	N
P13				
23 rd March	9	Cloudy, dry & cool with a light breeze (8mph SSW)	Nil	4 m SN 3 f SN
15 th April	8	Dry & partly cloudy with a light breeze (6mph ENE)	Nil	N
19 th April	10	Dry & clear with a light breeze (4mph SSW)	1 m SN 1 f SN	N
17 th May	9	Partly cloudy, dry & cool with a light breeze (8mph W)	1 m SN	N
P14				
23 rd March	9	Cloudy, dry & cool with a light breeze (8mph SSW)	Nil	N
15 th April	8	Dry & partly cloudy with a light breeze (6mph ENE)	Nil	N
19 th April	10	Dry & clear with a light breeze (4mph SSW)	Sticklebacks	N

Great Crested Newt Survey Report

Table 1 2021 GCN Survey Results				
Date	Air (°C)	Weather Description	Torch	GCN Eggs
17 th May	9	Partly cloudy, dry & cool with a light breeze (8mph W)	Nil	N
P15				
23 rd March	9	Cloudy, dry & cool with a light breeze (8mph SSW)	5 m SN 3 f SN	N
15 th April	8	Dry & partly cloudy with a light breeze (6mph ENE)	2 m SN 2 f SN Common toad	N
19 th April	10	Dry & clear with a light breeze (4mph SSW)	4 m SN 1 f SN	N
17 th May	9	Partly cloudy, dry & cool with a light breeze (8mph W)	2 m SN 2 f SN	N
P16				
23 rd March	9	Cloudy, dry & cool with a light breeze (8mph SSW)	Nil	N
13 th May	8	Dry & partly cloudy with a light breeze (6mph ENE)	Dry	N
2 nd June	10	Dry & clear with a light breeze (4mph SSW)	Nil	N
11 th June	9	Partly cloudy, dry & cool with a light breeze (8mph W)	4 m SN	N

GCN: Great crested newt; SN: Smooth newt; PN: Palmate Newt; f: Female; m: Male, j: Juvenile

5 CONCLUSION

- 5.1 The 2021 presence / likely absence surveys of the ponds confirmed the presence of smooth newts but no great crested newts were recorded during any of the surveys. As such, no further survey work is recommended, and it is considered that great crested newts do not pose a constraint to the development.

DRAWINGS



TITLE: GCN Survey Location Plan

CLIENT: St Modwen Developments Ltd

JOB NUMBER: JN00474

DATE: November 2021

DRAWN/CHECKED: JW/MK

DRAWING NUMBER: JN00474/DW04

Key:

- Glan Llyn Development boundary
- St Modwen Park, Newport boundary
- Ponds



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APPENDIX 3



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ST MODWEN PARK, NEWPORT

BREEDING BIRD MITIGATION STRATEGY

Prepared for: **St Modwen Developments Limited**

Date: **November 2021**

Report Reference: **JN00474/D04**

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2.	LEGISLATIVE FRAMEWORK.....	5
3.	MONITORING AND MITIGATION STRATEGY	6
4.	RESULTS	7
5.	CONCLUSIONS.....	9

DRAWINGS

JN00474/DW05 Wader Nest Location Plan

1. INTRODUCTION

Background

- 1.1 SK Environmental Solutions Limited (SKE) was commissioned by St Modwen Developments Limited to implement a breeding bird mitigation strategy at St Modwen Park, Newport. The mitigation strategy was designed to evaluate and monitor nesting birds, particularly ground nesting species such as lapwing *Vanellus vanellus*, ringed plover *Charadrius hiaticula* and little ringed plover *Charadrius dubius* to ensure that as far as practicable ground preparation works could continue across both the residential site (Glan Llyn) and the commercial development area (St Modwen Park, Newport) without having a negative impact upon nesting birds.
- 1.2 As such, two experienced ecologists / ornithologists visited all areas of proposed earthworks. ground preparation works on a regular basis (2-3 / week) between March – August 2021.

Aims and Objectives

- 1.3 The aim of the ground nesting of the breeding bird mitigation strategy was to:
- Identify evidence of breeding birds across both the Glan Llyn and St Modwen Park, Newport areas;
 - Report back to St Modwen on weekly basis as to any areas of constraints due to the presence of active nests;
 - Monitor any active nests and implement suitable stand offs from active nests to ensure no disturbance occurred as a result of ongoing earthworks / site preparation works; and'
 - Undertake measures to 'cage' ground nesting bird species in order to maximise the chance of success of each breeding pair and to minimise the amount of time the nesting pair posed a constraint to movement around the two areas

Definition of Terms

- 1.4 For the purposes of this report the term '*St Modwen Park, Newport*' refers to the commercial development area denoted on Drawing No. JN00474/DW05 by a solid red line boundary.
- 1.5 The term '*Glan Llyn*' refers to the adjacent Glan Llyn residential development to the west of St Modwen Park, Newport and denoted on Drawing No. JN00474 DW05 by a solid blue line boundary.
- 1.6 The term 'the wider site' refers to all land shown on JN00474 DW05 where the breeding bird mitigation strategy was implemented.

Description of Survey Area

- 1.7 The site comprises an area of brownfield land formerly occupied by a steel works. The site is partially developed, with residential / landscaped areas completed within the western part of Glan Llyn and commercial units already constructed to the northern parts of St Modwen Park, Newport.
- 1.8 The site itself contains a mosaic of habitats comprised primarily of bare ground, open water, scrub and hardstanding.
- 1.9 Stockpiled material is present in piles around the site and piles of stone and debris, and numerous waterbodies / watercourses (reens) are also present.
- 1.10 The site is considered to provide suitable habitat for ground nesting bird species such as ringed plover, little ringed plover, lapwing and oystercatcher *Haematopus ostralegus*. The site also contains habitats such as reed and rush areas around ponds / reens which is suitable to supporting passerine species such as reed bunting *Emberiza schoeniclus* and reed warbler *Acrocephalus scirpaceus*.
- 1.11 To the west of the Glan Llyn residential development area is the Ecology Park, which is designated as a Site of Importance for Nature Conservation (SINC) for its wet woodland habitats. Cetti's warbler *Cettia cetti* is known to breed in this area.

Development Proposals

- 1.12 St Modwen Park, Newport is a phased development comprising the construction of industrial units, drainage (through the use of the existing / newly created reens) and habitat creation. The current reserved matters application is for the construction of three industrial storage units (Units 11, 12 & 14).

2. LEGISLATIVE FRAMEWORK

Legislation

2.1 All birds, their nests and eggs are protected by law under the Wildlife and Countryside Act 1981, and it is thus an offence, with certain exceptions, to:

- Intentionally kill, injure or take any wild bird;
- Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built;
- Intentionally take or destroy the egg of any wild bird;
- Use traps or similar items to kill, injure or take wild birds; and
- Intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.

Environment (Wales) Act 2016

2.2 Section 7 of the Environment (Wales) Act identifies priority species and habitats that should be afforded further levels of consideration with regard to development. This replaces the duty in Section 42 of the NERC Act 2006.

3. MONITORING AND MITIGATION STRATEGY

- 3.1 During the initial site visit by Barry Stewart on behalf of SKE in September 2020 to map the site in order to update the habitats present and identify any potential for the presence of protected / notable species, numerous area of the wider site were recorded as having suitable habitat to support breeding birds, both passerine species within scrub / reed habitats and ground nesting birds.
- 3.2 It was agreed, through liaison with St Modwen Developments Limited, Cumming Group, ACS, Rogers Leask and others, that a regular presence on site (2-3 days per week) between March 2021 and August 2021 would be required in order for earthworks and ground preparation works to continue during the breeding bird season. This presence, and weekly meetings, were designed to assist in minimising delays through nesting bird constraints whilst ensuring no offences were committed during these works with regard to breeding birds.
- 3.3 Three experienced ecologists / ornithologists were brought in to act as Ecological Clerk of Works to monitor active nests and clarify which areas of the wider site were considered out of bounds due to active nests (as well as other constraints such as the presence of water vole etc as part of wider ECoW requirements).
- 3.4 On each occasion the ECoW's would walk the wider site in order to identify active nests. If active nests were recorded, then a phone call to Cumming Group representative (either Gavin Ward for the Glan Llyn development or Matt Harries for the St Modwen Park, Newport development) would be made an updated constraints plan circulated by the end of the day to the wider site team. This would detail any areas considered to be 'no go' areas until a suitable stand off and access routes could be agreed between all parties. This would then be confirmed and recorded in minutes at the end of each week through a wider team meeting.
- 3.5 A strategy was implemented for ground nesting bird species. Active nests were identified and observed until the presence of eggs was recorded. Once eggs were identified within the nest, a small gabion cage was placed over the nest. The bars of the cage were stretched enough to facilitate access and egress for the adult birds, whilst being too narrow allow access of predators such as corvids (jackdaws, carrion crows etc) and mammals such as foxes.
- 3.6 This strategy has been employed at numerous sites for St Modwen Developments Limited and has proven an excellent method for both maximising the chances of the breeding pair of ground nesting birds having a successful brood, whilst minimising the length of constraint to works in the area. Species such as little ringed plover and ringed plover will leave the breeding area once a successful brood has been reared. Otherwise, if the brood is constantly predated by corvids or other predators, then the pair will linger and attempt to have multiple clutches until one is successful. A Schedule 1 licence from NRW was applied for and received by Barry Stewart in order to allow interference with Schedule 1 specie nests (i.e., little ringed plover).
- 3.7 Drawing No. JN00474/DW05 Wader Nest Location Plan illustrates the locations ground nesting species were recorded nesting. The following summarises what subsequently happened to the nests once successfully caged.

4. RESULTS

Ground Nesting Birds

Little Ringed Plover (LP)

4.1 Six pairs were recorded overall across the wider site, with a probable total of five fledged young. Early in the season activity was concentrated in the north-west of the wider site, however some birds apparently relocated to the east of the site, possibly due to a combination of disturbance and/or deterrence. Four out of six nests were caged.

- (1) This nest was found and caged on 05/05. Two young successfully fledged.
- (2) Nest caged on 09/06, probably a repeat clutch following an earlier failure in the same area. The cage was later found moved, with the eggs gone. Whether it was down to human interference or a predator such as fox is unclear;
- (3) This nest evaded discovery and so remained uncaged. Three young were recorded in the vicinity and were observed to have successfully fledged;
- (4) This nest was found and caged on 26/05. The area was visited on 21/06, when site workers verbally reported that they had seen young on 18/06. However, the following day the cage was gone and there were no sign of any adults or young that day or thereafter. Again, whether this was human interference or predation is unclear;
- (5) Nest caged on 27/05. The young hatched, but soon disappeared. There were a lot of potential predators (especially gulls and corvids) in this area which may account for this; and
- (6) This nest had evaded detection until 01/06 when an egg and three newly hatched young were discovered.

Ringed Plover (RP)

4.2 Four pairs were present overall across the wider site, with a probable total of three fledged young. All nests were caged.

- (1) Nest found on 06/04 and caged on 12/04. The bird was still sitting into May, but the eggs had become unviable;
- (2) This nest was identified on 08/04 and caged on 12/04. It was found abandoned (with the eggs still in the nest) on 21/04;

- (3) The nest was caged on 17/05 and hatched (three young, one egg failed) on 09/06. Three young subsequently fledged; and
- (4) Nest caged and subsequently hatched on 21/06. The young were present for around 10 days, then were presumed to have left the area.

Lapwing (L.)

4.3 There were three pairs present, all in the commercial area, probably five young fledged in total. No nests were caged.

- (1) Nest found on 12/05. On 17/05 heavy rain had caused the death of two of the young, with two still alive. It is thought that these fledged.
- (2) This nest evaded detection and three young fledged, these seen on 24/06.
- (3) This nest was discovered on 21/04 and it is thought that one young fledged.

Oystercatcher (OC)

4.4 A pair turned up in June and attempted to breed in the commercial area. The nest wasn't caged.

- This nest was found on 21/06 and was being incubated into July, but by 08/07 there was no sign of either the birds or the eggs.

Other Active Nest Observations

4.5 Low numbers of other passerine species were recorded across the wider nesting within reeds and scrub along reens across the wider site. Species recorded included reed bunting *Emberiza schoeniclus* and reed warbler *Acrocephalus scirpaceus*.

4.6 Any nests recorded were mapped onto the weekly updated constraints plans, shared with the team and the implications of such discussed during the weekly meeting to ensure that all contracts staff were aware of the nest location and where the stand-off zone was agreed.

5. CONCLUSIONS

- 5.1 The mitigation strategy for breeding birds implemented across the St Modwen Park, Newport, Glan Llyn and the wider site ensure that during the earthworks undertaken in 2021, no active nests were harmed.
- 5.2 Every effort was made to maintain suitable stand off distances from active nests throughout and the use of cages ensured that the maximum chance of having a successful brood was coupled the minimising the length of the constraint being in place (as discussed above).
- 5.3 Other strategies which have been employed on other sites in the past, such as use of bird scaring techniques and / or the use of hawks / dogs etc have proven to be more costly, cause more disturbance to the birds and be less successful in the aims of this mitigation strategy.
- 5.4 Regular team meetings to identify constraints (not just for breeding birds but for ecological issues) meant that all contracts staff were regularly kept informed as to the areas which were considered to be 'no go' areas and were involved in the process from the outset, meaning that they understood the rationale for these 'no go' areas and were able to access these areas as soon as the constraints were considered to be removed.
- 5.5 Further implementation of this strategy is anticipated to facilitate works across the wider site through the 2022 breeding bird season.

DRAWINGS

Llanwern wader nest locations 2021

* = LP * = RP * = L. * = OC



Key:

- Glan Llyn Development boundary
- St Modwen Park, Newport boundary

TITLE: Wader Nest Location Plan

CLIENT: St Modwen Developments Ltd

JOB NUMBER: JN00474

DATE: November 2021

DRAWN/CHECKED: JW/MK

DRAWING NUMBER: JN00474/DW05

LP - Little ringed plover, RP - Ringed Plover, L. - Lapwing, OC - Oystercatcher



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ST MODWEN PARK, NEWPORT

WATER VOLE SURVEY REPORT 2021

Prepared for: **St Modwen Developments Ltd**

Prepared by: **SK Environmental Solutions Ltd**

Date: **November 2021**

Reference: **JN00474/D05**

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JN00474/DW06 Water Vole Survey Location Plan

1 INTRODUCTION

Background

- 1.1 Following the Preliminary Ecological Appraisal, which commenced in September 2020 (and was completed in June 2021) evidence of habitat suitable for supporting water vole *Arvicola terrestris* was identified at St Modwen Park, Newport. As a result SK Environmental Solutions Limited was commissioned by St Modwen Developments Ltd to undertake water vole surveys to assess presence v/ likely absence. This report details the results of surveys undertaken in 2021.

Definition of Terms

- 1.2 For the purposes of this report the term 'site' refers to the St Modwen Park, Newport commercial area, which is identified as the land within the red line boundary on the Water Vole Survey Location Plan (JN00474/DW06).
- 1.3 The term 'wider Glan llyn development' which is located immediately west of St Modwen Park, Newport, refers to the land denoted by the blue line on Water Vole Survey Location Plan (JN00474/DW06).

Site Description

- 1.4 St Modwen Park is located immediately north of the A4810, connecting Newport to the west with the M4 at Magor, to the east. The site is situated at the eastern edge of the urban area of Newport and is primarily surrounded to the north and south by agricultural grazing pasture.
- 1.5 The site was formerly the location of the western section of Llanwern Steel Works, the remainder of which is now operated by Tata Steel to the east.

2 LEGISLATION

Wildlife and Countryside Act 1981 (as amended)

2.1 Water voles are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). This affords the following protections:

- Section 9(1) of the Act makes it an offence to intentionally capture, injure or kill a wild water vole;
- Section 9(2) makes it an offence to possess or control a wild water vole either alive or dead, or any part or thing derived from them;
- Section 9(4) makes it an offence to intentionally or recklessly damage, destroy or obstruct access to any structure or place which a wild water vole use for shelter or protection, or intentionally or recklessly disturb them while occupying a structure or place used for that purpose; and
- Section 9(5) makes it an offence to sell, offer or expose for sale, or possess or transport for the purpose of sale, any live or dead wild water vole, or any part or thing derived from them. It is also an offence to publish or cause to be published any advertisement likely to be understood as conveying that otters, or parts or derived things of them are bought, sold or are intended to be. Section 9 applies to all stages in their life cycle.

Environment (Wales) Act 2016

2.2 Water voles are listed under Section 7 of the Act. Section 7 is a list of species and habitats of principal importance for the purpose of maintaining and enhancing biodiversity in relation to Wales. This list is currently under review by the Welsh Government in consultation with National Resources Wales (NRW).

3 SURVEY METHODOLOGY

Field Survey

- 3.1 Two water vole surveys were carried out. The first in late April and the second in mid-September 2021.
- 3.2 The surveys were undertaken in general accordance with guidance provided in the 2011 Water Vole Conservation Handbook 3rd edition (Ref 14) and the 2016 Water Vole Mitigation Handbook (Ref 15).
- 3.3 The field signs searched for were:
- sightings of water vole;
 - latrines - recognisable by faeces size, shape, and content. If not too dried-out these are also distinguishable from rat droppings by their smell;
 - feeding stations - food items are often brought to feeding stations along pathways and hauled onto platforms. Recognisable as neat piles of chewed vegetation up to 10 cm long;
 - burrows - appear as a series of holes along the water's edge distinguishable from rat burrows by size and position;
 - lawns - may appear as grazed areas around land holes;
 - footprints - tracks may occur at the water's edge and lead into bank side vegetation. May be distinguishable from rat footprints by size; and
 - runways in vegetation: low tunnels pushed through vegetation near the water's edge.
- 3.4 Surveys were undertaken across the site and the wider Glan Llyn development in all suitable habitat, including a series of reens and waterbodies, as indicated by the Water Vole Survey Location Plan JN00474 DW06.

4 RESULTS

- 4.1 The results of the surveys for reens or waterbody surveyed are provided below in Table 1.

Table 1 – Water Vole Survey Results – St Modwen Park, Newport and the Wider Glan Llyn Development			
Survey Date/s	Waterbody / Reen Number	Habitat Suitability	Field Signs
Reens			
1 st late April followed by 2 nd mid-September	R1	High	Numerous field signs including six burrows, three latrines and two feeding stations
1 st late April followed by 2 nd mid-September	R2	Low	No evidence recorded
1 st late April followed by 2 nd mid-September	R3	Low	No evidence recorded
1 st late April followed by 2 nd mid-September	R4	Low	No evidence recorded
1 st late April followed by 2 nd mid-September	R5	Low - Moderate	No evidence recorded
1 st late April followed by 2 nd mid-September	R6	Low	No evidence recorded
1 st late April followed by 2 nd mid-September	R7	Negligible	No evidence recorded
1 st late April followed by 2 nd mid-September	R8	Low - Moderate	No evidence recorded

Water Vole Survey Report

Table 1 – Water Vole Survey Results – St Modwen Park, Newport and the Wider Glan Llyn Development			
Survey Date/s	Waterbody / Reen Number	Habitat Suitability	Field Signs
1 st late April followed by 2 nd mid-September	R9	Low	No evidence recorded
1 st late April followed by 2 nd mid-September	R10	Low - Moderate	No evidence recorded
1 st late April followed by 2 nd mid-September	R11	Low	No evidence recorded
1 st late April followed by 2 nd mid-September	R12	Moderate	No evidence recorded
Ponds			
1 st late April followed by 2 nd mid-September	P1	Low	No evidence recorded
1 st late April followed by 2 nd mid-September	P2	Moderate	No evidence recorded
1 st late April followed by 2 nd mid-September	P3	Low	No evidence recorded
1 st late April followed by 2 nd mid-September	P4	Low	No evidence recorded
1 st late April followed by 2 nd mid-September	P5	Moderate	No evidence recorded
1 st late April followed by 2 nd mid-September	P6	Moderate	Evidence recorded included one latrine, one

Table 1 – Water Vole Survey Results – St Modwen Park, Newport and the Wider Glan Llyn Development			
Survey Date/s	Waterbody / Reen Number	Habitat Suitability	Field Signs
			feeding station and five burrows
1 st late April followed by 2 nd mid-September	P7	Low	No evidence recorded
1 st late April followed by 2 nd mid-September	P8	Moderate	No evidence recorded
1 st late April followed by 2 nd mid-September	P9	Moderate	Evidence recorded included one feeding station and one burrow
1 st late April followed by 2 nd mid-September	P10	Low	No evidence recorded
1 st late April followed by 2 nd mid-September	P11	Low	No evidence recorded
1 st late April followed by 2 nd mid-September	P12	Low	No evidence recorded
1 st late April followed by 2 nd mid-September	P13	Low	No evidence recorded
1 st late April followed by 2 nd mid-September	P14	Low	No evidence recorded
1 st late April followed by 2 nd mid-September	P15	Moderate	No evidence recorded

Table 1 – Water Vole Survey Results – St Modwen Park, Newport and the Wider Glan Llyn Development			
Survey Date/s	Waterbody / Reen Number	Habitat Suitability	Field Signs
1 st late April followed by 2 nd mid-September	P16	Moderate	No evidence recorded
1 st late April followed by 2 nd mid-September	P17	Moderate	No evidence recorded
1 st late April followed by 2 nd mid-September	P18	Low	No evidence recorded
1 st late April followed by 2 nd mid-September	P19	Moderate	No evidence recorded
1 st late April followed by 2 nd mid-September	P20	Low	No evidence recorded
1 st late April followed by 2 nd mid-September	P21	Low	No evidence recorded

5 CONCLUSION

5.1 Following the completion of two water vole surveys in late April and mid-September 2021 evidence of water voles were recorded within three locations across the St Modwen Park, Newport and wider Glan Llyn development areas.

5.2 Field signs of water voles were positively identified within the following reens / ponds:

- R1 – numerous signs of water voles including latrines, feeding stations and burrow. During the survey audible evidence of water vole entering the reen was noted too;
- P6 – only one latrine, one feeding but five burrows were recorded at this location during the survey works; and
- P9 – only evidence of one feeding station and one burrow was recorded here.

N.B. Numerous pathways were also recorded in these locations during the survey.

5.3 R1 is located immediately to the west of a previously developed part of the overall Glan llyn development. The reen is designated as a SINC (the Woodland SINC) for its assemblage of wet woodland species – this is discussed further within the SINC Management Plans currently being produced for St Modwen Developments. The reen provides suitable habitat for a healthy population of water vole and the number of fields signs recorded would seem support this.

5.4 P6 is a small waterbody surrounded by vegetation suitable for foraging water voles. Numerous field signs were recorded in this area, suggesting a reasonable population of water are present. Plate 1, below shows evidence of water burrows and Plate 2 shows the typical vegetative habitat present.

Plate 1 – Water vole burrow entrances around P6.



Plate 2 – Habitat present surrounding P6



- 5.5 P9 is a slightly larger waterbody than P6 but does not have the same characteristic food species in the same abundance. Scattered scrub is encroaching on the swampy margins of the waterbody, and it is drying out in areas. Only two field signs were recorded here, namely a feeding station and a burrow entrance. Plate 3, below shows the typical vegetation surrounding P6.

Plate 3 – typical habitat surrounding P9.



- 5.6 The water voles within the south-western part of St Modwen Park, Newport and the north-eastern area of the wider Glan Llyn development will need to be considered prior to works coming forward for any future phases in these areas.
- 5.7 Whilst ground preparation and earthworks have been going on over the spring, summer and autumn of 2021, suitable 'no go' areas have been agreed around P6 and P9 between the interested parties, where no machinery may enter until a strategy for moving the water voles out of the areas has been discussed and agreed with Natural Resource Wales (NRW).
- 5.8 Further investigation of the most effective way of moving forward in 2021 will be discussed with Mike Dean of MB Ecology who has many years of working with water

vole conservation and co-authored the survey and mitigation guidelines for the species.

- 5.9 A site visit is planned in December 2021, in order for Mike Dean and the wider team to make assess the most effective method of dealing with the water voles in these areas under an NRW conservation licence.
- 5.10 Water vole mitigation planting has already been undertaken in 2021 to the east of the wider Glan Llyn development area, where construction has been completed. These areas will form the basis of the initial water vole mitigation strategy agreed with Mike Dean and NRW.
- 5.11 Water vole are to be the focus, and the flagship species for the overall Llanwern development and as such, all future phases will consider water voles within the site preparation and final layouts; this will promote the species site wide and aim to maximise the future potential of the site to support a large population of water vole across the reens, ponds and lakes within the development.

6 REFERENCES

Dean, M. (2021) Water Vole Field Signs and Habitat Assessment: A Practical Guide to Water Vole Surveys. Pelagic Publishing

Dean, M., Strachan, R., Gow, D. and Andrews, R. (2016) The Water Vole Mitigation Handbook (Mammal Society Mitigation Guidance Series). Eds Fiona Mathews and Paul Chanin. Mammal Society, London.

Strachan, R., Moorhouse, T. & Gelling, M. (2011) Water vole Conservation Handbook (third edition). WildCRu: Oxford

DRAWINGS



TITLE: Water Vole Survey Location Plan

CLIENT: St Modwen Developments Ltd

JOB NUMBER: JN00474

DATE: November 2021

DRAWN/CHECKED: JW/MK

DRAWING NUMBER: JN00474/DW06



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APPENDIX 5



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ST MODWEN PARK, NEWPORT

PRELIMINARY ECOLOGICAL APPRAISAL

Prepared for: St Modwen Developments Ltd

Date: October 2021

Report Reference: JN00474 / D06

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FIGURE 1	ST MODWEN PARK, NEWPORT HABITAT PLAN
JN00474/DW02	CONSULTATION DATA BOUNDARY PLAN

APPENDICES

APPENDIX 1	TARGET NOTES
APPENDIX 2	PROTECTED SPECIES LEGISLATION

1. INTRODUCTION

Background

- 1.1 SK Environmental Solutions Limited was commissioned by St Modwen Development Limited to undertake a Preliminary Ecological Appraisal (PEA) at a parcel of land near Newport, herein known as St Modwen Park, Newport.

Aims and Objectives

- 1.2 The purpose of the PEA is to identify:
- the major habitats present within the site and immediate vicinity;
 - the potential for legally protected and / or notable species to be present; and
 - the need for additional specialist ecological surveys.
- 1.3 A PEA does not constitute a full survey for protected species to standard survey methodologies but is used as a tool to determine the potential of a site to support protected/notable species and to determine whether any additional specialist species surveys are likely to be required, to inform a mitigation strategy.
- 1.4 These results have been used to assess the nature conservation importance of the site and immediate surroundings, with regards to the habitats and species present.

Definition of Terms

- 1.5 For the purpose of this report, the term 'site' is used to describe the area of land within the red line boundary as shown on Figure 1 - St Modwen Park, Newport Habitat Plan below.

Site Description

- 1.6 The site, which is part of the former Llanwern steelworks, is a brownfield site located to the east of Newport. The site is bordered to the south by the Queen's way Road A4810, to the north by a major railway link, to the east by remaining brownfield area and to the west by the wider Glan llyn development area. The site comprises a mosaic of habitats including:
- Scattered scrub (A2.2);
 - Improved grassland (B4);
 - Short ruderal vegetation (J1.3);

- Tall herb on spoil (C3.1 / I2.2);
- Swamp (F1);
- Marginal vegetation (F2.1);
- Inundation vegetation on spoil (F2.2 / I2.2);
- Standing water (G1);
- Amenity grassland (J1.3);
- Introduced shrubs (J1.4);
- Wall (J2.5);
- Buildings (J3.6); and
- Bare ground (J4).

Development Proposals

- 1.1 St Modwen Park, Newport is a phased development comprising the construction of industrial units, drainage (through the use of the existing / newly created reens) and habitat creation. The current reserved matters application is for the construction of three industrial storage units (Units 11, 12 & 14).

2. METHODOLOGY

Field Survey

Desk Study

3.1 The desktop study involved conducting database searches for statutory and non-statutory designated sites and features of interest within and surrounding the proposed application site up to 1km from the site boundary. Records for legally protected / notable species and / or habitats, were obtained from South East Wales Biodiversity Records Centre (SEWBrEC). The baseline conditions are based on a review of the following:

- Multi-Agency Geographical Information for the Countryside (MAGIC) website - to identify statutory designated sites;
- Ordnance survey mapping (to identify potentially notable habitats);
- Aerial photography (to identify potentially notable habitats);
- South East Wales Biodiversity Records Centre (SEWBrEC); and
- Natural Resources Wales/ Cyfoeth Naturiol Cymru (NRW).

3.2 Copies of all consultation data received from SEWBrEC can be provided on request.

Preliminary Ecological Appraisal

3.3 SK Environmental Solutions Limited undertook an ecological assessment of the site and immediate surroundings between September 2020 June 2021, to inform the PEA; an experienced ecologist conducted the surveys.

3.4 The field survey broadly followed the 'Extended Phase 1 Habitat Survey' methodology as set out in 'Guidelines for Baseline Ecological Assessment' (Institute of Environmental Assessment, 1995), which is a development of the method described in the 'Handbook for Extended Phase 1 Habitat Survey – a technique for environmental audit' (Joint Nature Conservation Committee, 1990).

3.5 The PEA provides information on the habitats within the survey area and identifies actual or potential presence of legally protected or otherwise notable species in or immediately adjacent to the site. The key features of the site are shown on Figure 1 - St Modwen Park, Newport Habitat Plan below.

- 3.6 Target Notes were taken to provide a more detailed description of a particular habitat in terms of species composition or as a means of highlighting a particular feature of ecological interest; these are provided in Appendix 1.
- 3.7 Plant names follow 'New Flora of the British Isles' (Stace 2010). The common and scientific names of all botanical species identified are provided when first mentioned in the text, but only the common name is stated thereafter.
- 3.8 In addition to establishing the baseline ecological interest within the area, it was intended that the survey should identify areas where further surveys may be required during the appropriate season. Habitat potential for legally protected or national/local BAP species including, but not limited to, bats, badger, breeding birds, flora, amphibians and reptiles was noted.

Supporting Information

- 3.9 Target Notes were compiled as appropriate, with each being given an associated reference number. Target Notes can be found in Appendix 1 and are used to identify:
- Complex habitat mosaics or small habitats; and / or
 - Features of ecological importance.
- 3.10 Photographs are used to illustrate the general area being surveyed and to show specific features of interest, such as valuable vegetation types or damaging activities. A note was made on the survey form with a general description of the image provided.

Limitations

- 3.11 Ecological surveys are limited by factors that affect presence of plants and animals such as time of year, weather, migration patterns and behaviour. The timing of the survey was considered to be an optimal time of year to carry out a survey. The aim of the survey is not to present an exhaustive list of vegetation present but to provide an indication of broad habitat types and whether there is the potential to support notable or protected species.

Personnel

- 3.12 All survey work was carried out between September 2020 and June 2021 by Barry Stewart on behalf of SK Environmental Solutions Limited. Weather conditions were partially overcast with sunny spells.

3. RESULTS

Baseline Conditions from Desk Study

Aerial Photography and OS Maps

- 3.1 Aerial photography and Ordnance Survey (OS) maps were used to identify any waterbodies or watercourses within 500m of the site boundary with habitat connectivity to the site.
- 3.2 Surrounding the site on all sides are an interconnected series of reens, drains and ditches of varying sizes.
- 3.3 One such watercourse, known as Monk's Ditch, bounds the site on its western side.
- 3.4 A number of ephemeral ponds and pools are located within the site boundary, and the adjacent residential development area.

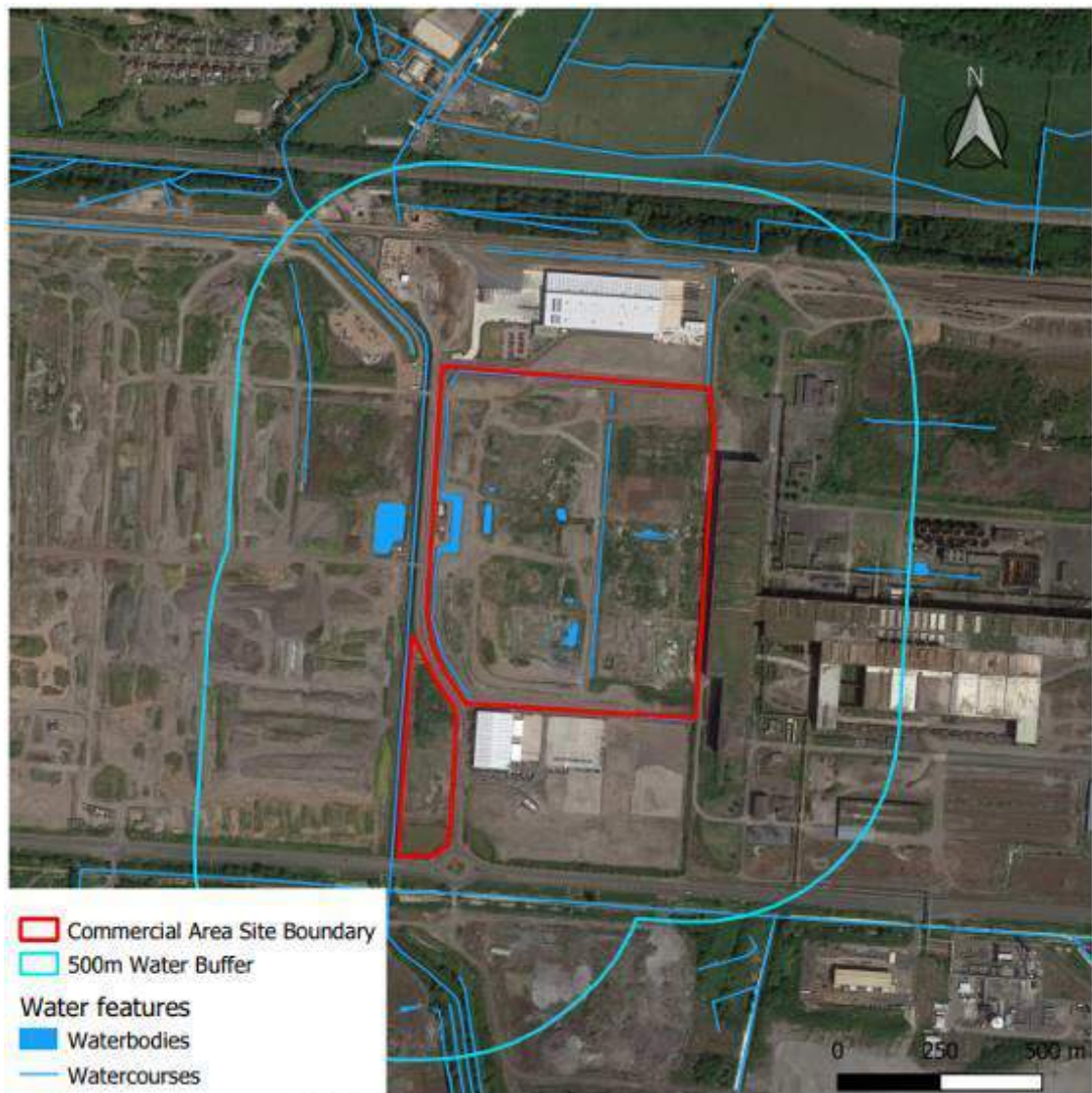


Figure 1. Water feature location plan. Scale as a guide.

Statutory and Non-Statutory Designated Sites for Nature Conservation

Statutory Designated Sites

3.5 MAGIC maps identified two statutory sites within 2km of the site boundary:

- Gwent Levels: Nash and Goldcliff Site of Special Scientific Interest (SSSI); and
- Gwent Levels: Whitson SSSI.

Both SSSIs are situated approximately 500m south of the site boundary, to the south of the A4810, with Whitson lying to the east of Nash and Goldcliff. Both are designated for their reed and ditch habitat and invertebrate diversity, including shrill carder bee.



Figure 2. Statutory sites location plan. Scale as a guide.

Non-Statutory Designated Sites

3.6 SEWBRc identified the following non-statutory designated site located within 1km of the CGR for the site:

- Monk's Ditch Wildlife Site / Site of Importance for Nature Conservation (SINC) located approximately 600m north west of the site boundary.

UK and Local Biodiversity Action Plans

- 3.7 The National Biodiversity Action Plan (UKBAP) and the Newport Local Biodiversity Action Plan (LBAP) are relevant to the proposed development site. Table 1 identifies the habitats listed on the LBAP and their associated UKBAP habitats.

Table 1 – Local BAP habitats for Newport and associated UK BAP habitats	
Newport BAP Habitats	UK BAP Habitats
Field Margins, Hedgerows	Arable Field Margins (Broad Habitat) Broadleaved, Mixed and Yew Woodland (Broad Habitat)
Lowland Mixed Deciduous Woodland, Upland Mixed Ashwoods, Traditional Orchards, Wet Woodland, Wood-Pasture & Parkland (including veteran trees)	Broadleaved, Mixed and Yew Woodland (Broad Habitat)
Calcareous Grassland, Lowland Dry Acid Grassland, Lowland Meadows, Purple Moor Grass and Rush Pastures, Lowland Heath	Calcareous Grassland, Neutral Grassland, Improved Grassland, Dwarf Shrub Heath (Broad Habitats)
Reedbeds, Coastal and Floodplain Grazing Marsh	Reedbeds (Broad Habitat) Fen, Marsh and Swamp (Broad Habitat)
Coastal Saltmarsh, Maritime Cliffs and Slope, Intertidal Mudflats	Supralittoral Rock, Supralittoral Sediment (Broad Habitats)
Open Mosaic Habitats on Previously Developed Land, Gardens and Allotments, Urban Open Space, Churchyards	Inland Rock (Broad Habitat)
Rivers & Streams, Canal, Ponds, Lakes	Rivers and Streams (Broad Habitat), Standing Open Waters and Canals (Broad Habitat)

- 3.8 The Newport LBAP has also prepared Local Action Plans for eight species groups and nine individual species. Some species are listed in table 2. For a full list of species in the LBAP

please refer to <https://www.newport.gov.uk/documents/Leisure-and-Tourism/Countryside/Newport-Local-Biodiversity-Action-Plan.pdf> .

Table 2 – Local BAP species for Newport	
Species Group	Species
Mammals	Eurasian Otter <i>Lutra lutra</i> , Common Dormouse <i>Muscardinus avellanarius</i> , European Water Vole <i>Arvicola amphibious</i> ,
Mammals - Bats	Bats; Barbastelle bat <i>Barbastella barbastellus</i> , Bechstein's bat <i>Myotis bechsteinii</i> , Natterer's bat <i>Myotis nattereri</i> , Daubenton's bat <i>Myotis daubentonii</i> , Whiskered bat <i>Myotis mystacinus</i> , Brandt's bat <i>Myotis brandtii</i> , Alcaethoe's bat <i>Myotis alcathoe</i> , Noctule bat <i>Nyctalus noctule</i> , Leisler's bat <i>Nyctalus leisleri</i> , Serotine bat <i>Eptesicus serotonii</i> , Brown long-eared bat <i>Plecotus auratus</i> , Grey long-eared bat <i>Plecotus austriacus</i> , Common pipistrelle <i>Pipistrellus pipistrellus</i> , Soprano pipistrelle <i>Pipistrellus pygmaeus</i> , Nathusius pipistrelle <i>Pipistrellus nathusii</i> , Greater horseshoe bat <i>Rhinolophus ferrumequinum</i> , Lesser horseshoe bat <i>Rhinolophus hipposideros</i>
Invertebrates	Shrill cader bee <i>Bombus sylvarum</i> , Small ranunculus <i>Hecatera dysodea</i>

Notable Species Records

- 3.9 Consultation with SEWBRc identified several protected and / or notable species records located within 2km of the site. For the purpose of this desk study only records from the past ten years are considered relevant (i.e. 2011 to present).

Badger

- 3.10 SEWBRc provided three records of badger *Meles meles* from within 2km of the site. The closest of these was a record of droppings located approximately 600m north east of the site.

Bats

- 3.11 SEWBRc returned twenty-three records of bats within 2km of the site boundary. These are:

- Six records of serotine *Eptesicus serotinus* the closest of which was located approximately 400m north of the site;
- Three records of common pipistrelle *Pipistrellus pipistrellus* the closest of which was located approximately 400m north of the site;
- Four records of unidentified pipistrelle species the closest of which was located approximately 400m north of the site;
- Two records of unidentified long-eared bat species the closest of which was located approximately 400m north of the site;
- A single record of noctule *Nyctalus noctula* located approximately 400m north of the site;
- A single unidentified *Myotis* species located approximately 400m north of the site;
- A single unidentified *Nyctalus* species located approximately 400m north of the site;
- A single lesser-horseshoe bat *Rhinolophus hipposideros* located approximately 400m north of the site;
- Two records of unidentified bat species the closest of which was located approximately 420m north of the site;
- A single record of soprano pipistrelle *Pipistrellus pygmaeus* located approximately 400m north of the site; and
- A single record of Daubenton's bat *Myotis daubentonii* located approximately 1.7km west of the site.

Otter and Water Vole

- 3.12 SEWBRc returned four records of otter *Lutra lutra* the closest of which is located in a reed within the site.
- 3.13 Seven records of water vole *Arvicola amphibius* the closest of which was located approximately 430m north west of the site.

Hazel Dormouse

- 3.14 SEWBRc returned seven records of hazel dormouse *Muscardinus avellanarius* the closest of which was located approximately 470m north of the site.

Birds

- 3.15 SEWBRc returned 245 records of fifty-nine bird species identified within 2km of the site. Table 3 lists species considered to have potential to be found in the habitats on site.
- 3.16 **N.B.** Minimum Distance listed in Table 3, refers to the distance from the species grid square near corner to the site boundary. Dependent upon the accuracy of the species locations and the sensitivity of the species, distances can vary, as locations may be only be given up to a 2km tetrad. For example, a distance of 0 does not necessarily mean the species is found on site, only that the given grid square overlaps with the site boundary.

Table 3 – Recorded bird species with potential to be on site					
Common Name	Scientific Name	Schedule 1 / NERC / Annex 1	UK Conservation status	No. of Records	Min Distance (km) from
Black-headed gull	<i>Chroicocephalus ridibundus</i>	None	Amber	2	900m
Bullfinch	<i>Pyrrhula pyrrhula</i>	NERC	Amber	7	440m
Canada goose	<i>Branta canadensis</i>	None	N/A	1	1.9km
Cetti's warbler	<i>Cettia cetti</i>	Schedule 1	Green	14	0m
Common whitethroat	<i>Curruca communis</i>	None	Green	8	500m
Coot	<i>Fulica atra</i>	None	Green	2	400m
Cormorant	<i>Phalacrocorax carbo</i>	None	Green	2	200m
Dunnock	<i>Prunella modularis</i>	NERC	Amber	18	0m

Table 3 – Recorded bird species with potential to be on site

Common Name	Scientific Name	Schedule 1 / NERC / Annex 1	UK Conservation status	No. of Records	Min Distance (km) from
Green sandpiper	<i>Tringa ochropus</i>	Schedule 1	Amber	2	620m
Grey heron	<i>Ardea cinerea</i>	None	Green	2	0m
Grey wagtail	<i>Motacilla cinerea</i>	None	Red	5	0m
Herring gull	<i>Larus argentatus</i>	NERC	Red	5	50m
Kestrel	<i>Falco tinnunculus</i>	None	Amber	2	30m
Kingfisher	<i>Alcedo atthis</i>	Schedule 1 Annex 1	Amber	4	0m
Lapwing	<i>Vanellus vanellus</i>	NERC	Red	2	400m
Lesser black-backed gull	<i>Larus fuscus</i>	None	Amber	5	50m
Linnet	<i>Linaria cannabina</i>	None	Red	3	0m
Little ringed plover	<i>Charadrius dubius</i>	Schedule 1	Green	3	1.7km
Mallard	<i>Anas platyrhynchos</i>	None	Green	11	0m
Meadow pipit	<i>Anthus pratensis</i>	None	Amber	14	0m
Peregrine	<i>Falco peregrinus</i>	Schedule 1 Annex 1	Green	2	500m

Table 3 – Recorded bird species with potential to be on site

Common Name	Scientific Name	Schedule 1 / NERC / Annex 1	UK Conservation status	No. of Records	Min Distance (km) from
Red kite	<i>Milvus milvus</i>	Schedule 1 Annex 1	Green	1	500m
Reed Bunting	<i>Emberiza schoeniclus</i>	NERC	Amber	6	0m
Ringed plover	<i>Charadrius hiaticula</i>	None	Red	2	1.7km
Skylark	<i>Alauda arvensis</i>	NERC	Red	2	0m
Snipe	<i>Gallinago gallinago</i>	None	Amber	6	0m
Starling	<i>Sturnus vulgaris</i>	NERC	Red	1	1.9km
Tufted duck	<i>Aythya fuligula</i>	None	Green	2	0m
Water pipit	<i>Anthus spinoletta</i>	None	Amber	1	0m

Reptiles

- 3.17 SEWBrEC returned no records of reptiles within 2km of the site boundary.

Amphibians

- 3.18 SEWBrEC returned one record of common frog *Rana temporaria* located approximately 1.1km south of the site boundary.
- 3.19 SEWBrEC returned one record of palmate newt *Lissotriton helveticus* located within the site boundary.

Terrestrial Invertebrates

- 3.20 SEWBRc returned fifty-two records of nineteen species of terrestrial invertebrates from within 2km of the site. Of these, Table 4 shows species that are listed under Section 7 of the Environment (Wales) Act 2016.

Table 4 – Section 7 Invertebrate species		
Common name	Latin name	Number of records
Brown-banded carder-bee	<i>Bombus humilis</i>	9
Buff ermine	<i>Spilosoma luteum</i>	1
Ghost moth	<i>Hepialus humuli</i>	1
Shrill carder-bee	<i>Bombus sylvarum</i>	12
Small emerald	<i>Hemistola chrysoprasaria</i>	1

Invasive Non-Native Species

- 3.21 SEWBRc identified one record of Spanish bluebell *Hyacinthoides hispanica* located approximately 880m north of the site.
- 3.22 SEWBRc identified one record of Himalayan balsam *Impatiens glandulifera* located approximately 730m east of the site.
- 3.23 SEWBRc identified two records of Japanese knotweed *Fallopia japonica* the closest of which was located approximately 1.3km south of the site.

Flora

- 3.24 SEWBRc returned two records of bluebell *Hyacinthoides non-scripta* both located approximately 880m north of the site.
- 3.25 A search of the Botanical Society of Britain & Ireland (BSBI) rare plant register (Tyler & Wood, 2019) identified a number of species of high conservation status at a county level, which have been recorded in the adjacent environs of the Study Site, namely;

- *Bidens cernua* (Nodding Bur-marigold);

- *Butomus umbellatus* (Flowering-rush);
- *Callitriche obtusangula* (Blunt-fruited Water-starwort);
- *Carex elata* (Tufted-sedge);
- *Catapodium marinum* (Sea Fern-grass);
- *Centaureum pulchellum* (Lesser Centaury);
- *Ceratophyllum submersum* (Soft Hornwort);
- *Chara vulgaris* (Common Stonewort);
- *Chenopodium glaucum* (Oak-leaved Goosefoot);
- *Hydrocharis morsus-ranae* (Frogbit);
- *Lepidium latifolium* (Dittander);
- *Malva neglecta* (Dwarf Mallow);
- *Oenanthe fistulosa* (Tubular Water-dropwort);
- *Oenanthe pimpinelloides* (Corky-fruited Water-dropwort);
- *Schoenoplectus tabernaemontani* (Grey Club-rush);
- *Sparganium emersum* (Unbranched Bur-reed); and
- *Trifolium arvense* (Hare's-foot Clover).

4. SURVEY RESULTS

Habitats

- 4.1 The main habitats within and immediately surrounding the survey site are shown on Figure 1 - St Modwen Park, Newport Habitat Plan (below) and Target Notes are provided as Appendix 1.

Table 5. Phase I habitat areas (ha).		
Phase I Code	Habitat	Totals (ha)
A2.2	Scattered Scrub*	0.30
B4	Seeded Grassland	0.28
C3.1/I2.2	Tall Ruderals on Spoil	1.15
F1	Swamp	0.48
F2.1	Marginal Vegetation	0.30
F2.2/I2.2	Seasonally Inundated Spoil	4.09
G1	Standing Water	1.04
J1.2	Amenity Grassland	0.23
J1.3/I2.2	Short Ruderal Vegetation on Spoil	12.41
J1.4	Introduced Trees and Shrubs	0.05
J3.6	Buildings & Other Structures	0.08
J4	Bare Ground (mostly tracks)	2.40
TOTALS (ha)		23.56

* Note that scattered scrub is overlain on other habitats, so that the habitat totals slightly exceed the 23.26 ha.

A2.2 - Scrub

- 4.2 Scrub habitats extend to approximately 0.30ha. In addition to the blocks of scrub that are mapped, small bushes are scattered widely across the site. Ubiquitous across the site, the most frequent species recorded was butterfly-bush *Buddleja davidii*, with other less frequent species noted including bramble *Rubus fruticosus* agg., downy birch *Betula pubescens*, goat willow *Salix caprea*, hybrid crack-willow *Salix x fragilis nothovar. basfordiana* f. *sanguinea* and Rusty Willow *Salix cinerea* ssp. *oleifolia*. The field layer beneath scrub, was generally representative of the surrounding vegetation.

B4 - Improved grassland

- 4.3 A small 0.28 ha area of seeded grassland on restored ground at compartment TN02 was dominated by red fescue *Festuca rubra*, with locally frequent ruderal herb species such as

broad-leaved dock *Rumex obtusifolius*, creeping cinquefoil *Potentilla repens*, creeping thistle *Cirsium arvense* and dandelion *Taraxacum officinale*.

C3.1/I2.2 - Tall ruderals on spoil

- 4.4 Tall ruderal vegetation extended to approximately 1.15 ha. Bilbao's fleabane *Conyza floribunda* was the species that characterised tall ruderal vegetation across large parts of the site, with dense mono-specific stands in many areas. The most frequent associates were bristly ox-tongue *Helminthotheca echinoides* and hoary mustard *Hirschfeldia incana*. Other locally frequent species noted included American willowherb *Epilobium ciliatum*, black mustard *Brassica nigra*, broad-leaved dock, common nettle *Urtica dioica*, creeping thistle *Cirsium arvense* and wild teasel *Dipsacus fullonum*. Among the occasional components recorded were great mullein *Verbascum thapsus*, hemp-agrimony *Eupatorium cannabinum*, small-flowered evening-primrose *Oenothera cambrica*, smooth sow-thistle *Sonchus oleraceus*, spear thistle *Cirsium vulgare*, tall melilot *Melilotus altissimus*, viper's-bugloss *Echium vulgare* and weld *Reseda luteola*.

F1 – Swamp

- 4.5 Swamp vegetation extended to approximately 0.48 ha. common reed *Phragmites australis* was the dominant species in all areas identified, with associates limited to a few tall species such as hybrid crack-willow, these being visible from the margins of the areas of habitats that were largely inaccessible during the survey because of widespread flooding across the site.

F2.1 – Marginal Vegetation

- 4.6 Marginal vegetation, including linear stands of vegetation <5m wide along reens, extended to approximately 0.30 ha. As with swamp habitats, common reed was the most dominant species that characterised these stands of vegetation, with associates including locally frequent bulrush *Typha latifolia*, Cyperus sedge *Carex pseudocyperus*, greater pond-sedge *Carex riparia*, gypsywort *Lycopus europaeus*, hard rush *Juncus inflexus*, lesser water-parsnip *Berula erecta* and yellow iris *Iris pseudacorus*. Other occasional components recorded included common duckweed *Lemna minor*, purple-loosestrife *Lythrum salicaria* and water mint *Mentha aquatica*.

F2.2/I2.2 – Seasonally inundated spoil vegetation

- 4.7 Seasonally inundated vegetation on spoil extended to approximately 4.09 ha. Varied topography, substrates and water depth provided a wide range of conditions and consequently a moderately high botanical diversity was recorded. The most abundant species characterising the habitat mosaics of seasonally inundated spoil vegetation were common reed, creeping bent *Agrostis stolonifera*, Cyperus sedge and Kneiff's hook-moss *Drepanocladus aduncus*. Locally

frequent species noted included common fleabane *Pulicaria dysenterica*, common spike-rush *Eleocharis palustris*, common stonewort *Chara vulgaris*, hairy sedge *Carex hirta*, hard rush, jointed rush *Juncus articulatus*, marsh bryum *Bryum pseudotriquetrum*, olive beard-moss *Didymodon tophaceus*, pink water-speedwell *Veronica catenata*, pointed spear-moss *Calliergonella cuspidata* and water mint. A few species of local significance were noted, such as annual beard-grass *Polypogon monspeliensis*, brookweed *Samolus valerandi*, common stonewort and small-bud bryum *Bryum gemmiferum*.

G1 – Standing water

- 4.8 At the time of the survey, areas of standing water (which excluded temporarily flooded tracks and depressions) extended to approximately 1.04 ha. Due to the extent of surface flooding it was not possible to accurately determine the precise extent of more permanent water bodies, but a minimum of 10 were identified in Area A and one in Area B. Marginal vegetation, as described under F2.1 above, was characteristic of many pond margins, but aquatic vegetation was mostly unrecorded due to the timing of the survey and the depth of water due to high water levels. Reens holding open water were also mapped under this category and have the potential to support a range of significant species which would not have been apparent during the survey. Further survey of open water areas should be made during the summer months to enable a more accurate assessment be made of these features.

J1.2 - Amenity grassland

- 4.9 Amenity grassland, which extended to 0.23 ha, was restricted to the roadside verges of Queen's Way, only part of which lies within the site boundary. These verges are relatively recently created and appeared to have been seeded with a standard grass mix dominated by perennial rye-grass *Lolium perenne*, resulting in limited ecological interest.

J1.3/J2.2 Short ruderal vegetation on spoil

- 4.10 Short ruderal vegetation on spoil was extensive across the site, extending to approximately 13.41ha. The vegetation typically comprised an open sward of sparse herbs and grasses, with locally extensive cloaking of spoil by bryophytes and the cyanobacterium witch's butter *Nostoc commune*. Diversity was generally moderate and the composition heterogeneous, with the most abundant species encountered including bicoloured bryum *Bryum dichotomum*, Bilbao's fleabane, black medick *Medicago lupulina*, creeping bent and lesser bird's-claw beard-moss *Barbula convoluta* var. *convoluta*.
- 4.11 Among vascular plants, species tolerant of either summer-droughted soils and/or winter flooding were well represented, with good populations of biting stonecrop *Sedum acre*, colt's-foot *Tussilago farfara*, creeping cinquefoil *Potentilla reptans*, hairy sedge *Carex hirta*, rat's-tail

fescue *Vulpia myuros*, ribwort plantain *Plantago lanceolata*, scentless mayweed *Tripleurospermum inodorum*, white clover *Trifolium repens* and white stonecrop *Sedum album*. Species noted of local interest included blue fleabane *Erigeron acris*, common stork's-bill *Erodium cicutarium*, narrow-leaved everlasting-pea *Lathyrus sylvestris*, round-leaved crane's-bill *Geranium rotundifolium*, sea fern-grass *Catapodium marinum* and slender sandwort *Arenaria leptoclados*.

- 4.12 Among the extensive list of locally frequent components, mosses were prominent, and in addition to those mentioned above, moss covered incorporated species such as common cord-moss *Funaria hygrometrica*, fallacious beard-moss *Didymodon fallax*, hornschurch's beard-moss *Pseudocrossidium hornschurchianum*, pointed spear-moss *Calliergonella cuspidata*, redshank *Ceratodon purpureus*, silver-moss *Bryum argenteum* and whitish feather-moss *Brachythecium albicans*. Variation of the substrate extended bryo-diversity with stones and rocks holding occasional to locally frequent anomalous bristle-moss *Orthotrichum anomalum*, grey-cushioned grimmia *Grimmia pulvinata*, and wall screw-moss *Tortula muralis*. Additional species noted on concrete bases and tarmac included great hairy screw-moss *Syntrichia ruralis* var. *ruralis*, Nicholson's beard-moss *Didymodon nicholsonii*, sand-hill screw-moss *Syntrichia ruralis* var. *ruraliformis*. No notable species were recorded, with the few of local interest being common aloe-moss *Aloina aloides*, sand feather-moss *Brachythecium mildeanum* and small-bud bryum *Bryum gemmiferum*.

J1.4 – Introduced trees and shrubs

- 4.13 Verge plantings of trees and shrubs covering 0.05 ha were recorded. Tree species noted included alder *Alnus glutinosa*, birch *Betula* sp., David viburnum *Viburnum davidii* and Portugal Laurel *Prunus lusitanica*. A line of standards was also present on the amenity grassland verge, the mix here included elm *Ulmus* sp., field maple *Acer campestre* and lime *Tilia x europaea*.

J3.6 – Buildings and other structures

- 4.14 The only fixed structures within the survey area were associated with the pumping facilities, which extended to approximately 0.08 ha.

J4 - Bare ground

- 4.15 Bare ground extended to approximately 2.40 ha. A large proportion of bare ground comprised well-tracked access tracks (some flooded at the time of the survey), with recently cleared ground or deposited spoil making up the rest of the total. The flora in these areas was generally restricted to the verges, with only limited cover of pioneer acrocarpous mosses such as bicoloured bryum, common cord-moss and annuals such as Bilbao's fleabane.

Notable/Invasive flora

- 4.16 No fully protected species were recorded.
- 4.17 Notable species recorded during the PEA included six species listed in the Monmouthshire County Rare Plant Register (Tyler & Wood, 2019), namely:
- Sea fern-grass *Catapodium maritimum*, Monmouthshire status: Locally Scarce;
 - Opposite stonewort *Chara contraria*, Monmouthshire status: Locally Rare. Listed as Least Concern in Wales (Stewart & Hatton-Ellis, 2020);
 - Common stonewort *Chara vulgaris*, Monmouthshire status: locally Rare. Listed as Least Concern in Wales (Stewart & Hatton-Ellis, 2020);
 - Round-leaved cranes-bill *Geranium rotundifolium*, Monmouthshire status: Locally Scarce; and
 - Grey club-rush *Schoenoplectus tabernaemontani*, Monmouthshire status: Locally Rare.
- 4.18 Additional species of national or local importance that were recorded included:
- Annual beard-grass *Polypogon monspeliensis*, Listed as Nationally Scarce but a species that has greatly extended its range in recent years.

Invasive Non-Native Species

- 4.19 No species were recorded that are listed under Schedule 9 Part II list of non-native invasive plants, to which Section 14(2) of the Wildlife and Countryside Act 1981 (WCA 1981) applies.
- 4.20 Bilbao's fleabane is not listed under Schedule 9 but is a recent colonist that was recorded in almost all parts of the site, often in great abundance and was the most common species across much of the site. The species is a rapid colonist of disturbed ground, but its ecological impact on native flora appears not to have been studied and the species is poorly understood.

Protected Species

- 4.21 Between September 2020 and June 2021, 691 vascular plant and bryophyte records were made during this survey period, together with 150 faunal observations. Note, that given the moderately high level of vascular plant diversity recorded, it is likely the site supports a much greater faunal assemblage than that indicated, and further invertebrate surveys would undoubtedly reveal a significant invertebrate assemblage of at least local importance.

Badger Meles meles

- 4.22 Areas A and B do not contain suitable habitat for sett building and the site as a whole provides limited foraging potential for the species. No evidence of badger was recorded during the PEA and as such this species is not considered further within this assessment.

Bats

- 4.23 Habitat on site comprises areas of open water, stockpiled material, bare ground, and newly constructed buildings / warehouses. Therefore, the habitats on site provide negligible opportunities for roosting bats and limited habitat to support foraging / commuting bats. A bat house is known to be present within the Pools SINC at the neighbouring Glan Llyn development, and as such bats are known to be in the area.

Otter Lutra lutra

- 4.24 A system of reens cross the site in a number of places. These are reens are linked to a wider network of reens that cross the neighbouring Glan Llyn site and wider environs. The reens provide suitable habitat in places to support otter. Access to and egress from of the reens across the site is difficult in places due to the steep sided, concrete structures that form the banks. However, otters are known to be present within the wider environment and as such likely use part of the reen system for commuting across the site.
- 4.25 Otter footprints were noted in soft mud between two sections of reen near to TN09.

Water vole Arvicola terrestris

- 4.26 Suitable habitat within the site was identified for to support water vole (see Figure 1 Habitat Plan). Surveys for water vole have been undertaken during the course of the 2021 and a small population of water vole have been recorded within a waterbody located in the south western part of the site (Target Note P6).

Other mammals

- 4.27 The site is considered unlikely to be used by hare *Lepus europaeus* or hedgehog, both BAP species and covered by Section 7 of the Environment (Wales) Act 2016.

Birds

- 4.28 A significant population of ground-nesting waders is known to be a key feature of the area with opportunistic nesting typically occurring on areas of cleared ground by little ringed plover *Charadrius dubius* (Schedule 1, WCA), ringed plover *C. hiaticula* (Section 7, EWA) and lapwing *Vanellus vanellus* (Section 7, EWA). Wetland areas with swamp and scrub vegetation on site are likely to support breeding Schedule 1 (WCA) species such as *Cetti's Warbler *Cettia cetti*

and *kingfisher *Alcedo atthis* may breed locally within the reed system. Section 7 wetland species likely to breed include *reed bunting *Emberiza schoeniclus*, whilst drier areas of scrub have the potential to support a suite of birds including Section 7 species such as *skylar *Alauda arvensis*, *dunnock *Prunella modularis*, *song thrush *Turdus philomelos*, bullfinch *Pyrrhula pyrrhula* and *linnet *Carduelis cannabina*

4.29 N.B. Those marked “*” were recorded during the survey.

4.30 Habitat on site for other common species is limited to areas of reeds and scrub (see Figure 1). Species such as reed warbler *Acrocephalus scirpaceus* are also known to nest on the site.

Reptiles

4.31 The open areas of bare ground, rubble piles and standing water offer suitable habitat to support common reptile species such common lizard *Zootoca vivipara* and grass snake *Natrix natrix*.

Herpetofauna

4.32 Great crested newts have been recorded breeding in ponds immediately to the south of the site and, as such there is a possibility that this species could be present within the site. Suitable breeding habitat occurs in areas of standing water within P1 – P11 see Figure 1 - St Modwen Park, Newport Habitat Plan - below.

Invertebrates

4.33 The shrill carder bee *Bombus sylvarum* is the rarest and most threatened bumblebee species in England and Wales and is now only known as five isolated populations, with two in England (Thames Estuary and Somerset) and three in Wales (Gwent Levels, Kenfig/Port Talbot and Castlemartin). Although there are no records from within the survey area (most likely due to access restrictions), the shrill carder bee has been recorded from locations immediately adjacent to it (CCW data file 2020) and it is likely the species will utilise the rich abundance of forage species that the extensive brownfield provides.

4.34 Given the diversity and abundance of plants across the site, which when coupled with the high degree variation in of topography, soil chemistry and hydrology, means that it is likely the site will support an associated diverse and abundant invertebrate assemblage. In the absence of survey data, it is not possible to assess the significance of the assemblage.

4.35 Larval host plants recorded during the survey, which are known to support rare invertebrates include:

- Prickly lettuce *Lactuca serriola*, larval host of the Nationally Scarce moth Small ranunculus *Hecatera dysodea*, known to be established in the Newport area; and
- Tufted vetch *Vicia cracca* was recorded and is the primary larval host for the Nationally scarce weevil *Oxystoma cerdo*, which is known to occur locally.

5. CONCLUSION

Habitats

Reeds

- 5.1 The reeds on site provide a valuable resource for nesting bird species, such as reed warbler. As such, the removal of any of the reeds around the ponds / reens, as well as any other vegetation across the site should be undertaken outside of the breeding bird season (march – August inclusively). If this is not feasible then the area to be cleared must be checked by an experienced ecologist to ensure no active nests or nest under construction are harmed / destroyed during the clearance works.

Bare Ground

- 5.2 Areas of bare ground across the site provide suitable nesting habitat for ground nesting bird species, as such a mitigation strategy (see JN00474 D04 Breeding Bird Mitigation Strategy) to avoid harming / disturbance to ground nesting bird species as a result of earthworks / ground preparation works will be produced and adhered to during the breeding bird season.

Scrub

- 5.3 Areas of scrub across the site provide suitable habitat for breeding birds, reptiles and amphibians. As such, the clearance of any areas of scrub should be supervised by an experienced ecologist in the role of Ecological Clerk of Works (ECOW).

Notable Species

Birds

- 5.4 As discussed above, a number of the habitats present on site have the potential to support nesting birds. As such, the removal of these habitats or works affecting these habitats should be timed to avoid the breeding bird season (March – August inclusive) were possible. If this is not achievable then an experienced ecologist should be employed to assess when it is safe to continue works which may affect breeding birds.
- 5.5 Bare ground and short grassland areas across the site provide suitable breeding habitat for ground nesting bird species such as lapwing, ringed plover and little ringed plover. As such, a mitigation strategy for ground nesting birds will be produced and an ECoW will be present on site periodically during the breeding bird season in order to identify sensitive areas where nests are active or under construction and a suitable stand off and / or caging of these nests will be

undertaken in order to maximise the chances of successful broods and / or minimise the time each breeding pair spends on site.

- 5.6 For more details on these mitigation measures please see JN00474 D04 Breeding Bird Mitigation Strategy.

Bats

- 5.7 It is not considered that any suitable habitat to support roosting bats is present within the site. However, bats are known to be present within the area and as such it is recommended that any lighting required for night-time works or security lighting be designed in such a way as to avoid light spillage as far as possible for any suitable foraging / commuting areas.

Water vole

- 5.8 The waterbodies and reens on site have the potential to support water vole. As such, it is recommended that a survey for water vole is undertaken within suitable habitats across the site.
- 5.9 If water vole is found to be present, then either a scheme designed to incorporate the water voles *in situ* into the site preparation and construction phases or a protected species conservation licence will be applied for through Natural Resources Wales (NRW) to facilitate a translocation to a suitable donor site within the wider Llanwern site.

Other Mammals

- 5.10 Although no further survey work is recommended for mammals, the potential for these species to pass through the site exists. Therefore, it is recommended that consideration to the welfare of these species be made during any works as follows:
- Any man-made excavations, trenches or pits relating to the development will either be securely fenced off or covered up overnight to avoid entrapment or, if left open, an egress point (e.g., mammal ladders or a roughened plank) will be placed within the excavation to form a ramp to allow species to escape;
 - Any temporarily exposed open pipe systems will be capped in such a way as to prevent species gaining access as may happen when contractors are off site; and
 - Any excavations will be inspected each morning to ensure no mammals have become trapped overnight. Contractors will be made aware that trapped animals such as badgers may dig a temporary sett into the side of a trench. If a badger or an otter is found within any excavations, an ecologist must be contacted immediately for further advice.

Amphibians

- 5.11 Habitats on site are considered suitable to support a range of amphibian species including the protected great crested newt. Previous survey work undertaken by Halcrow in 2005 did not identify any great crested newts across the site, however they are known to be present within the local area and as such a series of presence / absence surveys for great crested newt should be undertaken in order to ascertain if this species is a constraint to development. Should great crested newt be identified then liaison with NRW will be required to identify a strategy for safeguarding the population present. This is likely to include an application to NRW for EPSM licence to translocate the species to a suitable receptor area.

Reptiles

- 5.12 The site contains habitats such as stockpiles, bunds, open areas and waterbodies which have the potential to provide suitable habitat for common reptile species. Previous survey work in 2005 by Halcrow for reptiles did not record the presence of any within the site, however it is considered likely that the species are present within the area and as such, in order to ascertain whether reptiles pose a constraint to the ground preparation works and / or the development, a suitable of reptile surveys should be undertaken across the site.
- 5.13 If reptiles are recorded during the survey, then a suitable mitigation strategy will be designed and agreed with Newport LPA and Natural England in order to ensure the development of the site does not have a deleterious impact upon local reptile populations.

6. REFERENCES

JNCC. 2010. Handbook for Phase 1 habitat survey - a technique for environmental audit. JNCC, UK.

Rodwell, J.S. 1992. British Plant Communities Volume 2: Grasslands and montane communities. Cambridge University Press, UK.

Stace, C. 2010. *New Flora of the British Isles*. Cambridge University Press.

Stroh, P.A., Leach, S.J., August, T.A., Walker, K.J., Pearman, D.A., Rumsey, F.J., Harrower, C.A., Fay, M.F., Martin, J.P., Pankhurst, T., Preston, C.D. & Taylor, I. 2014. *A Vascular Plant Red List for England*. Botanical Society of Britain and Ireland, Bristol.

APPENDICIES

Target Note: Phase I	Habitat Description	Photograph(s)
01:	C3.1 Tall ruderal vegetation on I2.2 Steelworks slag/waste	
02:	B4 Improved grassland	
03:	J1.4 Introduced shrubs with C3.1 Tall ruderal vegetation	

04:	J1.3 Short ruderal vegetation (parts seasonally inundated) on I2.2 Steelworks slag/waste	
05:	F2.2 Inundation vegetation on I2.2 Steelworks slag/waste	
06:	A2.2 Scattered Scrub encroaching on F1/I2.2 Swamp on steelworks slag/waste	

07:	C3.1 Tall ruderal vegetation on I2.2 Steelworks slag/waste	
08:	J1.3 Amenity grassland with planted standards	
09:	G1 Reen with stands of F2.1 Marginal vegetation	

10:	C3.1 Sparse, tall ruderal vegetation on I2.2 Rubbly steelworks slag/waste	
11:	J1.3 Established short ruderal vegetation on I2.2 Steelworks slag/waste	
12:	G1 Reen with J1.3 Short ruderal vegetation on reen banks	

13:	J1.3 Pioneer short ruderal vegetation on I2.2 Steelworks slag/waste	
14:	J1.3 Established short ruderal vegetation on I2.2 Steelworks slag/waste	
15:	G1 Reen with sparse F2.1 Marginal vegetation	

16:	F2.2 Swampy-inundation vegetation on I2.2 steelworks slag/waste	
17:	Mound with C3.1 Tall ruderal vegetation on I2.2 Steelworks slag/waste	
18:	G1 Reen with stands of J1.3 Short ruderal vegetation on reen banks	

19:	G1 Reen with F2.1 Marginal vegetation and J1.3 Short ruderal vegetation on reen banks	
20:	J1.3 Short ruderal vegetation on I2.2 Steelworks slag/waste and concrete	
21:	J1.3 Short ruderal vegetation on I2.2 Steelworks slag/waste	

22:	Mound with J1.3 Short ruderal vegetation on I2.2 Steelworks slag/waste	
23:	Access route - reen cross-over point	
24:	F2.2 Swampy-inundation vegetation on I2.2 steelworks slag/waste	

25:	F1/I2.2 Swamp on steelworks slag/waste	
26:	J1.3 Short ruderal vegetation on I2.2 Steelworks slag/waste	
27:	F2.2 Inundation vegetation on I2.2 steelworks slag/waste	

28:	J1.3 Short ruderal vegetation on I2.2 Steelworks slag/waste	
29:	F2.2 Inundation vegetation on I2.2 steelworks slag/waste	
30:	J1.3 Short ruderal vegetation on J5 Concrete bench	

31:	J4 Bare ground (steelworks slag/waste)	
32:	F2.2 Inundation vegetation on I2.2 steelworks slag/waste	
33:	A2.2 Scattered Scrub on F2.2/I2.2 Inundation vegetation on steelworks slag/waste	

34:	J1.3 Short ruderal vegetation adjacent to G1 Reen	
35:	J2.5 Lower plant vegetation on concrete wall running alongside Monks Ditch	
P01:		No image
P02:		

P03:		
P04:	G1 Standing water amongst F1/I2.2 Swamp on steelworks slag/waste.	
P05:		

P06:



P07:



P08:



P09:		
P10:		
P11:		

Badgers

Badgers and their setts are protected under the Protection of Badgers Act (1992), which consolidated and added to previous legislation. It is illegal to wilfully kill or injure a badger or to interfere with a sett, unless a license is granted. A license may be granted by Natural England for the purpose of development (amongst other reasons) as defined in Section 55 (1) of the Town and Country Planning Act 1990.

Bats

Bats are protected under Schedule 5 of the Wildlife & Countryside Act (1981, as amended) and are also listed under Section 41 of the Natural Environment and Rural Communities Act 2006 (NERC Act). They are protected by law against all of, but not limited to, the following:

- intentional or reckless killing, injuring, taking;
- damage to, destruction of, obstruction of access to any structure or place used by a scheduled animal for shelter or protection; and
- disturbance of animal occupying such a structure or place.

The conservation (Natural Habitats &c.) Regulations (1994) provide additional protection for the breeding sites and resting places of bats.

Hazel Dormouse

Dormice are given full protection under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Protection to the species is also afforded by Schedule 2 of the Conservation (Natural Habitats &c) Regulations, 1994, making the hazel dormouse a European Protected Species. These two pieces of legislation operate in parallel, although there are some small differences in scope and wording. Under the provisions of Section 9 of the Wildlife & Countryside Act, it is an offence to:

- Intentionally kill, injure or take a dormouse;
- Possess or control and live or dead specimen or anything derived from a dormouse (unless it can be shown to have been legally acquired);
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a dormouse; and
- Intentionally or recklessly disturb a dormouse while it is occupying a structure or place which it uses for that purpose.

Schedule 2 of the Conservation (Natural Habitats &c) Regulations, 1994 make it an offence to:

- Deliberately capture or kill a dormouse;
- Deliberately disturb a dormouse;
- Damage or destroy a breeding site or resting place of a dormouse; and
- Keep transport, sell or exchange, or offer for sale or exchange a live or dead dormouse or any part of a dormouse.

The dormouse is a Priority Species under the UK Biodiversity Action Plan (UK BAP) and has been adopted as a Species of Principal Importance in England under section 41 of the NERC Act 2006 (section 42 in Wales).

Red Squirrel

Red squirrels receive full protection under the Wildlife and Countryside Act 1981 (as amended).

Red squirrels and their resting places are fully protected in Britain; it is an offence to:

- deliberately, capture, injure or kill them;
- to damage, destroy or obstruct their breeding or resting places; and
- disturb them in their breeding or resting places.

Great crested newt

Great crested newts and their habitats, both aquatic and terrestrial, are protected under the Wildlife & Countryside Act 1981 (amended by the Environmental Protection Act 1990), and under the Conservation (Natural Habitat, &c.) Regulations 1994. For any development that affects great crested newts it must be first demonstrated that:

- there are no alternatives;
- there are over-riding reasons of public interest or safety; and
- it will not adversely affect the conservation status of the species.

Any works affecting the breeding or foraging habitat of the species is subject to a license from Natural England. A license is only granted where compliance with these tests is demonstrated.

Breeding Birds

Under the Wildlife & Countryside Act (1981), a wild bird is defined as any bird of a species that is resident in or is a visitor to the European Territory of any member state in a wild state. Game birds, however, are not included in this definition (except

for limited parts of the Act). They are covered by the Games Acts, which fully protect them during the closed season.

All birds, their nests and eggs are protected by law and it is an offence, with certain exceptions, to;

- intentionally kill, injure or take any wild bird;
- intentionally take, damage or destroy the nest of any wild bird whilst it is in use or being built;
- intentionally take or destroy the egg of any wild bird;
- have in one's possession or control any wild bird, dead or alive, or any part of a wild bird, which has been taken in contravention of the Act or the Protection of Birds Act 1954;
- have in one's possession or control any egg or part of an egg which has been taken in contravention of the Act or the Protection of Birds Act 1954;
- use traps or similar items to kill, injure or take wild birds;
- have in one's possession or control any bird of a species occurring on Schedule 4 of the Act unless registered, and in most cases ringed, in accordance with the Secretary of State's regulations;
- intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs of young, or disturb the dependent young of such a bird.

Rare species listed in Schedule 1 Part 1 are given further protection, including special increased penalties under Subsection 1 (5) as amended by the Countryside and Rights of Way Act 2000. If any person intentionally or recklessly disturbs any wild bird included in Schedule 1 while it is building a nest or is in, or near containing eggs or young.

The British Trust for Ornithology (BTO) has a list of birds that are Species of Conservation Concern. These birds are not legally protected but where they are found on site they should be given planning consideration. The criteria for birds listed as amber (medium conservation concern) include:

- Historical population decline during 1800-1995, but recovering: population has more than doubled over last 25 years;
 - Moderate (25-50%) decline in UK breeding population over last 25 years;
 - Moderate (25-50%) contraction of UK breeding range over last 25 years;
 - Moderate (25-50%) decline in UK non-breeding population over last 25 years;
-

- Species with unfavourable conservation status in Europe (Species of conservation Concern);
- Five year mean of breeding pairs in the UK;
- $\geq 50\%$ of UK breeding population in 10 or fewer sites.
- $\geq 50\%$ of UK non-breeding population in 10 or fewer sites;
- $\geq 20\%$ of European breeding population in UK;
- $\geq 20\%$ of NW European (wildfowl), East Atlantic Flyway (waders) or European (others) non-breeding populations in UK.

Water vole

From the 6th April 2008 there were changes to the Wildlife and Countryside Act 1981 (Variation of Schedule 5) (England) Order 2008) affecting water voles *in England only*. Water voles now benefit from full protection under the WCA 1981 in England.

Under the previous law (which covered both England and Wales and still remains in Wales), water voles only benefited from protection under s9(4) WCA 1981. This meant that their burrows were legally protected ie it was an offence to intentionally or recklessly:

- Damage, destroy, or obstruct access to, a structure or place which is used by water voles for shelter or protection; or
- Disturb a water vole whilst it is occupying such a structure or place which it is using for that purpose.

Since the 6th April 2008, water voles in England have benefited from full section 9 protection. So, in addition to the above offences it is now also an offence to:

- Intentionally kill, injure or take a water vole;
- Have in one's possession or control any live or dead water vole or derivatives; or
- Sell, or offer to sell a water vole, or to be found in possession of, or to transport, a water vole for the purpose of sale. This includes publishing any advertisement for the purchase or sale of water voles.

Otter

Otters are fully protected by their inclusion in Annex II of the Habitats Directive (92/43/EEC) and Schedule 5 of the Wildlife & Countryside Act 1981 (as amended) and it is therefore subject to the provisions of Section 9, which makes it an offence to:

- intentionally kill, injure or take an otter [Section 9 (1)];
- possess or control any live or dead specimen or anything derived from an otter [Section 9(2)];
- intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by an otter [Section 9(4) (a)];
- intentionally or recklessly disturb an otter while it is occupying a structure or place which it uses for that purpose [Section 9 (4)(b)];
- sell, offer for sale, possess or transport for the purpose of sale or publish advertisements to buy or sell an otter.

A license is required from Natural England if the potential to commit an offence exists in order for the development to take place.

Reptiles

There are six species of native reptile in the UK. Only two species, smooth snake (*Coronella austriaca*) and sand lizard (*Lacerta agilis*) are fully protected under UK and European Legislation. They are listed on Schedule 5 of the Wildlife & Countryside Act 1981 (as amended) and under Schedule 2 of the Conservation (Natural Habitats &c.) Regulations 1994. Under these legislations it is unlawful to:

- deliberately or intentionally kill, injure or take (capture) or disturb sand lizards and smooth snakes;
- deliberately take or destroy the eggs of sand lizards;
- damage or destroy a breeding site or resting place, or intentionally damage a place used for shelter and protection;
- intentionally obstruct access to places used for shelter; and
- keep, transport, sell or exchange, or offer for sale or advertising.

Hedgerows

All hedgerows are potentially protected by the Hedgerow Regulations 1997. Under the Regulations it is against the law to remove or destroy certain hedgerows without permission from the LPA. These regulations do not apply to any hedgerow within the curtilage of, or marking the boundary of the curtilage of, a dwelling house.

Permission is required before removing hedgerows that are at least 20m in length and over thirty years old. Permission is gained by submitting a Hedgerow Removal Notice to the Local Planning Authority (LPA) as set out in Schedule 4 of the

Regulations. The LPA will then assess the importance of the hedgerow using the criteria set out in Schedule 1 of the Regulations.

Permission is not required in the following instances:

- Where planning permission has been authorised, except where permission has been granted by the Town and Country Planning General Permitted Development Order 1995;
- To make a new opening in substitution for an existing one which gives access to land;
- To obtain temporary access to any land in order to give assistance in an emergency;
- To gain access to land where another means of access is not available or is available at a disproportionate cost;
- For national defence purposes;
- To carry out work for the purposes of flood defence or land drainage;
- To prevent the spread of, or ensure the eradication of, a plant or tree pest;
- For work undertaken by the Secretary of State in respect of any highway for which s/he is the highway authority or in relation to which s/he has the same powers as the Local Highway Authority;
- To prevent obstruction of or interference with electric lines and plant or prevent danger under the Electricity Act 1989; and
- For the proper management of the hedgerow.

Hedgerows in areas covered by a historic landscape characterisation are often protected on the basis of historic importance and their wildlife value. UK Biodiversity Action Plan (BAP) priority habitats include all hedgerows with at least 80% cover of at least one woody UK native species (UK BAP, 2008).

The current Wiltshire hedgerow BAP definition is based on the previous UKBAP HAP definition and is restricted to ancient hedgerows in existence before the Enclosure Acts and hedgerows which contain four or more woody species or have a rich basal flora of herbaceous plants.

Trees and Woodland

The potential effect of development on trees, whether statutorily protected by a Tree Preservation Order (TPO) or by their inclusion within a conservation area or not, is a

material consideration that is taken into account by LPA's when dealing with planning applications.

The National Planning Policy Framework (NPPF) states that:

“When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:

Planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss.”

“New development should positively incorporate new and protect and enhance existing trees unless there are clear and demonstrable reasons why their removal would aid delivery of a better development overall.”

The Wiltshire Council Local Plan Core Policy 51 - Landscape Management states that:

“Proposals will need to demonstrate that the following aspects of landscape character have been conserved and where possible enhanced through sensitive design, landscape mitigation and enhancement measures. The locally distinctive pattern and species composition of natural features such as trees, hedgerows, woodland, field boundaries, watercourses and waterbodies.”

A TPO can be made to afford protection to any tree in any location under Section 198 of the Town and Country Planning Act 1990. This Act also requires that, except in certain circumstances, no work shall be carried out which will affect trees over a certain size which are situated in a Conservation Area. Six weeks' notice must be given to the Local Authority prior to work being carried out.

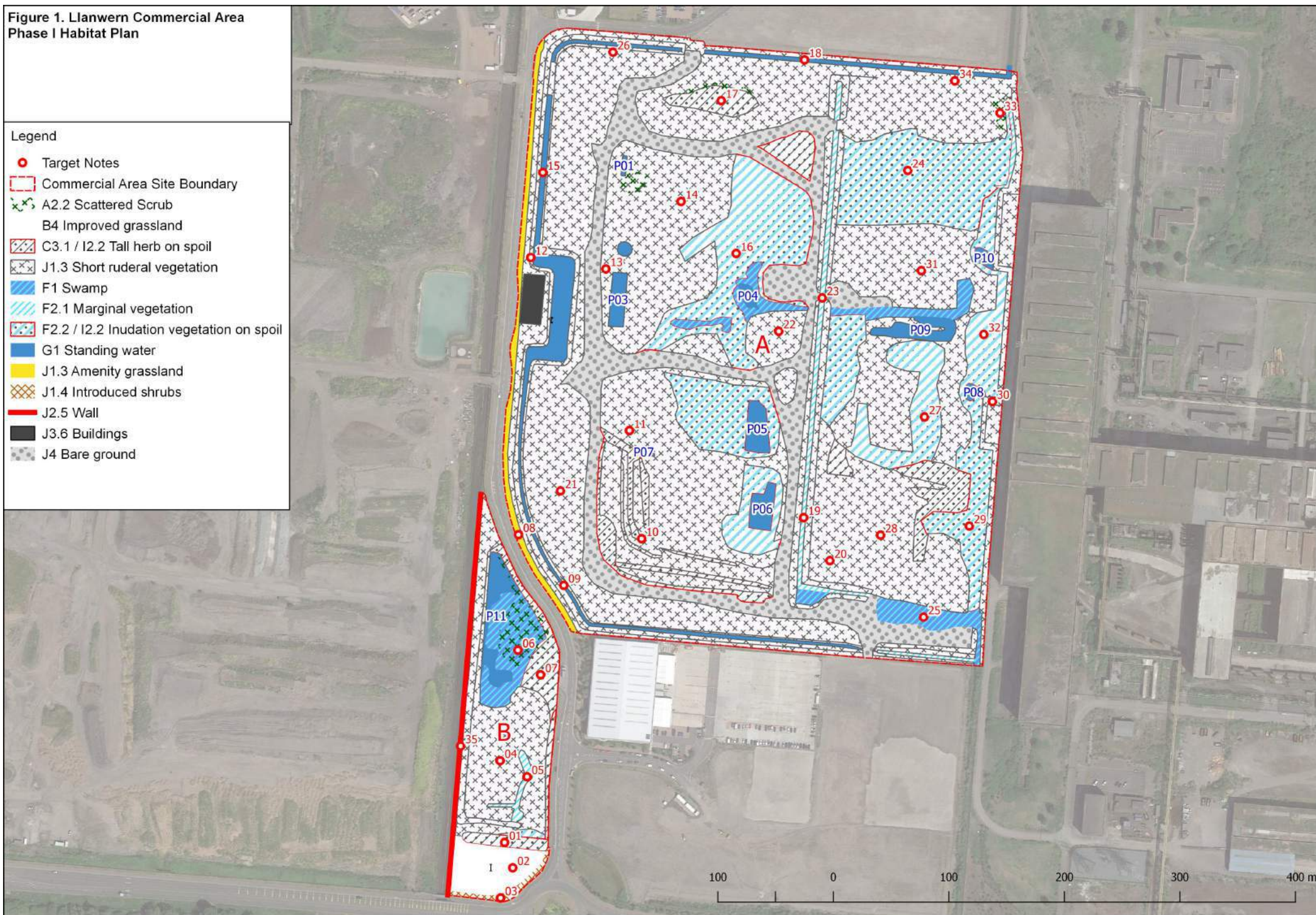
Even where no legal designations apply it may be necessary to obtain a felling licence. A felling licence is required when the volume of timber to be removed exceeds a specified amount. The Forestry Commission administers felling licences under the Forestry Act 1967.

DRAWINGS

**Figure 1. Llanwern Commercial Area
Phase I Habitat Plan**

Legend

- Target Notes
- Commercial Area Site Boundary
- ✕✕ A2.2 Scattered Scrub
- B4 Improved grassland
- C3.1 / I2.2 Tall herb on spoil
- J1.3 Short ruderal vegetation
- F1 Swamp
- F2.1 Marginal vegetation
- F2.2 / I2.2 Inudation vegetation on spoil
- G1 Standing water
- J1.3 Amenity grassland
- J1.4 Introduced shrubs
- J2.5 Wall
- J3.6 Buildings
- J4 Bare ground





TITLE: Site boundary - 1km buffer

SITE: Llanwern

CLIENT: St Modwen Developments Ltd

JOB NUMBER: JN00474

DATE: October 2021

DRAWN/CHECKED: JW/MK

SCALE: NTS

DRAWING NUMBER: JN00474/DW02

Key:

 Red Line Boundary

 1km Buffer

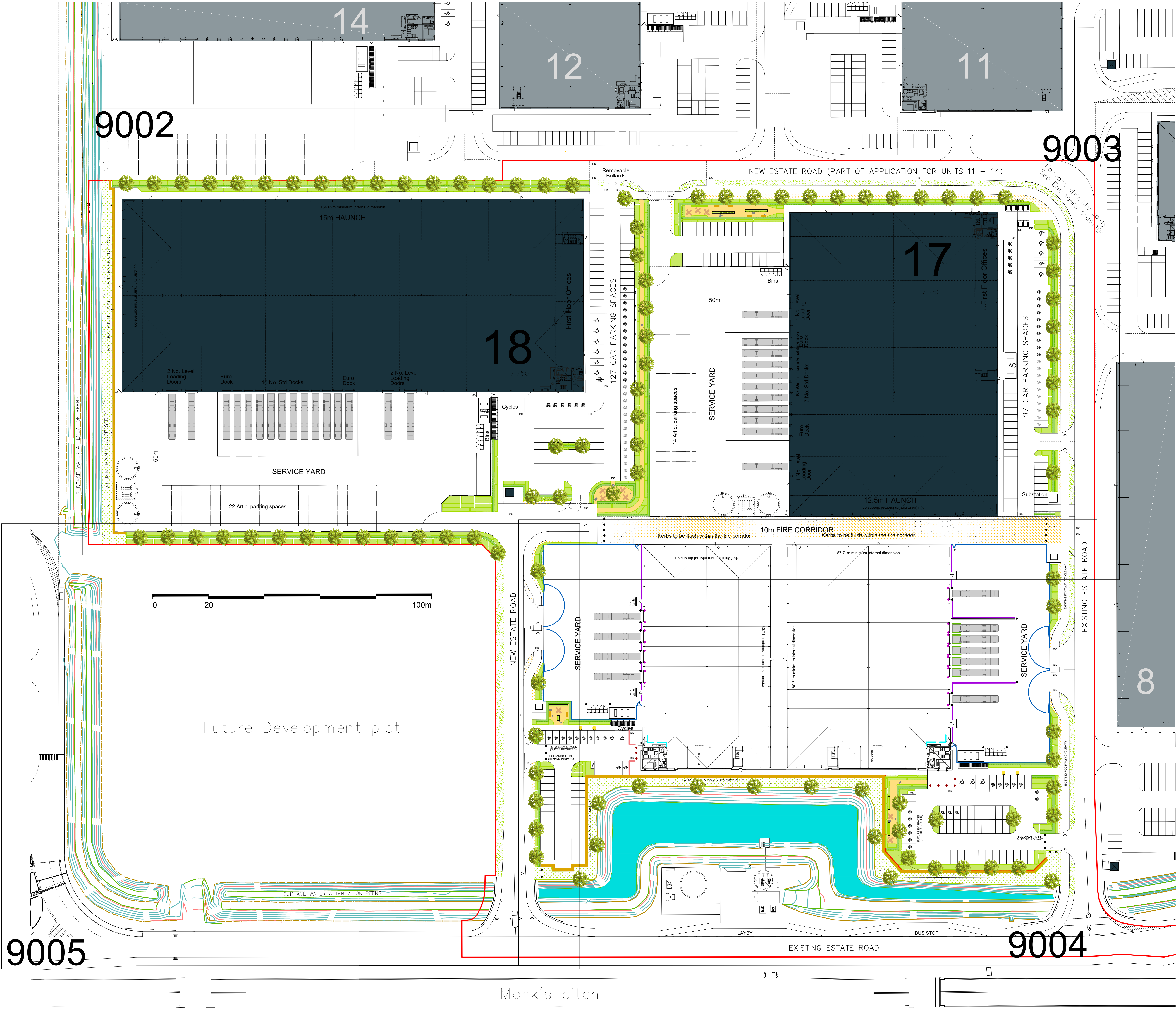


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APPENDIX 6

Landscape Key

- Tree planting
- Shrub planting
- Hedge planting
- Grassed areas (close mown)
- Wildflower and grass seed mix
EM2 Standard General Purpose Meadow Mixture
supplied by Emorsgate Seeds (or equal approved)
- Flowering Lawn Mixture
EL1 Flowering Lawn Mixture supplied by Emorsgate
Seeds (or equal approved)
- Outdoor amenity spaces /
meeting rooms
- Raised edible planting
beds
- Amenity Space - crushed
stone surface-self binding
gravel (as engineers details
or equal approved)
- Retaining Wall (as engineers
details)
- Root barriers



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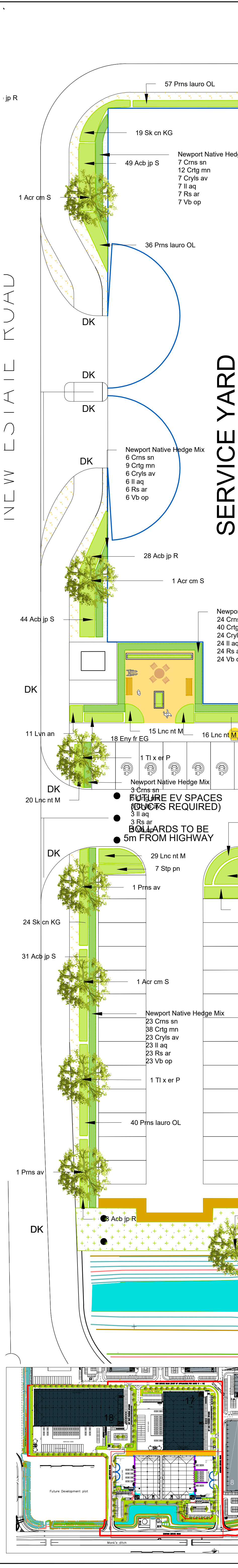
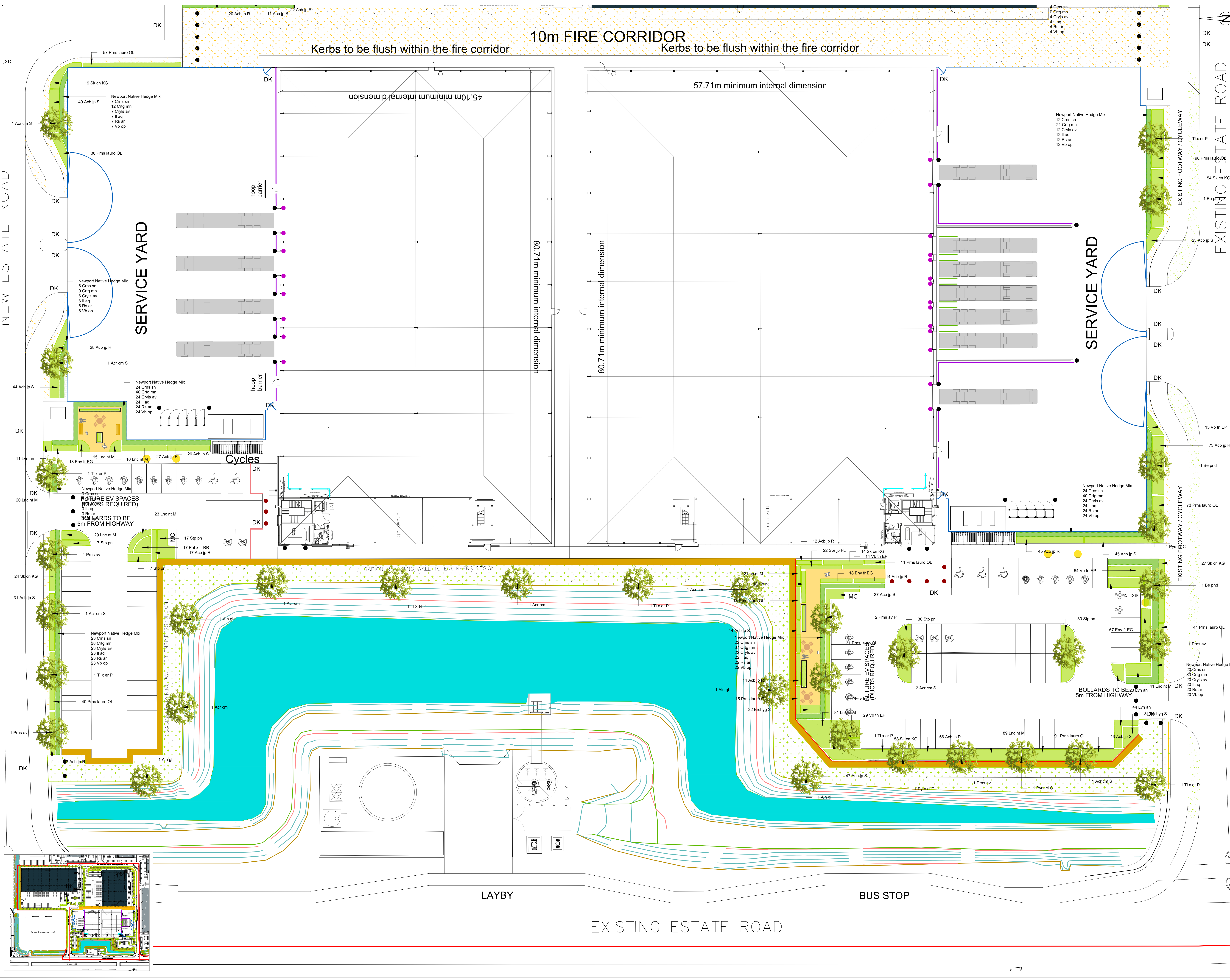
Drawing Scale Bar (ensure drawing is printed to the correct sheet size)

Safety, Health & Environment Information

In addition to the hazards / risks normally associated with the types of work detailed on this drawing take note below. It is assumed that all works on this drawing will be carried out by a competent contractor, working, where appropriate, to an appropriate method statement.

Construction risks Maintenance/Cleaning risks Demolition/Adaption risks





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Notes

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Drawing Scale Bar (ensure drawing is printed to the correct sheet size)

Scale: 1:200

0m 2m 4m 6m 8m 10m 12m 14m 16m 18m 20m

Safety, Health & Environment Information

In addition to the hazards / risks normally associated with the types of work detailed on this drawing take note below. It is assumed that all works on this drawing will be carried out by a competent contractor, working, where appropriate, to an appropriate method statement.

Construction risks	Maintenance/Cleaning risks	Demolition/Adaptation risks

Landscape Key

- Tree planting
- Shrub planting
- Hedge planting
- Grassed areas (close mown)
- Wildflower and grass seed mix
EM2 Standard General Purpose Meadow Mixture
(supplied by Emongate Seeds or equal approved)
- Flowering Lawn Mixture
EL1 Flowering Lawn Mixture supplied by Emongate
Seeds (or equal approved)
- Outdoor amenity spaces /
meeting rooms
- Raised edible planting
beds
- Amenity Space - crushed
stone surface-self binding
gravel (as engineers details
or equal approved)
- Retaining Wall (as engineers
details)
- Root barriers

Rev	Description	By	CHK	Date
P02	Updates to Units 15 & 16 layout	MM	DB	20.05.25
P01	First Issue	MM	DB	26.02.25

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Client: **INDURENT**

Project: Indurent Park, Newport
Phase 6B

Title: Detailed Soft Landscape Plan
Sheet 3 of 4

Status	Scale	Date Created
Planning	1:200 @A0	Feb 2025

Task Team	Information	Task Information
Manager	Author	Manager
DB	MM	DB

Document Number: 5124-RPS-XX-EX-DR-L-9004

Project Code - Originator - Zone - Level - Type - Risk - Drawing Number

RPS Project Number: 794-PLN-LAN-5124

Subsidiary: 53

Revision: P02

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APPENDIX 7

DRAWINGS



DRAWING TITLE: Donot & Re Sites

KEY:

 receptor site

Donor Site

 Donor Site

SITE: Indurent Park
CLIENT: Indurent
JOB NUMBER: JN00741
DRAWING NUMBER: JN00741/DV
DATE: January 2025
DRAWN/CHECKED: CH
SCALE: NTS

