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HUNTSPILL ENERGY PARK
PURITON
BRIDGWATER

Ecological Mitigation Strategy And Management Plan (Remediation Phase)

August 2021
5106.EMSMP.vf3

ecology solutions for planners and developers

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1. INTRODUCTION

1.1 The Ecological Mitigation Strategy and Management Plan (EMSMP) was initially prepared by Ecology Solutions Ltd on behalf of BAE Systems in respect of the remediation phase of the Huntspill Energy Park, Puriton. The EMSMP has now been revised in light of the Section 73 application on the existing planning consent (Ref: 42/11/00017). The site location is shown on Plan ECO1. This document sets out the mitigation strategy for features of ecological interest and associated faunal species, due to be retained and protected. It also sets out specific management objectives and prescriptions for retained habitats and faunal species.

1.2 This EMSMP has been specifically produced to discharge Condition 7 (reproduced below) of the planning consent, in relation to the remediation of the site.

1.3 Condition 7 states:

"Prior to the commencement of remedial works and earthworks, details shall be submitted to, and approved in writing by, the LPA in respect of the provision of an ecological mitigation and management plan as identified in the ecological reports. The Plan shall include the proposed mitigation for protected species within the site and the management of the retained habitats to ensure that biodiversity is maintained and enhanced within the Site. The remedial works and earthworks shall proceed in accordance with the approved details."

1.4 This EMSMP has been written with reference to published guidance from the Chartered Institute of Ecology and Environmental Management (CIEEM) and in accordance with Natural England guidelines for protected species.

1.5 This EMSMP is set out as follows:

- Ecological baseline and evaluation of important features within the site;
- Mitigation Strategy to avoid significant adverse impacts on features due to be retained within the Site; and
- Management prescriptions in order to achieve specific objectives, including any monitoring requirements.

2. ECOLOGICAL BASELINE AND EVALUATION

2.1 A suite of ecological surveys have been undertaken at the Site and in a wider study area by EnvironPlus International Limited (EPI) and Ecology Solutions during the period 2007 and 2021.

2.2 Habitat surveys were based upon an extended Phase 1 survey technique as recommended by Natural England. The habitats and dominant plant species were recorded, together with conspicuous faunal activity and evidence of the presence, or potential presence, of protected species. In addition to the Phase 1 habitat surveys, detailed hedgerow assessments have been undertaken along with specific botanical surveys.

2.3 [redacted]

Results

Habitats

2.4 Habitat features identified within the site include:

- Improved Grassland;
- Semi-Improved Grassland;
- Amenity / Rough Grassland;
- Marshy Grassland;
- Plantation / Woodland;
- Scrub;
- Hedgerows;
- Tall Ruderal Vegetation;
- Ephemeral / Short Perennial Vegetation;
- Standing Water;
- Seasonal Wet Ditches / Dry Ditches; and
- Buildings and Hardstanding

2.5 The locations of these features is shown on Plan ECO2. Habitat descriptions, including the botanical composition, are set out most recently within the Chapter 7 of the Environmental Statement for the Huntspill Energy Park (Ref: 42/13/00010).

Faunal Species

2.6 Protected species, or evidence of use (or potential use) by protected species, noted within the site are as follows:

- [redacted]
- Bats;
- Water Vole;
- Nesting birds;
- Great Crested Newts; and

- Common reptiles (Grass Snake only);

2.7 In addition the invertebrate fauna at the site was of some note.

2.8 The locations for the relevant protected species records are shown on Plan ECO3. Full details of the survey results are set out most recently within the Chapter 7 of the Environmental Statement for the Huntspill Energy Park (Ref: 42/13/00010).

3. MITIGATION STRATEGY

3.1 The mitigation strategy proposed is based around the ecological baseline as recorded through a series of specific ecological surveys undertaken over several years. The strategy set out below accords with current legislative requirements and relevance guidance. It should be noted that in certain instances licences are required from Natural England.

Designated sites

3.2 There are no statutory designated sites of nature conservation interest within the site. The nearest statutory designated site is the Huntspill River National Nature Reserve (NNR), which is located approximately 0.7km to the north of the application site. It is considered that there will be no direct impacts on the NNR as a result of the planning application proposals. The measures described below in relation to potential dust and hydrological contamination of on-site features will mitigate any perceived risk to this designated site.

3.3 There are eight non-statutory designated sites of nature conservation interest within or immediately adjacent to the Site (see Plan ECO4). The impacts on each, together with the associated mitigation measures are described below.

3.4 Puriton Rhynes and Ponds. This Local Wildlife Site (LWS) is located in the northeast corner of the Site. It comprises an area of reed bed (outside of the site) that runs north of the site to the Huntspill River. It is designated for its notable plant species within the rhynes (drainage ditches), and because it supports Otter and a nationally scarce dragonfly the Hairy Dragonfly.

3.5 The southern corner of the LWS will be lost to the proposals, however it is thought that this area of the LWS should not have been included within the designation in the first place on account of the built form which was in fact present, as opposed to any of the listed qualifying features for the LWS. The rest of the LWS will be retained as part of the proposal.

3.6 Buildings are situated within the LWS and these are to be demolished. In addition associated earth bunds are to be removed (at least in part), with the exception of that to be retained for its historic value.

Mitigation *Any machinery used within this area should keep to existing tracks wherever possible.*

Any required clearance of ditches should avoid damage / disturbance of banks on account of the presence of Water Voles. Spoil should be deposited at a distance of around 2m from the bank edge in locations where Water Voles are known to be present (see further below in respect of water Vole mitigation).

Wheel washes and damping down techniques to be employed to prevent dust contamination where required.

Site personnel to be made aware of the sites designated status and adopted emergency procedures in the unlikely event of a pollution incident. A spill kit will be provided on-site.

Protective (e.g. herras) fencing will be installed along the boundary of retained parts of this LWS to prevent encroachment of machinery.

3.7 Borrow Pit, Puriton. The Borrow Pit LWS is situated immediately adjacent to the east of the Site. It is designated for its breeding population of Cetti's Warbler. The proposals will not directly affect the Borrow Pit LWS. The mitigation described below will avoid adverse impacts from hydrological contamination.

Mitigation

Site personnel will be made aware of the sites designated status and adopted emergency procedures in the unlikely event of a pollution incident. A spill kit will be provided on-site.

Wheel washes and damping down techniques to be employed to prevent dust contamination where required.

3.8 Stoning Pound Field South and Stoning Pound Rhyne. This LWS is situated immediately to the east of the Site (to the south of the Borrow Pit LWS. It is designated for its notable plant species and it previously supported Otter. It will not be directly affected by the proposals. The mitigation described below will avoid adverse impacts from potential hydrological and dust contamination.

Mitigation *All relevant mitigation in respect of ditches (set out further below) should be strictly adhered to.*

Site personnel will be made aware of the sites designated status and adopted emergency procedures in the unlikely event of a pollution incident. A spill kit will be provided on-site.

Wheel washes and damping down techniques to be employed to prevent dust contamination where required.

3.9 Woolavington Road and Fields North. This LWS is situated immediately south of the Site. It is designated for the mire habitats that it supports. The drainage strategy within the site will ensure that this habitat is not affected by the proposals.

Mitigation *All relevant mitigation in respect of ditches (set out further below) should be strictly adhered to.*

Site personnel to be made aware of the sites designated status and adopted emergency procedures in the unlikely event of a pollution incident. A spill kit will be provided on-site.

Wheel washes and damping down techniques to be employed to prevent dust contamination where required.

3.10 Puriton Cowslip Field. This LWS is situated within the Site just north of the Woolavington Road and Fields North LWS. It is designated for its neutral grassland habitat and the plant species it supports, though it is currently suffering from lack of management. This LWS will be partially lost to development, with the northern section falling within the proposed development plateau. It should be noted that, as with the Puriton Rhynes and Ponds LWS, the majority of the area affected is not considered to be contain the listed qualifying feature for the LWS.

Mitigation *To prevent encroachment by machinery fencing (herras) will be erected around the retained sections of the LWS. Where the site is bound by rhynes (to the south) no fencing will be required.*

Site personnel to be made aware of the sites designated status and adopted emergency procedures in the unlikely event of a pollution incident. A spill kit will be provided on-site.

Wheel washes and damping down techniques to be employed to prevent dust contamination where required.

3.11 Puriton Ash Ground. This LWS is located in the west of the Site and is designated for the notable plant species that it supports. This site is contaminated and has been remediated. A landscape feature (vegetated bund) consisting of material that is not suitable for use in development plots has been used to cover the area. An area of the LWS that is relatively uncontaminated has be retained, forming part of a larger ecologically rich landscape feature once the bund has been created.

Mitigation *The retained part of the LWS is to be fenced to prevent encroachment by machinery.*

Site personnel to be made aware of the sites designated status and adopted emergency procedures in the unlikely event of a pollution incident. A spill kit will be provided on-site.

Wheel washes and damping down techniques to be employed to prevent dust contamination of retained habitats where required.

3.12 Northmead Drove Fields. This LWS is situated immediately to the northwest of the Site. It is designated for its mosaic of grassland habitats and rhynes. It will not be affected directly by the proposals and no specific mitigation is required.

3.13 Puriton Meadows and Rail Spur. This LWS is situated in the northwest of the Site, continuing off-site along the railway spur to the northwest where it bisects the Northmead Drove Fields LWS. It is designated for its notable species and an area of semi natural grassland. This area will not be directly affected by the proposals with only access required to facilitate construction of new habitats within the mitigation area to the east. The existing access track traversing the LWS would be utilised but wider access to the grassland habitat will be restricted during all works. This will ensure that no accidental encroachment into this area occurs and safeguards the designating features.

Mitigation

Site personnel to be made aware of the sites designated status and adopted emergency procedures in the unlikely event of a pollution incident. A spill kit will be provided on-site.

Signage at the LWS boundary to be provided and where necessary this will be fenced to prevent encroachment by machinery.

Wheel washes and damping down techniques to be employed to prevent dust contamination where required.

Habitats

3.14 The habitats within the Site, outside of the LWSs, generally hold limited ecological value, comprising areas of woodland plantations, unmanaged hedgerows, semi-improved grassland, amenity/rough grassland, scrub, ruderal vegetation, buildings and hardstanding.

3.15 The drainage ditches within the Site hold relatively higher ecological value. Those that hold the highest value are situated within the LWSs and on the whole will be retained. Mitigation measures in respect of retained habitat features within the LWSs are described above.

3.16 There are number of County Notable plant species that have been recorded within the Site. These include Lesser Pond Sedge, Frogbit, Ivy-leaved Duckweed, Great Water Parsnip, Pyramidal Orchid, Wild Mignonette, Early Forget-me-not, and Ploughman's Spikenard. The data search records also returned records of other County Notable species such as Adder's Tongue, Lesser Skullcap, Yellow Rattle, Rootless Duckweed and Bee Orchid. The majority of these records are associated with the LWSs and it was only Pyramidal Orchid and Ivy-leaved duck weed that were recorded outside of these designations.

3.17 Two ditches recorded as having Lesser Duckweed present will be lost to the proposals, however a further seven ditches where it has been

recorded will be retained. Measures are proposed below which will safeguard this species during remediation operations.

3.18 Some areas of amenity/rough grassland that will be lost to the development contain Pyramidal Orchids. Measures are proposed which seek to ensure that this species is retained within the Site.

3.19 The majority of trees within the Site are to be retained, however some losses will occur. Measures are proposed below which will ensure that retained trees are fully protected during the remediation operations. Specific consideration is given further below in respect of potential impacts on roosting bats.

Mitigation

During any reinstatement works to ditches or during works in close proximity to ditches, regard will be had to the potential for contamination incidents. All machinery operatives will be made aware of the emergency procedures and a spill kit will be provided on-site.

During any reinstatement works to ditches full regard will be had to the potential for Water voles to be present. Where works to banks are required to ditches identified as having potential / known presence (within 2m of the bank edge) checks will first be undertaken by an ecologist. Damage to the banks will be avoided, with the lightest possible machinery used, sited away from the bank edge. Spoil will be deposited away from the bank edge at around 2m.

Where machinery (not in relation to routine ditch maintenance) is to be operating in close proximity to retained ditches (i.e. within 15m), each will be marked by a fence line (post and marker tape as a minimum) at a 2m stand off. This will prevent encroachment by machinery. Works required within this buffer zone will be undertaken with due care to avoid silting or contamination impacts, with the marker fence reinstated following work where further work is to take place within 15m of the ditch. Such fencing can be removed once all works within the restriction zone have been completed.

No spoil or other loose material will be stored within 15m of retained ditches.

No fuel or other chemicals will be stored within 15m of any ditches.

Any grassland to be retained, including that within the LWSs will be fenced to prevent encroachment by machinery.

Pyramidal Orchids are scattered across grassland within the Site and wherever possible will be removed

prior to the flowering period from areas of grassland to be lost. These will be dug by hand taking a deep cut of turf (approximately 200mm) and planted within retained areas such as the retained sections of the Puriton Rhynes and Ponds LWS.

All retained trees will be subject to root protection zones, with fencing used wherever appropriate to prevent encroachment by machinery. Retained hedgerows will also be fenced (post and marker tape) where required.

Faunal Species

[redacted]

[redacted]

3.21 It will be possible to close all setts that have been shown to be disused without the need to rely on a Natural England licence.

3.22 It should be noted that licenced sett have taken place in some instances within the Site.

Mitigation

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

3.24 One building currently remains which was a known roost site for Brown Long-eared bats, although update survey work has recorded the roost as abandoned (likely due to excessive water damage in the roof). Demolition of this building is covered under licence EPSM2011-2819, although the demolition is not considered to be a licensable work anymore. The location of this building is shown on Plan ECO3.

3.25 As part of the licensed losses to existing roost sites, replacement roosts have been provided on retained trees and built structures. This is in accordance with Natural England licence EPSM2011-2819.

3.26 Mitigation in respect of the trees with potential to support bats and the roosts sites provided as part of the licensed losses, is described below.

Mitigation *Site personnel, including the site foreman and relevant managers will be made fully aware of the presence of all roost sites (existing and newly created) such that no works are programmed which would cause an offence to be committed (damage / disturbance to a roost).*

As already prescribed, all retained trees (including those with bat boxes) will be subject to protection zones to prevent adverse effects during remediation operations.

Any trees identified as having potential to support roosting bats, which is to be lost will first be subject to a detailed survey involving climbing or emergence survey work, ahead of felling. Such work would be led by an appropriately qualified ecologist.

Any new roosts identified through survey work, which must be lost will be subject to a Natural England licence, with the mitigation strategy agreed with Natural England.

Water Voles

3.27 Water Voles have been recorded within the site at a number of locations, these are shown on Plan ECO3. The majority of the drainage ditches where Water Voles have been recorded will be retained. These are along the northern boundary of the Site and within the north-east corner. The ditches in the north-east corner of the Site are associated with the Puriton Rhynes and Ponds LWS.

3.28 There are however ditches within the Site that contain Water Voles that will be lost to the proposals. Some of the ditches are contaminated and require significant remediation. The remaining ditches cannot reasonably be retained within the scope of the proposals. In addition, reinstatement works will be required in respect of many of the ditches within the site, including those currently known to support this species.

3.29 Works to retained ditches with known Water Vole populations will need to be undertaken in a sensitive manner. Losses to ditches with known

Water Vole populations will be undertaken in agreement with Natural England, most likely under a licence in respect of translocation. The proposed measures are set out below.

Mitigation *Before any ditch is lost it will be subject to a repeat Water Vole survey. A Natural England licence will likely be applied for in respect of the trapping and translocation of Water Voles.*

Any required translocation will take the form of a fencing and trapping exercise on the areas of ditch to be lost. The trapped Water Voles will be moved to areas of suitable retained/enhanced habitat and released following the guidelines set out in the Water Vole Conservation Handbook.

Site personnel, including the site foreman and relevant managers will be made fully aware of the presence of Water Voles within ditches, such that no works are programmed which would cause an offence to be committed (killing/injury or damage, destruction, obstruction of a place of shelter).

During any reinstatement works to ditches full regard will be had to the potential for Water Voles to be present. Where works to banks are required (within 2m of the bank edge) checks will first be undertaken by an ecologist. Damage to the banks will be avoided, with the lightest possible machinery used, sited away from the bank edge.

Reinstatement and remediation works to ditches will enhance the opportunities for water Voles within the Site. Where dredging takes place, any dredged spoil will be set away from the bank edge at a distance of around 2m.

<u>Birds</u>

3.30 Habitats within the Site of value to breeding breeding birds include the trees/scrub/woodland, hedgerows and drainage ditches (associated vegetation). These same habitats offer foraging opportunities for a range of bird species throughout the year.

3.31 The breeding bird surveys recorded 5 schedule 1 bird species within and around the Site. Of these it was concluded that only Barn Owl and Cetti's Warbler were breeding within the Site.

Mitigation *Wherever possible all losses to vegetation which could be used by nesting birds will be removed outside of the main bird breeding season (March – August inclusive). Where this is not possible checks will be made by an appropriately experienced ecologist prior to removal.*

Any active nest will be subject to a 5m cordon until the young have fledged.

Retained habitats such as woodland, ditches and grassland (e.g. that within the LWSs) will be subject to appropriate protection measures as previously described.

A number of Barn Owl boxes have already been erected on suitable retained trees within the Site. These will be maintained, with annual condition checks during the winter months.

Further enhancements will be delivered for birds as part of the future landscape scheme associated with development proposals. These will include appropriate management of all ecological features, the provision of new species rich (e.g. native) planting and a range of additional bird nesting boxes.

Great Crested Newts

3.32 Given the nature of the remediation proposals, it was not possible to incorporate those Great Crested Newt breeding ponds located in the Site, in the masterplan. It was therefore decided that in order to maintain the Great Crested Newt population at a favourable conservation status, a relocation exercise is required. This relocation took place in 2017, with GCN removed from the central areas of the Site and translocated to a bespoke receptor are in the north west of the Site that included the creation of six new breeding ponds. The receptor area in the northwest remains fenced from the rest of the Site and additional fencing is also present in the southeast of the Site to prevent offsite populations from recolonising. As such, GCN are considered to be absent from the development plateaus.

3.33 The locations of Great Crested Newt receptor site is shown on Plan ECO3. Mitigation is described below.

Mitigation

The mitigation area within the north-west of the Site has been fenced sufficiently to prevent dispersal of relocated newts back into the development site.

The fenced mitigation area contains sufficient breeding and terrestrial / hibernating habitat (as agreed with Natural England). Herpetofauna fencing will only be removed on completion of all activities associated with the proposals within 500m of the new ponds. The herpetofauna fencing will be subject to maintenance checks at intervals of no less than every six weeks during the active season for Great Crested Newts (typically early March – October).

Further management with respect to the on and off-site mitigation areas is included within the GCNMMP at Appendix 1.

Reptiles

3.34 A low population of Grass Snake was recorded within the Site, with a low population recorded. Suitable reptile habitat will be lost as part of the proposals. However there will also be large areas of habitat retained.

3.35 As the site comprises such a large area and since the number of Grass Snakes recorded is so low, and Grass Snakes will transit across large areas within their range, a normal trapping and translocation exercise is not applicable in this instance.

Mitigation *Suitable Grass Snake habitat to be lost will be manipulated such that they move into retained habitat areas.*

Consideration will be given to the use of reptile exclusion fencing around retained habitat to prevent Grass Snakes entering the Site post remediation. The proposed management regime (see further below) should help prevent any recolonisation, thus the need for fencing will be determined through monitoring of the effectiveness of management measures adopted in the first instance.

Invertebrates

3.36 No specific mitigation is required in respect of invertebrates.

3.37 The majority of the higher quality habitats for invertebrates, as identified through survey work are to be retained and enhanced as part of the proposals. Losses to habitats of some value to invertebrates will be compensated for through the enhancement of retained habitats and the creation of new habitats through the landscape scheme proposed in respect of the energy park (e.g. the new vegetated bund in the west, new species rich grassland, new tree planting, new and enhanced wetland habitats).

4. MANAGEMENT OBJECTIVES

4.1 The aims and objectives of the Management Plan are to maintain and enhance features of ecological interest retained within the Site in addition to conserving populations of protected species, whilst providing for biodiversity enhancements wherever possible.

4.2 Management of the Site ahead of future development also aims to ensure that the development parcels can be retained in a state which is unsuitable for protected species. This will avoid the possibility of an offence being later committed or delays being incurred.

4.3 The following objectives have been identified:

- Objective 1: Maintain and enhance retained and newly created habitats within the Site;
- Objective 2: Maintain populations of protected species identified within the Site;
- Objective 3: Increase biodiversity by maximising opportunities for flora and fauna in retained habitats;
- Objective 4: Maintain the development footprint in a state which is not suitable for protected species; and
- Objective 5: Biological recording to monitor efficacy of the Management Plan.

5. MANAGEMENT AND MONITORING PRESCRIPTIONS

5.1 Management prescriptions and monitoring requirements have been described below, in relation to each of the five objectives.

Objective 1: Maintain and Enhance Retained and Created Habitats

Designated sites

5.2 Four (non statutory) designated sites fall within the Site. These are Puriton Rhynes and Ponds LWS, Puriton Cowslip Field LWS, Puriton Ash Ground LWS and Puriton Meadows and Rail Spur LWS. Impacts on these sites have been discussed previously. The proposed management of each of these sites, which are to be retained at least in part are discussed below.

Puriton Rhynes and Ponds LWS

5.3 As part of the future plans for the Site this area will be managed as grassland with drainage ditches. This will help ensure that the features are maintained to support the notable plant species, Otters and the Hairy Dragonfly.

5.4 The grassland will be cut on an annual basis with one cut in the autumn and a further cut towards the end of the growing season if necessary, until a final strategy is developed for the Site as part of the future proposals. All arisings will be removed.

5.5 The condition of the ditches will be monitored throughout the remediation phase and all future phases. Ditches will be maintained as fit for purpose in respect of the Site drainage strategy but in a sympathetic manner in respect of their biodiversity value.

5.6 Any required dredging will avoid potential damage to the banks (and adverse effects on Water Voles). Any dredged spoil will be set away from the bank edge at a distance of around 2m. Notable aquatic vegetation will also be retained (removed and reinstated if necessary).

5.7 The condition of any protective fencing installed will be monitored and replaced or repaired where necessary.

Puriton Cowslip Field LWS

5.8 This LWS will be partially retained as part of the proposals.

5.9 Access by machinery to retained areas will be prevented through the use of fencing (along western boundary) during the earthworks and demolition periods (where appropriate) to ensure that damage does not occur.

5.10 This field will be brought back into a more favourable management regime through the implementation of a cutting regime.

5.11 The grassland will be cut on an annual basis with one cut in the autumn and a further cut towards the end of the growing season if necessary. All arisings will be removed.

Puriton Ash Ground LWS

5.12 The part of this LWS that is relatively uncontaminated will be retained to ensure that the notable plant species that this site currently supports are not lost in its entirety.

5.13 Access by machinery into the retained portion of this site will be prevented through the use of fencing during the earthworks and demolition periods (where appropriate) to ensure that damage does not occur.

5.14 Given the sparse and ephemeral nature of the vegetation present in this LWS only limited management is proposed.

5.15 Encroachment of scrub will be monitored and kept in check through small scale clearance every two years, where deemed necessary. The aim will be to prevent the development of further areas of scrub which will out compete other flora.

5.16 Existing stands of mature scrub will be allowed to remain. Immature trees elsewhere will be removed retaining an open sward in the majority of the area.

5.17 The landscape feature will be finished with nutrient poor basic topsoil, that will be suitable to support the notable species, and the majority will be seeded with a non competitive seed mix, though some screen planting is proposed on the eastern slopes. The area of retained LWS will allow natural colonisation of the landscape feature. Where possible, seed collection will be taken from this area and scattered over the landscape feature to aid this colonisation.

5.18 Future management of the bund and retained part of the LWS will again be based on fairly limited intervention, with a biennial cutting regime employed and all arisings removed. This cutting regime will help suppress the encroachment of scrub, but specific treatment through cutting or herbicide treatment may be required (using a Natural England approved glyphosate herbicide).

Puriton Meadows and Rail Spur LWS

5.19 Access to this LWS will be prevented during the remediation works. This will ensure that no accidental encroachment into this area occurs and that the ecological interest of the LWS is maintained. A further driving force behind the management strategy for this LWS is the enhancement of grassland and wetland habitats for the benefit of Great Crested Newts, on the basis that the proposed ponds for Great Crested Newt relocation are located just outside of the LWS boundary (to the immediate east).

5.20 The grassland will be cut on an annual basis with one cut in the autumn and a further cut towards the end of the growing season if necessary. All arisings will be removed.

5.21 Encroachment of scrub within the grassland will be monitored and kept in check through small scale clearance every two years, where deemed necessary. The aim will be to prevent the development of further areas of scrub which will out compete other flora.

5.22 The drainage ditches are to be reinstated through dredging and thinning of dense scrub in order to enhance them for Water voles.

5.23 The condition of the ditches will be monitored throughout the remediation phase and all future phases. Ditches will be maintained as fit for purpose in respect of the Site drainage strategy but in a sympathetic manner in respect of their biodiversity value.

5.24 Any required dredging will avoid potential damage to the banks (and adverse effects on Water Voles). Any dredged spoil will be set away from the bank edge at a distance of around 2m. Such works will take place outside of the Great Crested Newt breeding season.

5.25 The condition of any protective fencing installed will be monitored and replaced or repaired where necessary.

<u>Habitats</u>

5.26 Retained habitats of ecological value are principally located with the LWS's, for which protection and management proposals have already been discussed. Retained features falling outside of the LWS boundaries include trees and ditches.

Mature Trees / Tree Groups

5.27 Where mature trees are to be retained, these will be subject to appropriate arboriculture management where necessary, to help prolong their life but also make them safe in light of the proximity of future development and public open space. The condition of the mature trees within the Site will be monitored every two years, for the life of this EMSMP.

5.28 All tree protection measures, such as fencing associated with root protection zones will be maintained in good working order until such time as it is not required.

5.29 Supplementary planting will be undertaken within the Site during the course of the future phased development. This new planting will be subject to a range of measures (to be agreed as part of the landscape strategy for the development) to ensure the establishment of the trees. As part of these measures a weed-free ring will be maintained (using herbicides) around each tree during the establishment period to reduce competition from weed-species for light and nutrients. Regular health checks of the trees will also be undertaken during periods of dry weather, to ensure that the trees are not affected by drought.

5.30 All tree groups will be thinned, where necessary, once every ten years in order to allow for development of an understorey and ground flora. Note that the woodland in the north-west of the Site is to be subject to minimal intervention on the basis of the proposed Great Crested Newt mitigation strategy.

Ditches

5.31 The condition of the ditches will be monitored throughout the remediation phase and all future phases. Ditches will be maintained as fit for purpose in respect of the Site drainage strategy but in a sympathetic manner in respect of their biodiversity value.

5.32 Any required dredging will avoid potential damage to the banks (and adverse effects on Water Voles). Any dredged spoil will be set away from the bank edge at a distance of around 2m.

5.33 Subject to the requirement to maintain the ditches as fit for purpose in respect of the Site drainage strategy, regular management will be limited in extent. Annual condition assessments will be undertaken and remedial action taken with regard to any 'choking' through aquatic vegetation, or significant encroachment by scrub.

5.34 The management objective for each ditch will be to have a mix of open grass / herb habitat and cover provided by scrub and standard trees. Any thinning of bankside vegetation should be undertaken no more than once or twice in a season, with any such works ideally undertaken during September and October.

5.35 Specific requirements in respect of the management of known Water Vole habitat is discussed further below.

5.36 The condition of any protective fencing installed will be monitored and replaced or repaired where necessary.

Cleared land

5.37 Land which has been subject to remediation will be managed intensively in order to prevent unnecessary disturbance, or potential killing / injury effects on protected species which might otherwise colonise the cleared ground. This will involve an intensive mowing regime, with the use of herbicide applications where necessary (i.e. in respect of any scrub species or where cutting proves inefficient). This issue is discussed specifically below under Objective 4.

Objective 2: Maintain populations of protected species identified within the Site

5.38 Within the Site, habitat enhancement through the introduction of an appropriate management regime, will provide for a net enhancement in the quality of retained habitat present. This will be of benefit to species/groups such as bats, [redacted], Water Voles and Great Crested Newts.

5.39 Management in respect of each of these identified species/groups is discussed below.

Bats

5.40 All retained trees supporting features which could support bat roosts, will be subject to condition assessments as necessary. Any remedial work required to ensure the health and longevity of the tree and associated features will be undertaken at the earliest possible opportunity. Any such work will be undertaken on the advice of an appropriately experienced ecologist, with consideration given to any licensing requirements.

5.41 All bat boxes erected will be subject to annual condition checks during the winter period when bats would not normally be resident. Any remedial work or replacement of boxes would be undertaken ahead of the next active season for bats (normally from April).

5.42 Condition assessments will also be undertaken in respect of the three bespoke bat roost structures provided in the east of the Site as part of the licensing process. Any remedial work (unlikely in the life of this EMSMP) would be undertaken during the winter period. The condition assessment will focus on the structural integrity of the buildings. Where internal access is required this should be undertaken by a suitably trained ecologist (working on the assumption that bats may use the structure).

5.43 The retention and management of existing features currently used by bats as foraging or navigational resources, such as the existing trees/tree groups and the ditches will ensure minimal disruption to existing feeding and commuting behaviour.

[redacted]

[redacted]

[redacted]

Birds

5.46 Bird species will benefit from the proposed management in respect of retained habitat features, including those associated with the LWSs. The proposed measures will ensure the continuation of nesting and foraging resources for a range of bird species.

5.47 Management of habitats will be undertaken with due consideration for potential use by birds. Any necessary management of vegetation, particularly new and existing trees and hedgerows which will provide important nesting habitats, will be undertaken outside of the main bird breeding season (March – August inclusive).

5.48 All bird boxes erected will be subject to annual condition checks during the winter period when they would not be in use by birds. Any remedial work or replacement of boxes would be undertaken ahead of the next breeding season (normally from March).

Herpetofauna (Great Crested Newts and reptiles)

5.49 Areas of optimal Great Crested Newt habitat have been created in the north west of the Site within a dedicated mitigation area. Management of this mitigation area, as well as the off-site mitigation area (reinstated pond and associate hedgerow), is also addressed for the purposes of the submitted licence application in some detail within the GCNMMP at Appendix 1. This also prescribes management post-remediation in order to ensure the favourable conservation status of the relocation populations, regardless of whether the forthcoming energy park is given full planning consent. Management discussed in this EMSPM relates to the remediation phase only.

5.50 Four new ponds are to be created within the mitigation area comprising predominantly woodland and grassland habitats. Management of the ponds will be limited in extent for the life of this EMSPM associated with the remediation phase of the development. Management will be focussed on the establishment of optimal newt breeding habitat.

5.51 New aquatic and bankside planting associated with the ponds will be monitored for successful establishment in accordance with any conditions associated with the Natural England licence.

5.52 Grassland habitat within the immediate vicinity of the new ponds will be subject to a non-intensive management regime. Cutting will be undertaken on a rotational basis with one third of the grass cut within each of the two areas (two ponds in each area) every year. Management of the woodland habitat immediately surrounding the ponds will be limited to works required on a health and safety basis.

5.53 Four artificial hibernacula will be created in close proximity to the new ponds in accordance with the Natural England licence. In addition, log piles will be created within adjacent woodland habitat.

5.54 Grassland and wetland habitat (e.g. ditches) in the adjacent LWS (to the west of the on-site Great Crested Newt mitigation area) will be subject to a management regime which also provides enhanced breeding and terrestrial habitat for Great Crested Newts. This management is described above in relation to the Puriton Meadows and Rail Spur LWS.

5.55 Until such time as development of land in the west and north-west is complete, it will be necessary to dissuade Great Crested Newts from accessing this area. Exclusion fencing will be used to achieve this and is discussed in more detail at Appendix 1.

5.56 The measures described above in respect of Great Crested Newts and also those for the retained LWSs will also be of benefit to Grass Snakes, the only reptile recorded on Site.

Habitat Management Constraints

5.57 Management cannot be undertaken which compromises the survival or success of protected species within areas of retained habitat. This will ensure compliance with relevant legislation and the aims and objectives of this EMSMP.

5.58 All works which have the potential to impact upon Great Crested Newts must be done under the direction of an appropriately experienced ecologist and in line with any conditions associated with a Natural England licence.

5.59 Works which have the potential to impact upon Water Voles (e.g. clearance of ditches) must be undertaken under the direction of an appropriately experienced ecologist.

5.60 Any mature trees that need to be felled should first be surveyed by an appropriately experienced ecologist to check for the presence of bats. Should a roost be found, either during the initial survey or during felling work, work must stop immediately and cannot continue until appropriate advice has been given and if necessary, a licence from Natural England has been acquired. This licence will specify timing and method of removal and the mitigation necessary to maintain the bat population on site.

5.61 [redacted]

5.62 If long grassland is cut during the active season for reptiles (typically late March – October, dependant on weather) cutting should be undertaken in favourable weather conditions (sunny or warm), when reptiles are most likely to be active. This will ensure that any reptiles present can move out of the way of machinery.

5.63 All British birds are legally protected from disturbance whilst actively nesting (typically March to August inclusive). Management of scrub and trees must therefore be undertaken outside of the bird-breeding season, or under the guidance of an appropriately experienced ecologist to avoid an offence being committed.

Objective 3: Increase Biodiversity by Maximising Opportunities for Flora and Fauna

5.64 All retained grassland (e.g. that within the LWSs) will be managed sensitively to increase its biodiversity value. Where possible this will include low intensity grazing to increase the floral diversity over the long term.

5.65 Habitats along the bund to be created in the west of the Site, together with the retained part of the Puriton Ash Ground LWS, will be managed to retain a diverse habitat mix including areas of suppressed/ephemeral vegetation. This will increase plant species diversity and will provide an important habitat matrix for a range of invertebrate species, whilst also delivering an ecologically diverse wildlife corridor along the western

boundary which links with further LWSs in the north-west.

[redacted]

5.67 The enhancement of ditches within the Site through initial reinstatement/remediation work, and subsequent sensitive management, will directly enhance the Site for Water Voles, wetland bird species, amphibians and aquatic invertebrates.

5.68 Tree/woodland management within the Site will increase diversity within these areas, creating a diverse ground flora which will have knock on effects for faunal species/groups including invertebrates, bats and birds. In the north-west of the Site management will be tailored to provide enhanced terrestrial habitat for Great Crested Newts.

5.69 Log piles will be created within areas of woodland planting to provide suitable hibernacula for reptiles (Grass Snake) and amphibians including Great Crested Newts.

5.70 New bat and bird roosting/nesting provisions will be maintained to ensure a continued resource for these groups in the medium – long term.

Objective 4: Maintain the development footprint in a state which is not suitable for protected species

5.71 Given the phased nature of the proposed development it will be necessary to ensure that once remediation is complete the development footprint is managed in order to avoid effects on protected species during later construction phases.

5.72 Herpetofauna fencing will be used in respect of areas known to be colonised by Great Crested Newts and potentially Grass Snakes. This will be of particular relevance in the north-west of the Site around the Great Crested Newt mitigation area (see Appendix 1).

5.73 Other remediated land within the development footprint will be subject to an intensive mowing regime once plants begin to establish. Consideration will be given to the use of herbicide where deemed appropriate (i.e. in respect of any scrub species or where cutting proves inefficient). Any use of herbicide will however be balanced against the need to retain the Site in a ‘green state’ following remediation and ahead of development of each parcel.

Objective 5: Biological recording to monitor efficacy of the Management Plan

5.74 Ecological surveys of the remediated land will be undertaken every three months to ensure that the land remains unsuitable for protected species, such as Great Crested Newts and reptiles.

5.75 Surveys of all retained habitats, including those associated with the LWSs will be undertaken on an annual basis during the optimum period for such surveys (May – June).

5.76 Additional species specific surveys may also be required. For example, additional surveys to monitor the success of any Great Crested Newt translocation programme are usually conditioned as part of a translocation exercise (see Appendix 1). Any surveys required as part of a Natural England licence, or through agreement in relation to other mitigation strategies in relation to Water Voles for example, would be undertaken in accordance with the relevant agreed procedure.

5.77 In the event that the findings of the ongoing monitoring deviate from the objectives set in this EMSMP, then it will be reviewed, in consultation with the planning authority and Natural England (as appropriate), and will be adapted as appropriate.

6. CONCLUSIONS

6.1 The Ecological Mitigation Strategy and Management Plan (EMSMP) was initially prepared by Ecology Solutions Ltd on behalf of BAE Systems in respect of the remediation phase of the Huntspill Energy Park, Puriton. The EMSMP has now been revised in light of the Section 73 application on the existing planning consent (Ref: 42/11/00017). The EMSMP relates to the discharge of Condition 7 associated with planning consent in respect of remediation works at the proposed Huntspill Energy Park site in Puriton, Somerset.

6.2 Condition 7 states:

"Prior to the commencement of remedial works and earthworks, details shall be submitted to, and approved in writing by, the LPA in respect of the provision of an ecological mitigation and management plan as identified in the ecological reports. The Plan shall include the proposed mitigation for protected species within the site and the management of the retained habitats to ensure that biodiversity is maintained and enhanced within the Site. The remedial works and earthworks shall proceed in accordance with the approved details."

6.3 This EMSMP, prepared by Ecology Solutions, sets out the mitigation strategy for features of ecological interest and associated faunal species, due to be retained and protected through the consented remediation phase. It also sets out specific management objectives and prescriptions for retained habitats and faunal species.

6.4 A range of protection and enhancement measures have been put forward which will ensure that the proposals accord fully with all legislative requirements and industry best practice.

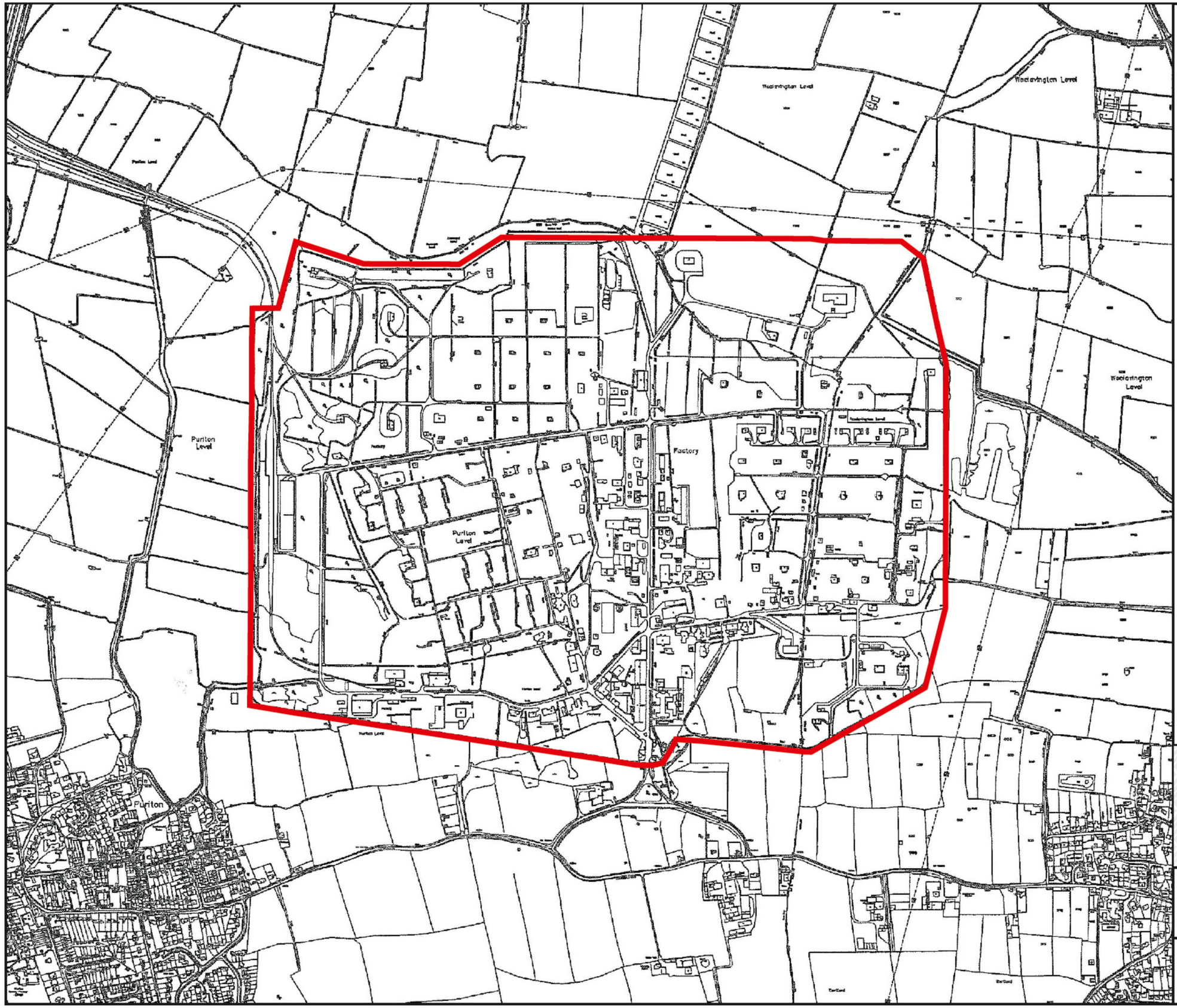
6.5 In adopting the measures put forward within this document, protected species will be retained at a favourable conservation status and the ecological interest of retained habitat features will be protected and indeed enhanced over time. On this basis, it is considered that planning Condition 7 of the consent can be safely discharged.

PLANS & APPENDICES

PLANS

PLAN ECO1

Site Location Plan



KEY:

BOUNDARY OF REMEDIATION SITE

N

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7761: GRAVITY

PLAN ECO1:
SITE LOCATION PLAN

Rev: B

Aug 2021

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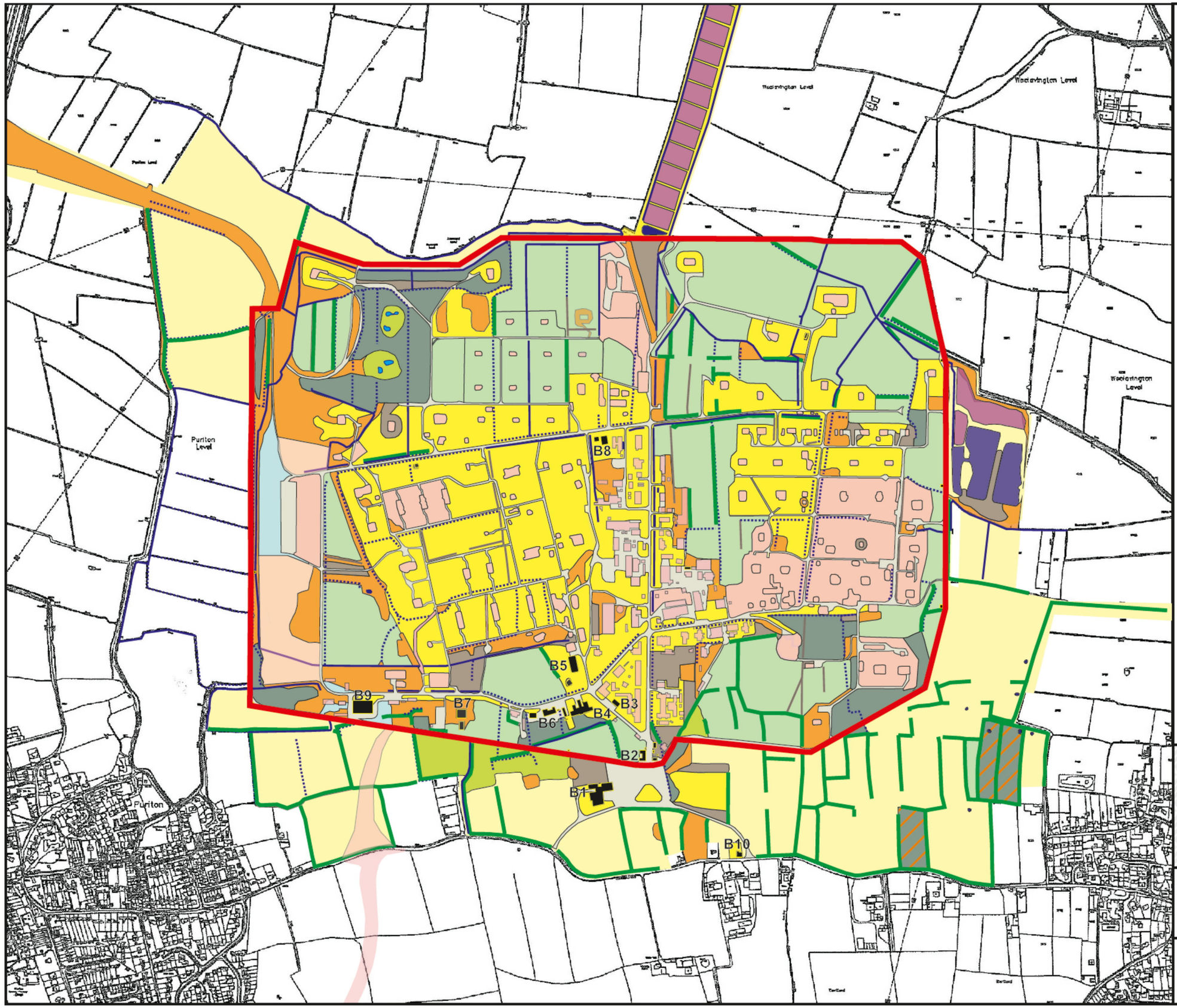
PLAN ECO2

Ecological Features



KEY:

- BOUNDARY OF SITE
- IMPROVED GRASSLAND
- SEMI-IMPROVED GRASSLAND
- AMENITY / ROUGH GRASSLAND
- MARSHY GRASSLAND
- PLANTATION / WOODLAND
- ORCHARD
- SCRUB
- HEDGEROW
- TALL RUDERAL VEGETATION
- EPHEMERAL / SHORT PERENNIAL VEGETATION
- STANDING WATER
- REED BED
- DRAINAGE DITCH
- SEASONAL DRAINAGE DITCH
- DRY DITCH
- BUILDING
- HARDSTANDING
- BARE GROUND

N

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PLAN ECO2: ECOLOGICAL FEATURES

Rev: B

Dec 2020

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