Haydock Point

ES Volume 4: Appendix 8.7 Landscape and Habitat Management Plan

8th March 2017 V2

Prepared by: TEP

THE ENVIRONMENT PARTNERSHIP

HAYDOCK POINT

NEWTON-LE-WILLOWS

LANDSCAPE AND HABITAT MANAGEMENT PLAN (LHMP)

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Document Title	Landscape and Habitat Management Plan (LHMP)
Prepared for	Peel Holdings (Land and Property) Limited
Prepared by	TEP - Warrington
Document Ref	5843.008

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Date	January 2017
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Approved	Alice Babb

Amendment History					
Version	Date	Modified by	Check / Approved by	Reason(s) issue	Status
1.0	24/01/17	AL	AB / FH	Original issue	Issued
2.0	08/03/17	LAC	FBH	Parameters plan references updated	Issued

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APPENDICES

1.0 Introduction

Purpose of the Management Plan

1.1 This Landscape and Habitat Management Plan (LHMP) has been produced by The Environment Partnership (TEP) Limited on behalf of Peel Holdings (Land and Property) Limited to provide a framework for long term management and maintenance of the retained and newly created habitats associated with the proposed development of logistics premises at Haydock Point "Site".

1.2 This LHMP provides information on managing the retained and newly created habitats to enhance biodiversity value and strengthen their connectivity to the wider landscape.

Scope of the Management Plan

1.3 This document has been written as a Technical Appendix for the Ecology chapter of the Environmental Statement (ES).

1.4 This LHMP covers the provision and management of the following areas as shown on the Ecology Mitigation Plan (Michael Sparks Associates, Drawing Ref: 30926-FE-027E):

- New woodlands to be created at site perimeters;
- Central ecological corridor, comprising existing ditch and hedgerow and newly created grasslands on ditch banks and buffer zone;
- New permanently wet ditch to be created in the east of the existing ditch; and
- New permanent dry basin areas/swales, wet ditches, reedbeds and wildflower meadow as part of the proposed sustainable urban drainage (SUDS) scheme.

1.5 The LHMP describes the site in terms of landscape elements and management operations and provides recommendations for a duration of 10 years. All habitats on-site will be managed for the duration of the development.

1.6 The LHMP should be read in conjunction with the Ecological Impact Assessment (EIA) Chapter 8: Ecology and Plan 8.2 Phase 1 Habitat Survey (TEP Ref: G5843.004).

Structure of the Management Plan

1.7 Chapter 2.0 provides a summary of the factors influencing management and a site analysis. Chapter 3.0 outlines the long-term aims and objectives for management and Chapter 4.0 sets out how the success of the plan will be monitored, reviewed and updated over time.

1.8 Appendix A provides the Ecology Mitigation Plan (Michael Sparks Associates, Drawing Ref: 30926-FE-027E), Appendix B is the Plan 8.2 Phase 1 Habitat Survey (TEP Ref: D5843.004), Appendix C provides a table of maintenance operations and Appendix D summarises relevant legislation.

Site Location

1.9 The Site (Grid Ref. SJ 58510 97649) lies approximately 2.44 km north of Newton-le-Willows town centre.

1.10 The wider site is bounded by Haydock Park Racecourse and residential development associated with Haydock Park Gardens to the north, woodland to the north and east, East Lancashire Road/A580 to the south and Lodge Lane with the M6 beyond to the west.

Planning and Development Context

1.11 Outline planning permission is to be sought for development for c.1.5mill. sq. ft. of logistics premises at Haydock Point, along with associated roads, car parking and surface water management systems.

2.0 Site Management Considerations

Responsibility for Site Management

2.1 Peel Holdings (Land and Property) Limited will employ a managing organisation who will be responsible for operational management and maintenance of these habitats.

2.2 The managing organisation will require the necessary experience and certificates of competence to undertake habitat management operations on site. The managing organisation will ensure that management complies with the guidelines set out in this LHMP. Where practical, contractors with experience in biodiversity management will be sought.

Management Objectives

2.3 The long term management objectives of this LHMP are:

- To safeguard the biodiversity value and integrity of the woodland designated as Local Wildlife Sites (LWS) (and potential LWS) in proximity to the north and east of the Site;
- To safeguard the biodiversity value and integrity of retained aquatic habitat and central wildlife corridor for water vole and bat foraging;
- To ensure that retained and newly created habitats on Site remain suitably biologically diverse for protected and local species; and
- To monitor the habitats to inform future iterations of this plan and subsequent reserved matters applications on this Site; and
- To comply with statutory requirements and constraints.

Ecological Factors

Designations

2.4 The Site does not fall within any statutory or non-statutory designated wildlife sites of international, national or local recognition, and there are no national or international designated sites within 2km of the Site.

2.5 There are seven designated and one potential St Helen's Local Wildlife Sites (LWS) within 1km of the boundary:

- Haydock Park Woodlands LWS borders the site to the north and east;
- Fox Covert including Cowhey Dam LWS lies 50m south-west;
- Ellams Brook LWS lies approximately 452m south;
- Wicken Hedge & Ellam's Brook LWS lies approximately 386m south-east;
- Kilbuck Lane Grassland LWS lies approximately 467m west;
- Plantation Copse & Ponds, Haydock LWS lies approximately 638m north-west;
- Haydock Cross LWS lies approximately 589m north-west; and
- Lady Hill Plantation immediately east of the site is a potential LWS.

Habitats and Species of Principal Importance in England

2.6 Section 41 (S41) of Natural Environment and Rural Communities (NERC) Act 2006 requires a list of habitats and species of principal importance in England to be drawn up.

2.7 Local Biodiversity Action Plans (BAPs) provide an indication of the relative value given to existing habitats and species. The North Merseyside BAP has been used when assessing the value of the habitats and species present within the Site.

2.8 The following priority species and habitats listed in S41 and the local BAP will be sustained around or within the Site:

- Woodland;
- Field boundaries;
- Ponds;
- Reedbeds;
- Skylark;
- Song thrush;
- Urban birds;
- Bats;
- Water vole;
- Common toad; and
- Bluebell.

Ecological Surveys

2.9 Below is a list of the ecological surveys carried out at the Haydock Point site:

- Desk Study (TEP, 2014);
- Ecological Walkover Survey (TEP, 2014);
- Desk Study update (TEP, 2016);
- Extended Phase 1 Habitat Survey (TEP, 2016);
- Bats - Activity Transect Surveys (Dunelm Ecology, for TEP, 2016);
- Bats - Static Detector Surveys (Dunelm Ecology, for TEP, 2016);
- Ornithology Assessment (TEP, 2016);
- Water Vole Surveys (TEP, 2016);
- GCN – eDNA and Traditional Population Surveys (TEP, 2016);
- Updated Desk Study (TEP, 2017);
- Birds - Non-Breeding and Wintering Bird Surveys (TEP, 2017).

Flora

Semi-Natural Broadleaved Woodland

2.10 Semi-natural broadleaved woodland (S41) lies offsite immediately adjacent to the eastern boundary associated with Haydock Park Woodlands LWS. The woodland forms part of an extended network within the local landscape, connecting the Site with the wider environment and is of inherent ecological value.

Coniferous Woodland

2.11 A belt of coniferous woodland separates the Site from Haydock Racecourse and stretches along the northern site boundary offsite, extending the woodland canopy cover within the local landscape.

Scattered Broad-leaved Trees

2.12 A line of predominately young sycamore trees is present along East Lancashire Road/A580. These provide habitat 'stepping stones' within the wider green network and will be protected and retained where possible.

2.13 A beech tree in the easternmost corner of the Site would qualify as a veteran tree under the National Planning Policy Framework (NPPF) and will be retained and protected.

Hedgerows

2.14 A hawthorn-dominated hedgerow runs along the majority of the wet ditch's length. This linear feature is of inherent value as terrestrial and aquatic habitat, and offers connectivity through the Site and will be retained.

2.15 Another species-poor intact hedgerow with trees along Lodge Lane is to be retained and appropriately protected.

2.16 Although the hedgerows are not sufficiently species-rich to qualify as "important" under the wildlife criteria of the Hedgerow Regulations (1997), they are designated as S41 habitats of principal importance.

Bluebell

2.17 Bluebell were found present within the ground flora of the woodland to the north-east woodland outside of the Site boundary, but due to the survey being conducted in July it was not possible to confirm whether the bluebells are the native species *Hyacinthoides non-scripta* (Schedule 8, WCA).

2.18 This woodland, and associated bluebells, will be retained and protected as part of the proposals.

Invasive Non-Native Species (INNS)

2.19 The offsite adjacent woodland is dominated in places by common rhododendron (*Rhododendron ponticum*).

2.20 Common rhododendron is listed on Schedule 9 of the Wildlife and Countryside Act (1981) as amended. Under this legislation it is an offence to plant or otherwise allow them to grow in the wild. In the event of encroachment, a suitably qualified specialist will be consulted and an Invasive Species Management Plan implemented.

Waterbodies

Ponds

2.21 Two heavily shaded ponds supporting some marginal and aquatic flora are found within the woodland to the north-east outside of the Site boundary. These ponds are of high ecological value and form an important part of the wider green network.

Wet Ditch

2.22 A wet ditch which forms part of the Ellams Brook catchment bisects the Site horizontally, flowing into the woodland at the south-eastern corner.

Fauna

Water Vole (Arvicola amphibious)

2.23 Water vole activity has been evidenced on Site with burrows, runs, feeding remains, latrines and food prints recorded along the central wet ditch.

2.24 The wet ditch is not optimal habitat in its current condition but, importantly, provides aquatic connectivity through the site as part of the Ellams Brook catchment.

2.25 Water vole are fully protected under Schedule 5 of the WCA 1981 and is a S41 priority conservation species. The species is protected from killing or injury, and from disturbance at the place of rest.

2.26 Full details of a water vole mitigation scheme and assessment of impacts of drainage proposals on water vole habitat is included in Appendix 8.6 of the EIA (TEP Ref: 5843.004).

Common Toad (Bufo bufo)

2.27 Common toad (S41) are assumed to be present on Site as the central wet ditch and two offsite ponds and woodland/rough grassland habitat provide suitable breeding, sheltering and foraging habitat for this species.

Birds

2.28 The woodland edge habitat and central hedgerow provide suitable nesting, foraging and dispersal habitats for birds.

2.29 Several S41 and BoCC listed species were recorded on Site and include: tree sparrow (*Passer montanus*), skylark (*Alauda arvensis*), reed bunting (*Emberiza schoeniclus*), dunnock (*Prunella modularis*), and kestrel (*Falco tinnunculus*).

2.30 All UK wild birds are protected while at the nest. Effectively, this means that if removal of habitats (which can include buildings, trees, hedges, scrub and grassland) cannot be timed to avoid the bird breeding season (April to August inclusive), then a survey by a suitably experienced ecologist will be required to ensure no nesting birds will be affected. There is generally no process to gain a licence to disturb nesting birds; therefore, if active nests are present works will need to avoid the area of the nest until the young have fledged.

Bats

2.31 The offsite woodland provides sheltered conditions for foraging and is likely to support some of the highest densities of insects within the surrounding area resulting in the woodlands providing high value foraging areas for bats. Additionally there are numerous mature trees with potential for roosting within the adjacent woodland edge areas.

2.32 The central ditch and hedgerow that run through the Site function as a wildlife corridor and were found to be used by the local bat population.

2.33 Collectively, the results of the bat surveys (Dunelm Ecology, 2016) revealed the Site is used by at least four species of bat which include: Pipistrelle spp., soprano pipistrelle (*Pipistrellus pygmaeus*), brown long-eared (*Plecotus auritus*) and noctule bats (*Nyctalus noctula*).

2.34 Bats and their roosts are also protected under Schedule 5 of the Wildlife and Countryside Act (1981) as amended and the Conservation of Habitats and Species Regulations as amended (2012). If any trees with bat roost potential require felling, full bat surveys are required to be carried out by a suitably qualified ecologist.

Social Factors

Health and Safety

2.35 Peel Holdings (Land and Property) Limited will retain ultimate responsibility for the health and safety of the Site and will review health and safety as part of its regular inspections of the Site. The Site will be subject to informal inspections and a formal annual inspection. Whenever the Site is visited, any deficiencies in safety provision will be noted and acted upon through appropriate risk management procedures.

2.36 The Site will be managed to comply with all relevant health and safety legislation, approved codes of practice (ACOP's) and Health and Safety Executive (HSE) guidance. The landowner will be responsible for ensuring that risk assessments are undertaken for the site as required under the Management of Health and Safety at Work Regulations 1999, and for monitoring and reviewing the effectiveness of control measures implemented as a result of the risk assessment to ensure their effectiveness.

2.37 They will also be responsible for ensuring that accidents and incidents which occur on the Site are reported to the relevant enforcing authority as required by the Reporting of Injuries, Disease and Dangerous Occurrences Regulations (RIDDOR) 2013.

2.38 The health and safety regime for any work undertaken on the Site will follow the guidelines as laid down in the HSE publications, including HSG65 'Managing for Health and Safety and HSG268 'How to Control Risks at Work'. As the managing organisation will be the instigator and controller of works on the Site, the managing organisation will fulfil the landowner's role and the work manager's role. This also places an obligation on the managing organisation to ensure that any contractor understands and fulfils their role.

Legal Factors

2.39 Management of the Site must be in line with all legislation relating to health and safety and the environment. A review of the relevant legislation affecting site management is at Appendix D.

3.0 Management Intentions and Operations

Landscape Elements

Habitats

3.1 The Site comprises various retained and newly created habitats as part of the proposed development, as illustrated on the Ecology Mitigation Plan (Michael Sparks Associates, Ref: 30926-FE-027E) and described in the Ecological Impact Assessment (EIA) Chapter 8: Ecology.

3.2 Existing habitats to be retained are:

- Scattered broad-leaved trees;
- Hedgerows; and
- Wet ditch (including associated bankside vegetation).

3.3 New habitats to be created include:

- Woodland planting;
- Native tree planting;
- Hedgerow planting;
- Grassland;
- Wildflower meadow;
- Wet ditches;
- Reed beds; and
- SUDS (dry basin areas/swales).

All Areas

Management Intentions

3.4 The Site will be inspected regularly and formally assessed annually to confirm the Site is being managed appropriately. Health and safety inspections will ensure any hazards are identified and remedial measures are actioned.

3.5 Cleansing will be carried out regularly.

Management Operations

3.6 A general cleanse of the habitats will be carried out on a quarterly basis. All water channels and attenuation areas are to be included as part of this routine cleanse.

3.7 All litter will be removed from the Site and disposed of in an authorised manner.

3.8 Fly-tipping may occur from time to time and this will be removed as soon as possible in order to discourage reoccurrences.

Constraints

3.9 Care must be taken during cleansing to check for wildlife, which may be hiding in or under items. Any wildlife found will be returned to suitable cover.

3.10 When removing material from within or near to the ponds, care must be taken to check for amphibians, which may be hiding in or under items. Any amphibians, except GCN, found will be returned to suitable cover. It is an offence to handle GCN unless you have a specific licence from Natural England.

Inspections

3.11 A health and safety inspection will be undertaken to identify any health and safety hazards. Any hazards will be made safe as far as is practicable. The inspection will be undertaken annually.

3.12 Results from the health and safety inspection, as well as any remedial measures, will be compiled and presented within the annual report which will be used in the review of the management plan as detailed in Chapter 4.0.

Soft Landscape Element: Woodland Planting

Management Intentions

3.13 A minimum 15m buffer of woodland planting is proposed to the majority of the perimeter of the Site, with the exception of where this would conflict with the central wildlife corridor, as illustrated on the Ecology Mitigation Plan (Michael Sparks Associates, Drawing Ref: 30926-FE-027E). This includes the northern boundary with Haydock Park Woodland LWS, eastern boundary with Lady Hill Plantation (potential LWS), southern boundary with Lodge Lane and western boundary with East Lancashire Road/A580.

3.14 The woodland planting will consist of >95% native species and provide wildlife corridors important for ecological connectivity and opportunities for foraging and refuge. The woodland planting will be managed for the benefit of small mammals, amphibians, birds, bats and invertebrates.

3.15 A contoured-height edge along the edge facing the development will be created. This can be achieved partly through species choice and partly through variable coppicing.

3.16 The management of woodland trees will be targeted towards enhancing ecological diversity, safety and amenity value as well as creating a varied age structure and providing deadwood habitat.

Woodland Planting Establishment

Management Operations

3.17 Where trees are staked, the stakes and ties will be checked monthly and it is anticipated that they will need adjusting at least twice annually. Any broken or damaged stakes will be replaced and ties re-fixed at a slightly lower position, allowing for growth since planting.

3.18 Remove stakes as necessary, when the tree is suitably established, in approximately year 5.

3.19 To reduce excessive competition, a weed free area will be retained around any trees less than 3m in height and will be maintained to a diameter of 0.5m around the base of the trees using glyphosate spray twice a year. Newly planted trees will require re-firming as required during the first three years.

3.20 Young trees will require formative pruning to maintain a desirable shape as well as to maintain health and vigour.

3.21 Once trees attain a height of 3m, the maintenance of a weed free base and formative pruning can be discontinued. However, crown pruning is desirable and any dead or severely damaged trees will be felled and replaced accordingly.

3.22 Habitat surveys will include an assessment of scrub encroachment onto neighbouring grassland. Where reduction of coverage is required, scrub growth will be controlled along its advancing face using brush cutters during the winter season (outside of the bird breeding season) and treated with a glyphosate application to stop re-growth. Future growth of stumps will be monitored and additional cuts and glyphosate applications will be made over the following two or three years as required. Arisings will be chipped and blown into woodland 'sanctuary areas', ensuring that chippings are evenly spread rather than piled up.

Inspections:

3.23 Assessment of condition and structure of trees in young woodland areas: Assess requirements for thinning, beating up, hazard tree works, formative pruning and addressing branch/stem breakages.

Constraints:

3.24 Any works will be carried out outside of the bird nesting season (between March and August). Should any works be required within the bird nesting season an assessment will be undertaken by a suitably qualified ecologist before any works commence.

Years 5 and 10

Management Operations

3.25 To create an age structure within the woodland blocks and a contoured-height edge along the edge facing the development, a cyclical programme (5-10yr cycle) of thinning, felling and coppicing introduced with the aim of increasing species as well as structural diversity of the canopy layer and woodland edges will be implemented. An Arboriculturalist must be consulted prior to undertaking any major tree works within the site boundary. Any major thinning and felling works will be subject to a bat survey prior to works being undertaken. Tree works will also avoid the bird nesting season (between March and August). Should any works be required within the bird nesting season an assessment will be undertaken by a suitably qualified ecologist before any works commence.

3.26 Thinning works, when undertaken, will be targeted towards the removal of non-native tree species within the woodland. Trees for thinning will be cut to a level stump length of 150 mm for treatment with stump killer. Care will be taken to ensure that thinning/pruning operations do not cause damage to desirable plants, or rutting of the ground in wet conditions. A minimum of 50% of the stump surface will be scored over and treated to stop re-growth. Future growth of stumps will be monitored and additional cuts and applications of stump killer will be made over the following two years as required.

3.27 Wood under 250 mm diameter collected from thinning, pruning, brashing and scrub/vegetation clearance will, wherever possible, be chipped and used on site for mulching, either by blowing directly back into planting areas or by storing on site for future use.

3.28 Wood greater than 250 mm diameter will be logged and used to create deadwood piles to increase biodiversity. This will include standing dead timber and hollow trunks as well as allowing dead wood to remain on the ground. Deadwood provides habitats for fungi, lichen and invertebrates which in turn provide a source of food for amphibians and birds. Amphibians and small mammals also favour dead wood as a place to seek refuge. Standing deadwood is also an important ecological habitat; however consideration of the proximity to the footpaths and other public access areas will be required. Brushwood, if collected elsewhere on site, will also be stacked within these areas as small habitat piles.

Inspections

3.29 A tree hazard inspection will be undertaken by trained arboriculturists of mature trees within or adjacent to areas of public access. The inspection will include checking for damage and disease, and to maintain appropriate height clearances for safe pedestrian access. The tree hazard inspection will be undertaken every 3 years.

Soft Landscape Element: Existing Trees

Management Intentions

3.30 Existing scattered broad-leaved trees will be retained where possible and protected during development.

3.31 To mitigate any negative impacts to retained trees, including disturbance to habitats and species the trees support, appropriate protection measures will be adopted to minimise accidental damage.

Management Operations

3.32 Management of existing trees will include thinning and improvement through coppicing and pruning to be undertaken annually, where required. The following specification is applicable to all arboricultural works:

3.33 An Arboriculturalist must be consulted prior to undertaking any major tree works within the site boundary.

3.34 Wood under 250 mm diameter collected from thinning, brashing, or coppicing will, wherever possible, be chipped and used on site for mulching, either by blowing directly back into planting areas or by storing on site for future use.

3.35 Trees for coppicing will be cut back to 50 mm above ground level. Where a number of stems are coppiced on one plant, cut faces are to slope away from the centre. Care will be taken to ensure that thinning operations do not cause damage to desirable plants, or rutting of the ground in wet conditions.

3.36 Trees for thinning will be cut to a level stump length of 150 mm for treatment with stump killer. A minimum of 50% of the stump surface will be scored over and treated to stop re-growth. Future growth of stumps will be monitored and additional cuts and applications of stump killer will be made over the following two years as required.

3.37 Any deadwood found on site will be stacked and kept onsite where possible as it is of value to invertebrates.

Constraints

3.38 Any woodland management and tree felling will be carried out outside of the bird nesting season (between March and August). Should any works be required within the bird nesting season an assessment will be undertaken by a suitably qualified ecologist before any works commence.

Inspections

3.39 A tree hazard inspection will be undertaken by trained arboriculturists of mature trees within or adjacent to areas of public access. The inspection will include checking for damage and disease, and to maintain appropriate height clearances for safe pedestrian access. The tree hazard inspection will be undertaken every 3 years.

Soft Landscape Element: Native Tree Planting

Management Intentions

3.40 Areas of new native tree planting are proposed to provide connectivity to the wider environment.

Management Operations

3.41 Where trees are staked, the stakes and ties will be checked monthly and it is anticipated that they will need adjusting at least twice annually. Any broken or damaged stakes will be replaced and ties re-fixed at a slightly lower position, allowing for growth since planting.

3.42 Remove stakes as necessary, when the tree is suitably established, approximately in year 3.

3.43 Newly planted trees will require re-firming as required during the first three years.

3.44 To reduce excessive competition, a weed free area will be retained around any trees less than 3m in height and will be maintained to a diameter of 0.5m around the base of the trees using glyphosate spray twice a year.

3.45 Young trees will require formative pruning to maintain a desirable shape as well as to maintain health and vigour.

3.46 Once trees attain a height of 3m, the maintenance of a weed free base and formative pruning can be discontinued. However, crown pruning is desirable.

3.47 Any dead or severely damaged trees will be felled and replaced accordingly in the first five years. Deciduous species will be replaced when dormant in early November to late March. Conifers and evergreen species will be replaced in September/ October or April/ May.

Inspections:

3.48 An assessment of the condition and structure of trees (young woodlands and structure planting areas) will be carried out annually to determine the requirements for thinning, beating up, hazard tree works, formative pruning and addressing branch/stem breakages.

Soft Landscape Element: Hedgerows

Management Intentions

3.49 The hawthorn-dominated hedgerow will be retained as a linear feature of inherent value as terrestrial and aquatic habitat, offering connectivity for bats and birds through the centre of the Site.

3.50 The species-poor intact hedgerow with trees along Lodge Lane is to be retained and appropriately protected.

3.51 New hedgerow planting will provide nesting habitat for a range of birds utilising the Site.

Management Operations

Establishment of Proposed Hedgerows

3.52 Management operations during the establishment phase (until branches of adjacent plants fully merge together) will comprise of weed control, watering (if required) and formative 'facing up' of the hedgerow to establish dense branch growth. New planting will be re-firmed as required.

3.53 During the first five years of establishment, between April and October monthly inspections of hedgerow will be undertaken and weeds will be removed by hand weeding and if necessary herbicide (glyphosate) spot application. Any plant failures will be replaced. Deciduous species will be replaced when dormant in early November to late March. Conifers and evergreen species will be replaced in September/ October or April/ May.

General

3.54 All hedge cuts must be undertaken using appropriate hand or power tools. Mechanical methods of management, where appropriate, will be used in favour of machinery.

3.55 The hedge will be cut in an ‘A’ shape to maintain a wide base for bird nesting and roosting. The 'A' shape profile of the hedge should be maintained annually by cutting the current season's growth.

3.56 If possible only one side will be cut annually. Cutting every 2 years rather than annually will create a bushier hedge for wildlife nesting/refuge and allows for berry production in the alternate years.

3.57 Hedgerows can be cut between September to February to avoid bird nesting season. The later hedges are cut the bigger the advantage they provide to foraging wildlife from providing berries and fruits.

3.58 Additional hedgerow cutting may be required from a health and safety perspective should there be a good growing season.

Constraints

3.59 Any hedgerow management will be carried out outside of the bird nesting season (between March and August). Should any works be required within the bird nesting season an assessment will be undertaken by a suitably qualified ecologist before any works commence.

Soft Landscape Element: Native Grassland

Management Intentions

3.60 New areas of proposed native grassland, including to the central wildlife corridor and dry basin areas/swales will be managed to maintain and promote structural and botanical diversity and prevent the grasslands from scrubbing over.

Management Operations

3.61 The grassland will be managed to improve structural and floristic diversity. Grass cutting will be timed to allow the various grass species to flower.

3.62 In the first growing season the grass will be cut every 6-8 weeks to 150mm with arisings raked off.

3.63 The grassland will then be cut once a year in late September to a height of 150mm with the arisings raked off and removed from the Site.

3.64 Grass cutting will be avoided between mid-March and August to prevent risk of disturbance to nesting birds. Should any works be required within the bird nesting season an assessment will be undertaken by a suitably qualified ecologist before any works commence.

3.65 Grass cuts will be undertaken with flail cutters/mowers set to retain vegetation at a height of 150mm in order to prevent any risk to amphibians that may be present within the grasslands. The cuts must not be carried out by cutting the outer perimeter of the grassland areas and working in towards the centre, as this will trap young chicks, leaving them no opportunity for escape. Instead, grass cuts will work from one side of the area to the other, or from the centre of the grassland, out to the perimeters. Grass cuts will ensure the retention of a 3m buffer of uncut grass alongside hedgerows and woodlands with understorey vegetation.

3.66 Grassland areas will not be fertilised in order to conserve the sward diversity. Where treatment of noxious weeds such as docks, thistles, nettles, ragwort and willowherb is required, this will be controlled by hand pulling, or spot treatment of glyphosate. It is hoped that in the long term the input of chemicals into this site can be minimised as far as possible.

Soft Landscape Element: Wildflower Meadow

Management Intentions

3.67 Areas of high quality wildflower meadow are proposed in the new dry basin areas/swales, to introduce ecological diversity and valuable wildlife habitats.

3.68 The timing and frequency of grass cuts will be determined by management procedures required to maximise conservation benefits of desirable flora species and maintaining grassland habitats.

Management Operations

3.69 Routine management will include cutting the wildflower sward annually to a height of 150mm (approx.) in late September once seed heads have dropped. In order to minimise disturbance to terrestrial habitat it is recommended that wildflower grassland areas are cut in sections (e.g. one third of the grassland area) on a weekly rotation to ensure areas of uncut vegetation are retained as refuge for amphibians and small mammals. Arisings should be left in situ for 24 hours to allow flower seed to disperse and then raked off.

3.70 The cutting of all grass areas is to be carried out with particular care, using 'strimmers' fitted with guards so as to protect obstacles from damage. The necessary health and safety precautions must be undertaken when cutting grass on steep slopes (e.g. steep banks on the wet ditches). All cuttings must be removed from these areas in order to prevent nutrient enrichment and retain the desired species composition, but can be stacked within suitable woodland areas to provide additional habitat. Arisings will be lightly raked off, with great care being taken to avoid disturbance to amphibians or damaging refugia hidden in the grass and removed from site.

3.71 Grass cutting will be avoided between mid-March and August to prevent risk of disturbance to nesting birds. Should any works be required within the bird nesting season an assessment will be undertaken by a suitably qualified ecologist before any works commence.

3.72 Weed control will include spot treatment using selective herbicide of noxious weeds such as docks, thistles, nettles, ragwort and willowherb.

Constraints

3.73 Fertiliser is not to be applied to any of the meadow areas in order to conserve the development of a diverse sward. The species mix may need review after the first complete flowering season to ensure no one species is becoming dominant.

Soft Landscape Element: Existing Wet Ditch

Management Intentions

3.74 The existing central ditch corridor, its proposed eastern extension and its immediate banks are to be maintained with a minimum 8m buffer of grassland between the top of the ditch and the development to ensure protection of water vole habitat.

3.75 Additional wet ditches are proposed as connectors between the existing central wet ditch and proposed eastern extension, to proposed dry basin areas/swales located to the north-western, eastern and south-west corners of the Site.

3.76 Management will ensure the ditch is able to support a diverse and healthy population of small mammals, amphibians, insects and waterfowl.

Management Operations

Cleansing

3.77 Leaf litter and other debris will be removed from the ditch twice annually.

Strimming

3.78 Strimming will be undertaken twice annually, once in February and once in late September or early October after seed heads have dropped. The banks will be cut to no less than a height of 100mm in order to prevent any risk to amphibians that may be present. All cuttings must be removed to prevent a build-up of nutrients.

3.79 Works will be carried out in an upstream direction and will leave at least one third of the ditch untouched retaining a dense fringe of marginal emergents alongside either bank. Works will progress upstream in order to permit dislodged plant propagules and invertebrates to re-colonise in the disturbed substrate downstream.

3.80 Strim 1/2 of the ditch in staggered 50m sections. The sections will be strimmed on rotation so that all areas are cut each year. Use of herbicides near the ditch will be avoided/minimised.

Scrub Encroachment

3.81 Any colonising trees or shrubs within 5m of the ditches will be removed to prevent shading, which in time will reduce the biodiversity value of the ditches and access for maintenance.

De-silting

3.82 The ditch may require dredging in the future, however this will only be carried out if necessary to minimise disturbance of the microhabitat of the ditch. The requirement to dredge the ditches will be reviewed after five years; it is unlikely that there will be a need for any ditch clearance works at this point but it will indicate when the next appropriate review interval will be.

3.83 De-stilting of the ditch will be undertaken as necessary to 1/3 of one bank and minimised to short stretches at certain problem areas along the ditch to ensure minimal interference to banks wherever possible.

3.84 Spoil removed in de-silting is to be spread thinly along the top outside edge of the banks.

3.85 Dredging works will be undertaken in September or August to avoid the water vole hibernation season and the amphibian breeding season (February to August) and. Should any works be required an assessment will be undertaken by a suitably qualified ecologist before any works commence.

Constraints

Licensing Restrictions

3.86 Natural England will be consulted to undertake any of the above works as they may require a Natural England Licence

3.87 Herbicides will not be used within close proximity to the banks of the ditch.

Inspections

3.88 An annual inspection will be undertaken to monitor the ditch to assess any signs of drying, colonisation by vegetation and any accumulation of sediment or debris.

Soft Landscape Element: Proposed Wet Ditches

Management Intentions

3.89 Proposed wet ditches as part of the SUDS scheme will be maintained for both functionality and as a habitat in their own right. Management will ensure ditches are able to support a diverse and healthy population of small mammals, amphibians, insects and waterfowl.

Management Operations

Strimming

3.90 Strimming will be undertaken in late September or early October after seed heads have dropped, and cut to no less than a height of 100mm in order to prevent any risk to amphibians that may be present. All cuttings must be removed to prevent a build-up of nutrients.

3.91 Works will be carried out in an upstream direction and will leave at least one third of the ditch bottom untouched retaining a dense fringe of marginal emergents alongside either bank. Works will progress upstream in order to permit dislodged plant propagules and invertebrates to re-colonise in the disturbed substrate downstream.

3.92 Ditches will have a buffer of grassland which is mown regularly to 150mm to indicate the edge of the ditch; due to the proximity of the residential area. One third of the banks of the ditches will be strimmed annually and arisings removed. Use of herbicides near the ditches will be avoided/minimised.

Scrub Encroachment

3.93 Any colonising trees or shrubs within 5m of the ditches will be removed to prevent shading, which in time will reduce the biodiversity value of the ditches and access for maintenance.

De-silting

3.94 Ditches may require dredging in the future, however this will only be carried out if necessary to minimise disturbance of the microhabitat of the ditch. The requirement to dredge the ditches will be reviewed after the first five years; it is unlikely that there will be a need for any ditch clearance works at this point but it will indicate when the next appropriate review interval will be.

3.95 De-stilting of ditches will be undertaken from only one bank and minimised to short stretches at certain problem areas along the ditch to ensure minimal interference to banks wherever possible.

3.96 Spoil removed in de-silting is to be spread thinly along the top outside edge of the banks.

3.97 Dredging works will not be undertaken during the amphibian breeding season (February to August). Should any works be required an assessment will be undertaken by a suitably qualified ecologist before any works commence.

Constraints

Licensing Restrictions

3.98 Natural England will be consulted to undertake any of the above works as they may require a Natural England.

3.99 Herbicides will not be used within close proximity to the banks of the ditches.

Inspections

3.100 An annual inspection will be undertaken to monitor the ditch to assess any signs of drying, colonisation by vegetation and any accumulation of sediment or debris.

<u>Soft Landscape Element: SUDS</u>

Management Intentions

3.101 SUDS are water basins designed to temporarily fill during times of high rainfall or flooding but have the added benefit of providing habitats for amphibians and other invertebrates as well as being a source for education.

3.102 Dry basin areas/swales are proposed to the north-western, eastern and south-west corners of the Site connected through existing and proposed wet ditches to facilitate wildlife movement across the Site.

3.103 A reed bed is proposed to the edge of the woodland buffer associated with Lady Hill Plantation (potential LWS).

Management Operations

Reed beds -

3.104 The management of reed beds and marginal vegetation should ensure that these areas retain their aesthetic function within the landscape, whilst also enhancing species diversity and valuable wildlife habitats. Maintenance of marginal vegetation will therefore include cutting back invasive species (particularly Reed, Bulrush and Reed Sweet Grass) to prevent them from encroaching upon areas of open water and regular removal of dead vegetation and litter, which leads to reed beds drying out and loss of habitat through natural succession.

3.105 Vegetation will be strimmed back (to 150mm). Vegetation will be removed annually to retain between 60% and 30% of open water. Approximately 25-30% of wetland vegetation will be removed each year with arisings removed from the Site.

3.106 It is important that cutting does not take place over the entire wetland area, and should therefore be cut in alternate sections on annual rotation leaving uncut areas as refuge for wildlife.

Dry Basin Areas/Swales -

3.107 Grass in the dry basin area/swale will be cut monthly to 50mm in the growing season.

3.108 Any scrub which develops on the bankside will be removed annually.

3.109 Approximately 25-30% of planting and silt will be removed from the base of the dry basin areas/swales every five years. This work will be carried out between September and November to avoid disturbing wildlife.

Constraints

3.110 If required, herbicide treatment of weeds will be limited to a controlled treatment of glyphosate which will require prior approval by the Environment Agency where within close proximity to waterbodies.

Inspection

3.111 A monthly inspection will be undertaken of the control structure to and from the dry basin areas/swales.

3.112 An annual inspection of the dry basin areas/swales and reed bed will be undertaken to assess bank stability, water quality, coverage of aquatic/marginal vegetation and drainage.

4.0 Monitoring and Review

Monitoring

4.1 Simple monitoring reports against key measures will be submitted by the managing organisation to Peel Holdings (Land and Property) Limited on a quarterly basis, together with financial information. An annual report will be produced by the managing organisation, summarising the management of the Site over the last year and the measures achieved.

- An annual site meeting and review: with the managing organisation;
- Quarterly (initially) formal site inspections: with the managing organisation; and
- Ad hoc unannounced inspections: to be made as frequently as possible to review condition of entrances, the boundaries of the Site etc.

4.2 With respect to monitoring habitat creation, it is important that full ecological surveys are undertaken of habitat areas, to establish the current biodiversity and inform future management policies concerning matters including: the effectiveness of the water vole mitigation scheme in accordance with the requirements set out in the Natural England Licence; and the success of habitat establishment for identified receptive species.

4.3 The following ecological surveys will be undertaken at the Site:

- Water voles - surveys in accordance with water vole licence monitoring, plus surveys every 6 years;
- Bat activity - 3nr evening transect surveys and static surveys every 3 years;
- Birds: breeding bird transects every 3 years;
- Habitat condition and remedial measures - every 3 years; and
- Additional reports and remedial measures - every 3 years, circulated to Peel and if requested the LPA.

4.4 The frequency of surveys and report production will be reduced to every 5 years following completion of the development,

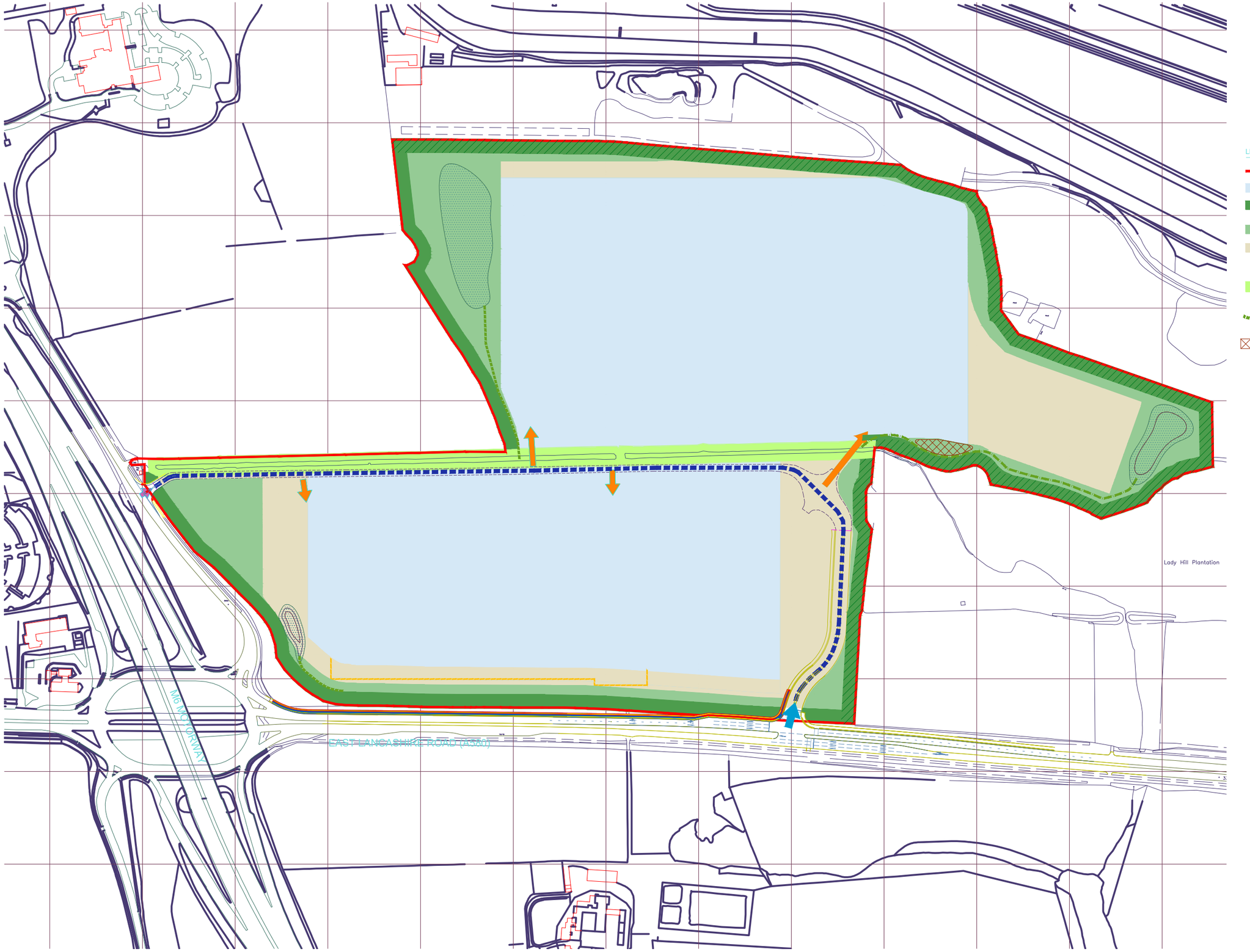
4.5 The monitoring would be for the duration of the development, unless otherwise agreed with the LPA.

Review

4.6 The LHMP would be implemented under planning condition to ensure that the habitats shown on the parameters plans would be protected and managed during the construction and operation of the Proposed Development. The LHMP would also include the above monitoring scheme to assess the success of establishment and wildlife use of the habitats, and provide remedial responses to incidents of damage arising from construction and operation of the proposed development.

4.7 The Management Plan will be reviewed on an annual basis by Peel Holdings (Land and Property) Limited and its managing organisation to ensure that the plan is meeting the original management aims and objectives and responding to the developing needs of the Site.

APPENDIX A: ECOLOGY MITIGATION PLAN (MICHAEL SPARKS ASSOCIATES, DRAWING REF: 30926-FE-027E)



01
027

GREEN INFRASTRUCTURE MITIGATION PLAN

1:2000

0 50 100 200m

NOTES:

SUBJECT TO STATUTORY CONSENTS

SUBJECT TO SURVEY

BASED ON OS MAP REPRODUCED BY PERMISSION OF CONTROLLER OF HM STATIONARY OFFICE (c) CROWN COPYRIGHT LICENCE NO. 10000194

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DO NOT USE ELECTRONIC VERSIONS OF THIS DRAWING TO DETERMINE DIMENSIONS UNLESS SPECIFICALLY AUTHORISED BY MICHAEL SPARKS ASSOCIATES

IF USING AN ELECTRONIC VERSION OF THIS DRAWING FIGURED DIMENSIONS TAKE PRECEDENCE AND NOTIFY MICHAEL SPARKS ASSOCIATES OF ANY DISCREPANCIES

N

LEGEND

- SITE BOUNDARY
- DEVELOPMENT PARCELS
- LANDSCAPE ZONE(MINIMUM 15m DEPTH OF WOODLAND PLANTING ON NORTHERN, EASTERN AND WESTERN BOUNDARIES USING > 95% NATIVE SPECIES)
- INUNDATION GRASSLAND, MEADOW ,SCRUB AND REED BEDS
- VERTICAL NO BUILD ZONE (THIS ONLY APPLIES TO LOGISTICS / INDUSTRIAL BUILDINGS AND NOT ANCILLARY STRUCTURES ie CYCLE SHELTERS, SPRINKLERS, GATEHOUSES, SIGNAGE, WASTE STORAGE, RECYCLING CENTRES, LIGHTING COLUMNS, STREET FURNITURE, ACOUSTIC FENCE)
- ECOLOGY CORRIDOR (8M MIN OFFSET FROM TOP OF DITCH TO DEVELOPMENT, 2 CROSSING POINTS TO A MAX WIDTH OF 20m (INCLUDING HEADWALL AND ABUTMENTS))
- WET DITCH
- REED BED HABITAT
- INDICATIVE MAIN ESTATE ROAD
- MAIN SITE ACCESS
- ACCESS FOR EMERGENCY VEHICLES, PEDESTRIANS AND CYCLEWAY
- INDICATIVE VEHICLE ACCESS
- INDICATIVE LINE OF POTENTIAL ACOUSTIC FENCE - LINE SHOWN IS MOST SOUTHERN POSITION OF FENCE . FENCE HEIGHT MAX 5m
- FOOTWAY/CYCLEWAY TO A580 FRONTAGE
- DARK CORRIDOR ALONG LANDSCAPE BOUNDARY AND NO GROUND LEVEL CHANGES IN ROOT PROTECTION ZONES OF ADJOINING WOODLAND . MAX LUX LEVEL 3 LUX
- DRY BASIN AREA/SWALE (SUDS)
- MINIMUM OF 370m2 OF NEW PERMANENTLY WET VEGETATED DITCH TO BE PROVIDED WITHIN THIS AREA WITH NATIVE GRASSLAND AND REED BED MIXES . DITCH TO BE PROVIDED AS 1 TO 3 SEPARATE LENGTHS PROVIDED THERE IS VEGETATIVE CONTINUITY BETWEEN THEM AND ECOLOGY CORRIDOR TO THE SOUTH WATER VOLE MINI- DAMS TO BE INSTALLED ALONG WET DITCH AT APPROXIMATELY 50m INTERVALS TO CREATE AREAS OF DEEPER WATER FOR WATER VOLES

NOTES

ECOLOGY CORRIDOR -
MAXIMUM WIDTH OF EACH ROAD CROSSING POINT TO BE 20m , INCLUDING HEADWALL AND ABUTMENTS.

8m ZONE TO EACH SIDE OF THE DITCH MEASURED FROM BANKTOP) TO BE RETAINED AS PERMANENT VEGETATED LANDSCAPE (APART FROM CROSSING POINTS).

5m ZONE TO EACH SIDE OF THE DITCH (MEASURED FROM BANKTOP) NOT TO UNDERGO LEVEL CHANGES , UNLESS IT CAN BE DEMONSTRATED THAT NO WATER VOLES WOULD BE DISTURBED , OR UNLESS A LICENCE IS GRANTED BY NATIONAL ENGLAND

NO TREE PLANTING OF SPECIES CAPABLE OF REACHING >5m HEIGHT IN THE CORRIDOR TO THE SOUTH OF THE DITCH AND WITHIN 5m TO THE DITCH TO THE NORTH.

5m ZONE TO EACH SIDE OF THE DITCH (MEASURED FROM BANKTOP) TO BE DARK CORRIDOR

WATER VOLE MINI- DAMS TO BE INSTALLED ALONG WET DITCH AT APPROXIMATELY 50m INTERVALS TO CREATE AREAS OF DEEPER WATER FOR WATER VOLES

LIGHTING -
EXTERNAL LIGHTING TO BE KEPT TO A MINIMUM TO SERVE OPERATION ON SITE. UPWARD LIGHTING AND LIGHT TRESPASS SHOULD BE MINIMISED , WITH LIGHTING KEPT NEAR TO OR BELOW THE HORIZONTAL. NARROW SPECTRUM BULBS SHOULD BE USED , WITH THE EMISSION OF UV LIGHT KEPT TO A MINIMUM. LIGHTING COLUMNS SHOULD BE AS LOW HEIGHT AS POSSIBLE AND LIGHTING DIRECTIONAL. LIGHTING SHOULD BE DESIGNED SO THAT THE 'DARK CORRIDORS' IDENTIFIED ARE AT 3 LUX OR BELOW.

PARAMETERS

MAXIMUM FLOORSPACE: 167,225 sqm / 1,800,000 sqft

USE CLASSES: B2 & B8 (MAXIMUM 20% B2).

MAXIMUM BUILDING HEIGHT: 60.65 m AOD

REV	DATE	NOTE	DRAW	CHCK

MICHAEL SPARKS ASSOCIATES
CHARTERED ARCHITECTS
11 PLATO PLACE
ST.DIONIS ROAD
LONDON SW6 4TU
TELEPHONE 020 7736 6162
www.msa-architects.co.uk

TITLE
HAYDOCK POINT, HAYDOCK

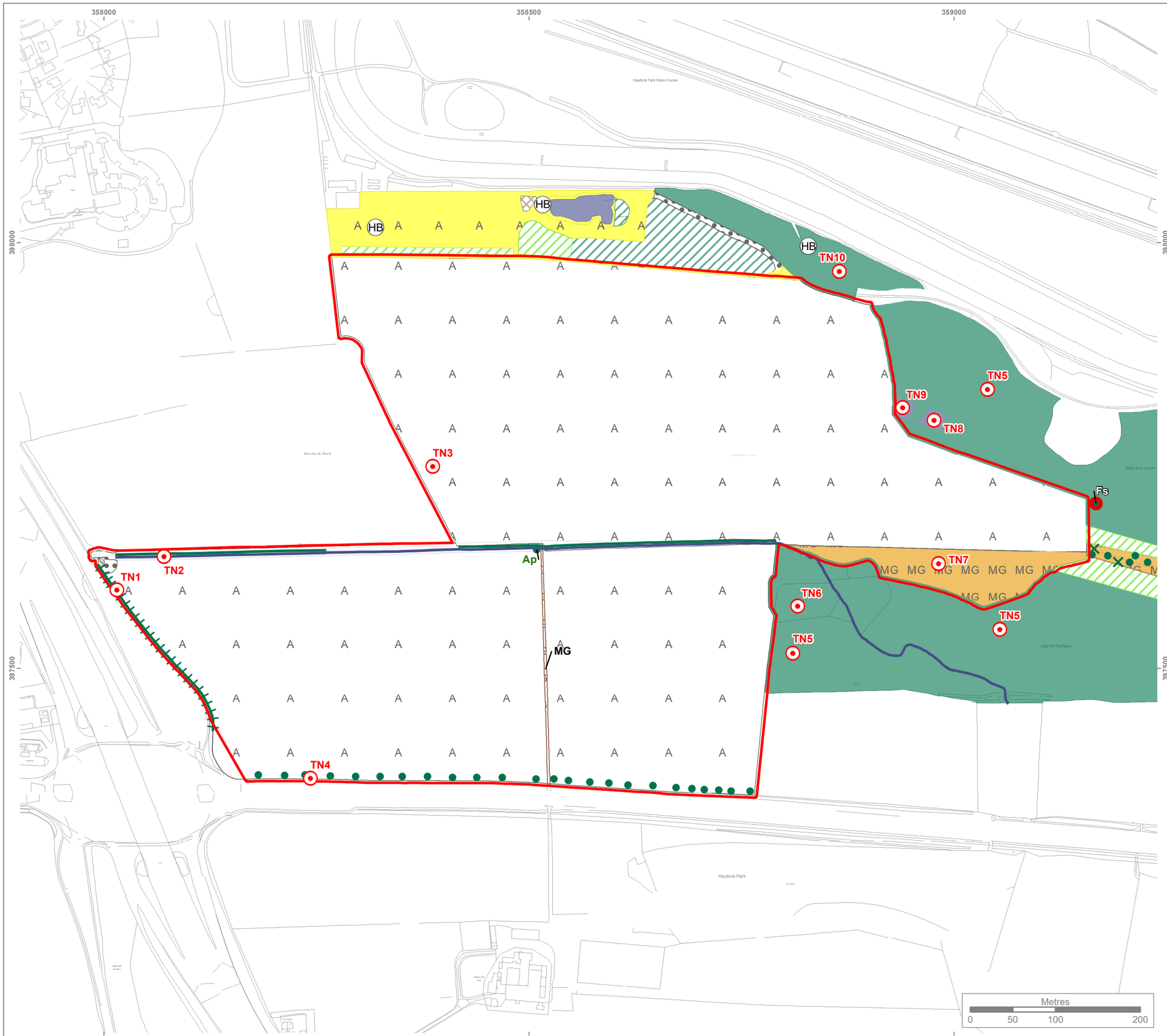
DRAWING
GREEN INFRASTRUCTURE MITIGATION PLAN

CLIENT
PEEL INVESTMENTS (NORTH) LTD

DATE	SCALE	DRAWN
JAN 2017	1:2000	PF
	STATUS: FEASIBILITY	CHECKED: NC/MS

DRAWING NUMBER
30926-FE-027E

APPENDIX B: PLAN 8.2 PHASE 1 HABITAT SURVEY (TEP REF: D5843.004)

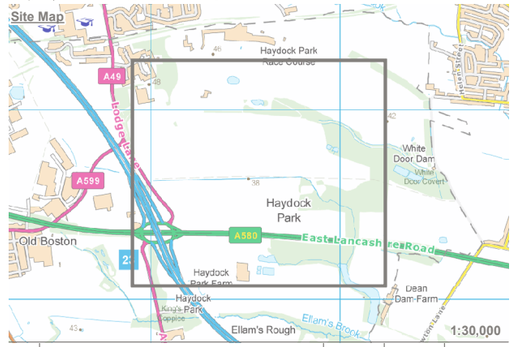


KEY

- Site Boundary
- Target Notes
- Himalayan Balsam
- Scattered Scrub
- Scattered Broad-leaved Trees
- Broad-leaved Tree with High Bat Potential
- Standing Water
- Species-poor Intact Hedge and Ditch
- Species-poor Hedge and Trees
- Semi-natural Broad-leaved Woodland
- Plantation Broad-leaved Woodland
- Plantation Coniferous Woodland
- Modified Neutral Grassland
- Species-poor Modified Neutral Grassland
- Tall Ruderal
- Standing Water
- Arable
- Amenity Grassland
- Introduced Shrub
- Bare Ground

Species Code

Ap	Sycamore
Fs	Beech



Rev	Description	Drawn	Approved	Date

TEP | THE ENVIRONMENT PARTNERSHIP

Genesis Centre, Birchwood Science Park, Warrington WA3 7BH
Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

PEEL

Project
Haydock Point, Ecology

Title
ES Volume 3b
Plan 8.2: Phase 1 Habitat Survey

Drawing Number
G5843.004

Drawn	Checked	Approved	Scale	Date
RE	JS	SS	1:4,500 @ A3	07/03/2017

Haydock Point

APPENDIX C: LANDSCAPE MAINTENANCE SCHEDULES

Activity	Frequency per Annum	Years	Indicative Timing of Operation											
			J	F	M	A	M	J	J	A	S	O	N	D
Inspections, Surveys and Cleansing														
Health and Safety														
Undertake a formal inspection to review hazards identified by original assessment.	1	All years												
Specialist Surveys														
Instruct a trained arboriculturist to undertake a tree hazard and condition survey of mature trees.	0.3	Every 3 years												
Water vole survey carried out every 6 years in addition to surveys to be carried out by suitable licenced ecologist in accordance with the Natural England Licence.	0.16	Every 6 years												
Bat activity surveys including: 3nr evening transect surveys and static surveys carried out by suitably qualified ecologist every 3 years.	0.3	Every 3 years												
Breeding bird transect surveys by suitable licenced ornithologist carried out every 3 years.	0.3	Every 3 years												
Habitat walkover survey by suitable qualified ecologist.	0.3	Every 3 years												
Site Cleansing														
Cleanse the whole site quarterly.	4	All years												
Remove fly-tipping as soon as possible.	As required	All years												
Soft Landscape Elements														
Woodland Planting- Proposed														
Check stakes and ties monthly, adjust twice annually.	12	1 to 5												
Replace any damaged or missing stakes and ties.	As required	1 to 5												
Remove stakes and ties.	1	Year 5												
Glyphosate spot spray around base of trees any vegetation within 0.5m.	2	1 to 5												
Replace failed or damaged deciduous species.	1	1 to 5												
Replace failed or damaged coniferous/evergreen species.	1	1 to 5												
Re-firm newly planted trees as required.	1	1 to 5												
Water new planting.	As required	1 to 5												
Formative prune to maintain health and vigour.	N/A	5 to 10												
Assessment of condition and structure of new tree planting.	1	All years												
Undertake a cyclical programme of selective thinning, coppicing, pruning and felling. Wood under 250 mm diameter collected from thinning, pruning, brashing and scrub/vegetation clearance will, wherever possible, be chipped and used on site for mulching. Wood greater than 250 mm diameter will be logged and used to create deadwood piles to increase biodiversity.	N/A	Every 5 years												
Treat any stumps following felling works with stump killer.	N/A	Every 5 years												
Monitor stumps and, if required, cut any re-growth and re-apply stump killer as required.	N/A	Years 6, 8 and 10												
Trees- Existing														
Undertake a cyclical programme of selective thinning, coppicing, pruning and felling. Wood under 250 mm diameter collected from thinning, pruning, brashing and scrub/vegetation clearance will, wherever possible, be chipped and used on site for mulching. Wood greater than 250 mm diameter will be logged and used to create deadwood piles to increase biodiversity.	N/A	Every 5 years												
Treat any stumps following felling works with stump killer.	N/A	Every 5 years												
Monitor stumps and, if required, cut any re-growth and re-apply stump killer as required.	N/A	Every 2 years												
Native Tree Planting- Proposed														
Check stakes and ties monthly, adjust twice annually.	12	1 to 5												
Replace any damaged or missing stakes and ties.	As required	1 to 5												
Remove stakes and ties.	1	Year 5												
Glyphosate spot spray around base of trees any vegetation within 0.5m.	2	1 to 5												
Replace failed or damaged deciduous species.	1	1 to 5												
Replace failed or damaged coniferous/evergreen species.	1	1 to 5												
Re-firm newly planted trees as required.	1	1 to 5												
Water new planting.	As required	1 to 5												
Formative prune to maintain health and vigour.	N/A	5 to 10												
Assessment of condition and structure of new tree planting.	1	All years												

Haydock Point, Newton-le-Willows
Landscape Maintenance Schedules

Activity	Frequency per Annum	Years	Indicative Timing of Operation											
			J	F	M	A	M	J	J	A	S	O	N	D
Hedgerow- Existing														
Cut one side and top.	1	All years			▒	▒	▒	▒	▒	▒				
Hedgerow Planting- Proposed														
Check protective fencing or spiral guards monthly and repair/replace as required.	As required	1 to 5												
Replace any damaged or missing fencing or spiral guards.	As required	1 to 5												
Remove fencing or spiral guards.	1	Year 5												
Glyphosate spot spray around base of trees any vegetation within 0.5m.	2	1 to 5	■	■	■						■	■	■	■
Replace failed or damaged deciduous species.	1	1 to 5				■	■	■	■	■	■	■		
Replace failed or damaged coniferous/evergreen species.	1	1 to 5						■	■	■				
Re-firm new planting as required.	1	1 to 5			▒	▒	▒	▒	▒	▒				
Strim vegetation between trees and remove arisings from the Site until the canopy layer closes over.	1	1 to 5	■	■	■						■	■	■	■
Face up to one side of hedge.	1	5 to 10			▒	▒	▒	▒	▒	▒				
Native Grassland- Proposed														
Cut (150mm) once a year and remove arising from the Site.	1	All years	■	■	■							■	■	■
Cultivate and re-seed as required.	1	1 to 3	■	■				■	■	■		■	■	■
Weed control.	1	All years	■	■	■							■	■	■
Wildflower Meadow- Proposed														
Cut (100mm) once a year and remove the arisings from the Site. Cut in 1/3 sections on a weekly rotation.	1	All years	■	■	■	■	■	■	■	■	■		■	■
Cultivate and re-seed as required.	1	1 to 3	■	■				■	■	■		■	■	■
Weed control.	1	All years	■	■	■							■	■	■
Wet Ditch- Existing														
Remove leaf litter and other debris from ditch twice annually.	2	All years												
2x yearly strim (100mm) to 1/2 of ditch in staggered 50m sections. Arisings removed from site. Strim sections on rotation.	2	All years	■		■	■	■	■	■	■		■	■	■
Cut back of any scrub within 5m of ditch.	1	All years	■	■	▒	▒	▒	▒	▒	▒			■	■
Silt removal as necessary to 1/3 of ditch to maintain areas of open water.	1	All years	■	■	■	■	■	■	■			■	■	■
Wet Ditches- Proposed														
Remove leaf litter and other debris from dry ditch monthly.	12	All years												
1x yearly strim (100mm) to 1/3 of ditch with arisings removed from site. Strim sections on annual rotation.	1	All years	■	■	■							■	■	■
Cut back of any scrub within 5m of ditch.	1	All years			▒	▒	▒	▒	▒	▒				
Silt removal as necessary in November to 1/3 of ditch to maintain areas of open water.	1	All years	■	■	■	■	■	■	■	■	■	■		■
Reed Bed- Proposed														
1x yearly strim (150mm) with arisings removed from the Site. Strim sections on annual rotation.	1	All years	■	■	■	■	■	■	■	■				■
Remove 25-30% of vegetation. Remove arisings from the Site.	1	All years	■	■	■	■	■	■	■	■	■	■		■
1x yearly cut to tree and shrub saplings encroaching into reedbeds and stump treat.	1	All years	■	■	■	■	■	■	■	■				■
Dry Basin Areas/Swales- Proposed														
Cut grass to 50mm monthly and remove arisings from the Site.	6	All years	■	■	■							■	■	■
1x yearly cut to tree and shrub saplings encroaching the swale/filter strips and stump treat.	1	All years	■	■	■	■	■	■	■	■				■
Remove 25-30% of planting and silt from the base of the swale/filter strips	0.2	Every 5 years	■	■	■	■	■	■	■	■	■	■		■
Inspect the control structure to and from the swale/ filter strips monthly.	12	All years												
Inspect the swale/filter strip annually to assess bank stability, water quality, coverage of aquatic/marginal vegetation and drainage.	1	All years												

NOTE Glyphosate formulations containing the surfacent Polyethoxylated tallow amine (POEA) should not be used within close proximity to waterbodies or other wetland habitats as it can cause high amphibian larvae mortality.

Key

■ Works not to be carried out in these months

▒ Bird breeding and nesting season

Works to be carried out in these months

APPENDIX D: SUMMARY OF RELEVANT LEGISLATION

Summary of Relevant Legislation

The following legal obligations, among others must be considered in carrying out any management operations:

Legislation	Obligations
Health and Safety Legislation	
The Health and Safety at Work Act 1974	All operations carried out on the Site must only be undertaken by trained personnel, using methods and equipment approved by the Health and Safety Executive (HSE).
Occupiers Liability Act 1984	Management organisation must ensure that every reasonable care is taken to remove any risks to both legitimate visitors and to any trespassers. In compliance it will be necessary: To make sure that all footpaths and any other structures are safe; To remove any hazardous objects; and To conduct an annual safety audit in order to identify any further hazards.
Environmental Legislation	
Conservation of Habitats and Species Regulations (as amended) (2012)	The Habitat Regulations assign a greater level of protection to a variety of native species of animals and plants listed, which are known as European Protected Species (EPS).
Wildlife and Countryside Act 1981	There is an obligation to comply with legislation for UK species protected (including amphibians, reptiles and bats) under this Act.
Environmental Protection Act 1990	There is an obligation to keep the Site free from litter and refuse.
Countryside and Rights of Way Act 2000	Imposes a new right of access on foot to registered common land and other areas of 'open countryside' which under certain circumstances allows access without being confined to footpaths.

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