



PARCEL G DEVELOPMENT, LAND OFF WALKER LANE, INGOL

For

NORTHERN TRUST

LANDSCAPE AND HABITAT MANAGEMENT PLAN

Issue 01 – 17.11.22

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Land off Walker Lane, Ingol

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1.0 INTRODUCTION AND CONTEXT

- 1.1 Appletons were commissioned in August 2022 to prepare a Landscape and Habitat Management Plan (LHMP) in relation to accompany an outline planning application for 11no. self-build residential plots on land off Walker Lane, Ingol which is also referred to as Parcel G arising from a previous planning application for the redevelopment of land within the former Ingol Village Golf and Squash Club.
- 1.2 This Management Plan considers the proposals for a scheme of residential developments on existing green space which was formerly utilised as a fairway for the former Ingol Golf Club together with management of associated adjacent woodland plantations bordering the site. Small parcels of public open space (POS) incorporated into the proposals shall be managed so that it is accessible to the public for them to freely use whilst also seeking to conserve and improve existing sensitive habitats and enrich biodiversity.
- 1.3 The Management Plan indicates how the area shall be managed in the short term for establishment of new landscape features and over a 25-year period for the management of these and existing landscape feature including pre-existing woodland plantations.
- 1.4 This document should be read in conjunction with the latest version of drawing no. 2425_02: Indicative Landscape Masterplan. The drawing sets out the details and extent for open space areas.

Scope of Management Plan

- 1.5 The Management Plan seeks to detail the strategy, methodology and operations to achieve suitable and functioning open space resources. The area to which the Management Plan relates, and which shall require certain maintenance and management operations for the publicly accessible aspects of the development including highways, public footpaths, verges, open green areas, ponds and woodland plantations.

Roles and responsibilities

- 1.6 The Northern Trust shall deliver the public open space provision for the development proposals and management will be undertaken by an appointed Management Company.

Site context and description

- 1.7 The site is centred at National Grid Reference NGR: SD 51764 32608 with the survey area covering approximately 1.8 hectares. The area is currently grassland open space

which was formerly part of Ingol Golf and Squash Club. The site is bounded to the north east by Walker Lane which links with Tom Benson Way to the north and Boys Lane in the south. To the west is the residential development of Uplands Chase which is screened on the boundary to the application site by a narrow linear belt of trees and tall shrubs. Woodland tracts form the boundaries to the south east and south west with the site narrowing to a small gap in the south between wooded areas. Sharoe Brook runs within the woodland to the south west forming a boundary to the Bellway Homes development site in the further south east. A small water body is located on the eastern aspect of the site in a roughly central position.

2.0 AIMS AND OBJECTIVES

2.1 The landscape features to be created and established on site beyond the residential development plots include planted mixes of native tree and scrub species, predominantly broadleaved species (as detailed within the Appletons Planting Schedules (issue 01), native, wildlife attracting and ornamental specimen tree planting, fruit tree planting, native hedgerow planting and sown wildflower and grasses. These features shall be managed to support a range of species including invertebrates and birds.

2.2 Aims

- ❖ Ensure that existing features of high wildlife value are retained, protected and enhanced as part of the proposed development.
- ❖ Maintain and enhance habitat connectivity and green infrastructure across the site and the wider area to ensure continued habitat availability for identified wildlife populations by establishing and maintaining tree and shrub planted areas.
- ❖ Manage and enhance plantation habitat in order to extend the overall diversity and foraging and commuting habitat for local birds and fauna and the long term.
- ❖ Maintain and manage areas of newly planted landscape associated with the highway accessway and entrance.

2.3 All new ecologically valuable habitat creation that has been proposed is appropriate to the local area, including habitats listed in the UK and Local Biodiversity Action Plan. New habitat creation that takes place during the construction phase of the development shall also involve mitigation measures to ensure that biodiversity on site is maintained at the maximum level it can be and that species groups that were known to use the site, including birds continue to do so.

2.4 As best practice, any habitat creation works have been designed based upon Biodiversity Action Plan (BAP) habitats. These include broad-leaved tree groups (Local BAP) and species rich neutral grassland (UK and Local BAP).

3.0 GENERAL MANAGEMENT PROPOSALS

3.1 Some management prescriptions are of a general nature and may be common to the entire site; the prescriptions of a general nature are dealt with in this section. Any detail that is specific to a particular habitat type or area is covered further within the relevant section.

3.2 Management Objectives

- 3.2.1 Maintain a clean and safe site for amenity value of local residents of the area.
- 3.2.2 Maintain good overall visual surveillance across the site.
- 3.2.3 Maintain a tidy and attractive site by means of best practice and good horticulture.
- 3.2.4 To limit the colonisation of 'weed' or invasive species.
- 3.2.5 To manage and maintain habitats suitable for the support of all a diverse array of flora and fauna.

Management Prescriptions

Material and Workmanship

- 3.3 Materials and workmanship required to undertake the management prescriptions and operations shall generally be in accordance with the following documents:
- *BS 3936-4:2007 Nursery Stock.*
 - *BS 4428:1989 Code of Practice for General Landscape Operations.*
 - It is good practice, with regard to retained trees and shrubs to adhere to the provisions of *BS 5837:2012 Trees in relation to design, demolition and construction. Recommendations.*
 - *BS 3882: 2007 Topsoil.*
 - *BS 3998:2010 Tree Work: Recommendations.*

Working close to residential areas

- 3.4 The woodland plantations located around the site is also in close proximity to residential areas and public rights of way. Appropriate measures shall be taken whilst working in proximity to the adjacent publicly accessible areas, to protect the public and operatives and, to avoid damage to third parties/ vehicles.

Creating a woodland edge to native planting blocks

- 3.5 A graded woodland edge around areas of existing plantations shall be created over time to maximise diversity of habitats and prevent egress into wooded areas.

Creating woodlands tiers in adjacent plantation areas

- 3.6 Woodland tiers shall be established over time by ensuring the presence of the upper canopy, the shrub layer and adequate ground cover. This shall be achieved through regular assessments of each layer and careful thinning of layers that may become too dominant, i.e. the shrub layer reaching over maturity and plants needing to be taken out. These plants shall either be replaced or retained specimens allowed to fill the gap. The same principle shall be applied to ground cover and the upper canopy. The assessment of this shall be made on an annual basis. By ensuring the presence of these layers increased the diversity of habitats shall be enhanced, whilst adding ecological depth through the layers of vegetation, providing vertical connectivity.

Dead wood from plantation blocks

- 3.7 Sections of dead wood shall be retained from felled trees as and when their removal is required, as long as they pose no threat to safety or future maintenance operations. These sections of dead wood shall be left on the ground to breakdown to provide a valuable habitat source for wildlife.

Increasing the light availability within plantation blocks

- 3.8 Light availability for all levels of the woodland shall be increased by cutting back poor quality regeneration. To ensure that invasive species such as Sycamore do not become dominant and to increase the light levels as far as is possible to the under storey, invasive species shall be removed on a biannual basis and up to 50% removed. In the long term, felling/ thinning shall be undertaken in 5, 10 and 20 years, so as to open up small sections of the native planting blocks and allow natural regenerations and ground flora to establish. No more than 20% of the woodlands mass should be removed through thinning and felling unless otherwise stated in section 4.0. This shall ensure enough cover is left within the woodland.

Replanting Native Species

- 3.9 Species planted shall be native and shall form part of the woodland/plantation habitats. The aim of any management shall be to enhance the existing character of the site. Replanting of failed new planting shall be carried out within a period of 7 years following the completion of the development within an appropriate planting season and shall be replaced with others of a similar size and species.

General Maintenance and Safety Checks

- 3.10 Safety checks of all footpaths, gates, structures and fences shall be completed on a monthly basis.

Paths and Hard Surfaces

- 3.11 All paths and hard surfaces shall be kept free of moss by mechanical means or approved herbicide.

Litter Picking

- 3.12 A litter pick and removal of any fly tipped material to all areas shall be carried out on a monthly basis.

Horticultural housekeeping

- 3.13 General horticultural maintenance of all soft planted features shall be carried out at appropriate intervals in response to the growing seasons and the establishment and maturity of the planted areas.

Invasive Species

- 3.14 The site shall be monitored to ensure no stands of Japanese Knotweed or other invasive species including Himalayan Balsam, New Zealand Pygmyweed (*Crassula helmsii*), Shallow/ Goat Willow shall colonise the site, particularly areas of woodland/tree planting. This monitoring shall occur on an annual basis in late spring to early summer. Any invasive species found shall be treated by the appropriate method (manual, mechanical or chemical) and within the recommended timescales of current best practice. All treatment shall be in accord with the Environment Agency guidelines.

Japanese knotweed

- 3.15 Japanese knotweed is not present on the site but monitoring should take place twice a year in the growing season for evidence of the plant. Should knotweed be recorded it shall be treated by Gyphosate herbicide. Any herbicide treatment needed shall take place for a minimum period of two years in order to eradicate the plant.

Ecology

- 3.16 The site shall be maintained and monitored to ensure that the newly created habitats remain in a state suitable for the support of species diversity with particular emphasis on the Great crested newt pond area. An effort shall be made to increase the species diversity of the site by encouraging more species through appropriate management and enhancement techniques.

4.0 ECOLOGICAL ENHANCEMENT MEASURES

Woodland and Hedgerow Enhancement

- 4.1 New native species woodland edge and hedgerow planting shall be undertaken along the existing woodland plantation boundaries within the individual plot rear garden areas to strengthen the woodland plantations and habitat linkage. New hedge planting will provide additional areas for shelter and foraging for GCN and provide increased habitat linkage.
- 4.2 Species compositions shall complement the current species mix on site. Species mix and composition are presented on 2425_02 Landscape Masterplan (**Appendix 1**).
- 4.3 Woodland edge planting shall be undertaken at 1.0 x 1.0m separation distance. This will provide a dense and well-structured woodland edge of value for wildlife. Species to be planted shall be of UK provenance. New planting will be protected, by guards where required (in order to prevent damage by rabbit grazing).
- 4.4 Hedgerows shall be planted in double staggered rows: 300mm apart at 450mm centres.
- 4.5 Bare-root stock will be stored in a sheltered area and not allowed to dry out prior to planting. *Mycorrhizal inoculant* (contractor's choice) is to be applied to bare root plants before planting. All plants supplied shall comply with BS 3936: Parts 1 to 10 as relevant, and BS 4043, the National Plant Specification, published by the Horticultural Trades Association, as appropriate.
- 4.6 The subsoil in the pit base shall be broken up to 150mm below the base of the trench.
- 4.7 The newly planted trees may require watering during drought. During drought, the soil moisture shall be checked by inserting a finger into the soil. If dry below 100mm, thorough watering is required.
- 4.8 Species providing valuable food resources to wildlife, including hazel and blackthorn, will be managed to allow them to flower, set fruit and seed in order to provide an increased food resource for a range of species, including birds and small mammals as well as invertebrates.
- 4.9 The exact timing of the proposed tree planting will be dependent on the ground conditions, but planting shall take place between the months of November and March inclusive. It is expected that ground conditions and climate will allow for earlier planting

(i.e. before January), and this will allow the plants more time to establish a network of feeder roots before the onset of spring. Planting shall avoid freezing and waterlogged conditions.

Grassland Enhancement

4.10 Enhancement will be provided largely through management of the structure of existing grassland, however new sowing shall be required within areas disturbed by construction activities. This will be implemented using seed mixes appropriate to the soil type, tolerant of both sun and shade and native to the UK. The objective for the site is to manage any grassland areas to encourage the development of both species and structural diversity over time.

4.11 Informal grassland around the existing pond and the retained mature oak tree shall be managed to provide a diverse structure of grassland This shall be managed to develop a varied height and tussocky structure valuable to small mammals, birds, amphibians and invertebrates. Amenity grassland to road verges and road entrances comprising the remaining existing grassland and newly seeded areas shall be managed as short grassland through more frequent mowing.

Ground Preparation for seeding

4.12 Prior to the sowing of the seed mixes (e.g., for re-instatement of areas cleared for construction) any existing weed cover within the area to be seeded shall be sprayed out with a glyphosate-based herbicide and cultivated to a 100mm depth in order to remove weeds and debris. The surface shall then be firmed and levelled as appropriate to create a suitable planting bed.

Sowing

4.13 Pond area habitat: This area shall be sown (where required for construction reinstatement) with a meadow mix for wet ground suitable to the soil conditions at the site (for example Emorsgate EM8) or similar. This will improve its value as a foraging and refuge resource for a range of species.

4.14 Amenity grassland. These areas shall be sown with a grassland mix suitable for regular mowing.

4.15 All areas shall be sown in accordance with suppliers' instructions, generally between 2g/m² and 4g/m² (following seed mix guidance) within the planting bed, ideally during early autumn (September - October) or spring (March – April), but can be sown at other times of year provided that there is sufficient moisture and warmth for seed germination (absence of frost, drought or waterlogging).

- 4.16 All seeding shall be carried out in accordance with BS 4428:1989 Code of Practice for general landscape operations (excluding hard surfaces), or the most up to date and current British Standard.

Pond Enhancement

- 4.17 The existing pond shall be retained and be managed to improve its longevity and value to Great crested newts and other amphibians in the long term.
- Removal of any encroaching scrub (particularly self-seeded willow) from pond margins. Any branches will be retained for the creation of habitat piles as cover for amphibians.
 - An area of terrestrial habitat shall be retained and enhanced around the pond to increase the habitat for amphibians.
 - Vegetation shall be left on the pond margins but encroachment of vegetation into the open water shall be removed involving hand clearance to maintain a balance of open water and aquatic and marginal vegetation around the pond.

Wildlife Enhancement

Birds

- 4.18 Additional bird roost provision shall be made through the inclusion of 6 bird boxes erected on mature trees or mounted on poles in suitable habitats, at an appropriate height of between 2 to 4 metres. Boxes shall be angled so that they face away from the prevailing wind or in a semi sheltered environment. Positioning within or close to mature vegetation will increase chances of occupation. Bird roosting boxes will provide suitable bird roosting opportunities for a variety of bird species such as; great, blue, marsh, coal and crested tit, redstart, nuthatch, collared and pied flycatcher, tree and house sparrows.

Bats

- 4.19 Additional bat roost provision shall be made through the inclusion of bat roost boxes erected on mature trees or mounted on poles in suitable habitats, at an appropriate height and with clear flight paths to the boundary of the site. 3 woodcrete bat boxes suitable for nursery or summer roosting for small crevice dwelling bat species shall be erected (each will face a different direction in order to provide roosts with varying conditions).

Amphibians and Reptiles

- 4.20 The area around the existing retained pond shall be managed for amphibian/ Great crested newt after completion of the infrastructure works. In order to improve the current

habitat within this area for amphibians and Great crested newts in general, the following shall be provided/created:

- 1no. hibernacula/refugia (above ground or below ground as appropriate to hydrological conditions) of at least the minimum dimensions shown in the Great crested newt mitigation guidelines (English Nature, 2001).
- Areas of coarse grassland to create linkages with existing woodland tracts and tree lines.

Hibernacula

- 4.21 Construction of the hibernacula both shall be based on the standard design as detailed in the Great Crested Newt Mitigation Guidelines (EN, 2001) and reproduced in Plate 1. Logs and clean bricks/rubble would be sourced locally as far as possible, with 'clean' materials brought in from elsewhere where this is not possible. A minimum of 1 hibernaculum will incorporate a south facing bank to provide additional favourable basking habitat for reptiles. It is proposed that the other hibernacula are orientated in different directions to provide a range of conditions for amphibians.

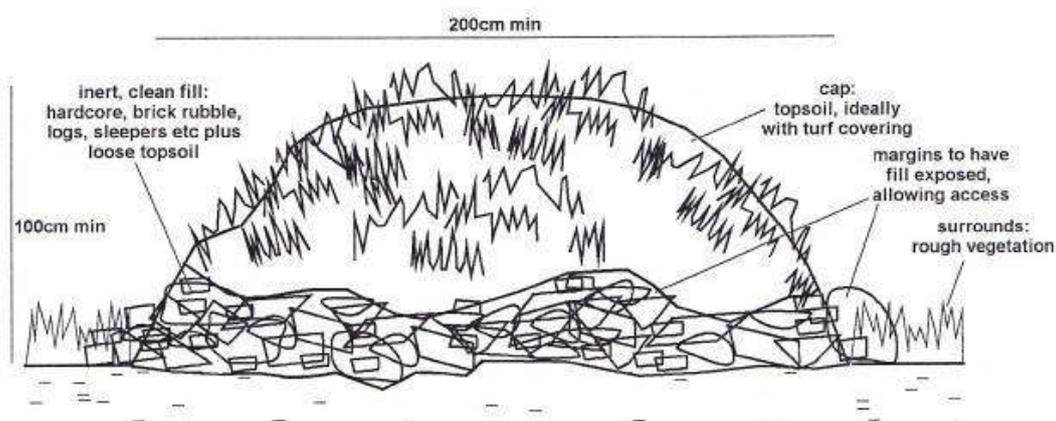


Plate 1

Habitat Piles

- 4.22 Additional log/brush piles formed from vegetation management shall be placed within the habitat areas beyond plot curtilages. These features will provide valuable invertebrate habitats and shelter for other species including amphibians and small mammals. Arising's from ongoing vegetation management can be used to supplement the log / brush piles, which should remain in the same locations from year to year.

5.0 MANAGEMENT FOR NEW LANDSCAPE AND HABITAT FEATURES

New native planting including woodland blocks, edge mix and native scrub planting

Aim

- 5.1 ***To provide additional amenity landscape features beyond plot curtilages and to encourage valuable wildlife habitats.***

Description

Vegetation

- 5.2 These areas have a combination of newly planted native vegetation types, including a small number of standard native tree and shrubs planted as whips, transplants, cell grown and rootballed stock. These are described within the planting schedules.

Access

- 5.3 Access shall be from Walker Lane. There is access for large machinery such as tractor mounted flail mowers. Access by persons with hand held equipment shall be via the same route.

Health and Safety/Risk Management

- 5.4 Appropriate measures need to be taken whilst working in proximity to residential areas and public footpaths to protect the public and operatives and to avoid damage to third parties and their property.

Management Objectives

- 5.5 The following objectives shall apply:
- 5.5.1 To ensure that the newly planted species establish.
 - 5.5.2 To encourage the ecological value of the planting by long-term maintenance of species composition, and to ensure ongoing biodiversity value as habitat of principle importance and local BAP priority habitat.
 - 5.5.3 To keep the area free from litter and fly tipped material.
 - 5.5.4 To ensure good growth and maintenance of the new species for the future value of the vegetation as a group.
 - 5.5.5 To ensure that appropriate visual surveillance of the site is maintained.

Management Prescriptions

- 5.6 The trees species shall be allowed to grow into high canopy woodland with the selective removal of any self-set species such as Ash, Goat Willow and Sycamore. Pruning in the longer term to provide containment to prevent any overhang onto public footpaths shall be carried out. Tree canopies as they establish and develop larger canopies shall be formatively pruned over time to encourage good branch structure and canopy shape for improved long-term health. Replanting of failed plants shall be undertaken up to a 5 year period from planting and thinning shall take place at periods of 5, 10 and 20 years in accordance with good arboricultural practice.

Operations

Newly planted native trees (whips and transplants) and shrubs

- 5.7 Newly planted trees and shrubs shall be maintained for an initial five year period to ensure successful establishment. Maintenance shall include weed control measures to the base of each whip, transplant or shrub and the strimming of grass/weed growth between the plants twice per annum. The objective of these measures is to reduce competition from grass and herb vegetation, ensuring rapid development, and also to reduce the risk of fire damage during winter months.
- 5.8 Any failed plants under 80% establishment shall be replaced within this period.
- 5.9 As the vegetation develops and establishes, the vegetation shall be pruned on the outer edges annually to contain outward growth. The vegetation shall be thinned to establish a good structure to the planted areas in 5, 10 and 20 years in accordance with good arboricultural practice. Any brash shall be left in piles within discreet areas of the site as wildlife habitats for amphibians and terrestrial invertebrates.
- 5.10 Rabbit guards shall be checked annually and replaced if damaged or lost for a period of 5 years.

Feathered and standard trees

- 5.11 Tree stakes standard trees shall be checked annually for damage and firmness in the ground and tree ties shall be checked for damage. Both shall be adjusted or replaced as appropriate.

- 5.12 Any dead or damaged branches shall be cleanly pruned back to healthy wood with a proprietary knife. All prunings shall be taken off site to the contractor's own tip.
- 5.13 Trees shall be inspected for broken or damaged branches which shall be cut back to the stem or nearest branch union.

Tree guards and shelters

- 5.14 Tree guards, stakes and shelters shall be checked to ensure they are firm in the ground and cannot be pulled out and that guards are in a good condition. Ties shall be checked to ensure they are firm and fixed to the stake. And the tie loosened if necessary to prevent rubbing. Shelters, guards, stakes and ties shall be replaced if damaged.

Removal of prunings and arisings

- 5.15 All prunings and litter collected shall be taken off site to the contractor's own tip.

Litter Picking

- 5.16 A litter pick and removal of any fly tipped material shall be carried out on a monthly basis.

Native species hedge planting

Aim

- 5.17 ***To provide an effective habitat for Great crested newts, provide a valuable food resource for wildlife and reinforce parts of the boundary of the area.***

Description

Vegetation

- 5.18 These areas have newly planted hedgerow species.

Access

- 5.19 Access for maintenance shall be from Walker Lane.

Health and Safety/Risk Management

- 5.20 Appropriate measures need to be taken whilst working in proximity to public footpaths and residential property to protect third parties and their property.

Management Objectives

- 5.21 The following objectives shall apply:
- 5.21.1 To ensure that the newly planted species establish.
 - 5.21.2 To establish an additional habitat for Great crested newts.
 - 5.21.3 To ensure good growth and maintenance of the new species for the future value of the vegetation as a whole.
 - 5.21.4 To keep the area free from litter and fly tipped material.
 - 5.21.5 To ensure that appropriate visual surveillance of the site is maintained.

Management Prescriptions

- 5.22 Hedge species shall be allowed to establish into a hedge form and pruned at intervals to all 3 sides.

Operations

Hedges

- 5.23 Hedgerows may require watering during drought. During drought, the soil moisture shall be checked by inserting a finger into the soil. If dry below 100mm, thorough watering is required.
- 5.24 The first year following planting, all dead, dying and diseased plants shall be identified and shall be replaced by the contractor at their own cost up to 5 years after planting.
- 5.26 During establishment (2-3 years) weeds within the hedgerow planting strips shall be subject to weed clearance twice during the growing season.
- 5.27 Stakes and shelters shall be checked to ensure they are firm in the ground and cannot be pulled out and that guards are in a good condition. Ties shall be checked to ensure they are firm and fixed to the stake. Shelters, guards, stakes and ties shall be replaced if damaged. Shelters and stakes shall be removed after year 5.
- 5.28 Hedge species shall be allowed to reach a height of approximately 1500cms over the first 2 years. They shall be pruned back to 450cms to encourage lateral growth and produce healthy well-shaped specimens. Thereafter the hedges shall be maintained by pruning to a height of 1.75m and width of approximately 1-2m with 1x cut bi-annually to contain and shape hedges. All hedges shall be faced off and across the top sides. Pruning shall be undertaken in late January or February. No cutting shall be undertaken during the breeding bird season (March to September inclusive).

Removal of prunings and arisings

- 5.29 All prunings and thinnings shall be collected and taken off site to the contractor's own tip unless left as wildlife brushwood piles as agreed with the land owner.

Litter Picking

- 5.30 A litter pick and removal of any fly tipped material shall be carried out on a monthly basis.
- 5.31 All litter and debris shall be taken off site to the contractor's own tip.

Standard tree planting

Vision Objectives

- 5.32 ***To manage planted trees to ensure establishment and survival for the long term.***

Description

Vegetation

- 5.33 These areas have newly planted trees.

Access

- 5.34 Access for maintenance shall be from Walker Lane.

Health and Safety/Risk Management

- 5.35 Appropriate measures need to be taken whilst working in proximity to public highway footpaths, internal footpaths, areas where the public may be at risk and residential property to protect third parties and their property. Future work to trees shall be undertaken by appropriately qualified arborists/ tree surgeons who hold the required certification to carry out works using lifting equipment, chain saws, winches and the like in accordance with health and safety legislation and recommendations of the Health Safety Executive.

Management Objectives

- 5.36 The following objectives shall apply:
- 5.36.1 To ensure that the newly planted species establish.

- 5.36.2 To ensure that avenue tree species across the site are managed and formatively pruned to maintain a good overall canopy shape true to species type that enhances the visual amenity of the trees.
- 5.36.3 To ensure good growth and maintenance of the new species for the future value of the vegetation as a whole.
- 5.36.4 To keep the area free from litter and fly tipped material.
- 5.36.5 To ensure that appropriate visual surveillance of the site is maintained.

Management Prescriptions

- 5.37 Trees shall be allowed to develop into mature specimens with their natural canopy habit. Dead wood and damaged branches shall be pruned to remove risk hazards.

Operations

Newly planted standard trees

- 5.38 Newly planted trees shall be maintained for an initial five year period to ensure successful establishment. Any trees which fail to thrive shall be replaced by the same species and initial planting size within a five year period from initial planting. Maintenance shall include weed control measures to the base of each tree.
- 5.39 Tree stakes on standard trees shall be checked annually for damage and firmness in the ground and tree ties shall be checked for damage. Both shall be adjusted or replaced as appropriate. Tree stakes shall be removed after year 7.
- 5.40 Any dead or damaged branches of young trees shall be cleanly pruned back to healthy wood with a proprietary knife.
- 5.41 As the canopies develop, they shall be pruned in accordance with good arboricultural practice. Pruning shall be carried out in compliance with BS 3998:2010 Tree Work: Recommendations as and when appropriate for the species, to promote healthy growth, correct shape and form, and to remove dead or dying wood, diseased wood, broken or damaged branches or bark, suckers (where not appropriate for the species) and gross irregular shapes.
- 5.42 All trees shall be inspected within 48 hours following strong gales (wind force 9) in order to remove any damaged, dangerous or hanging branches.

Removal of prunings and arisings

- 5.43 All prunings and thinnings shall be collected and taken off site to the contractor's own tip unless left as wildlife brushwood piles as agreed with the Local Planning Authority.

6.0 MANAGEMENT OF EXISTING WOODLAND PLANTATION AND MATURE TREES

Aim

- 6.1 *To develop long term management for the existing plantations.
To maintain and improve the plantation woodlands for amenity value, biodiversity and landscape and ensure that the plantations maintain a healthy and safe woodland habitat.*

General Description

Vegetation

- 6.2 These areas include plantation blocks and large groupings of trees to the east of the development identified as W11 on Appletons drawing no. 2425_01 Rev A. The plantation comprises of native and non-native species of mature and even-aged specimens. Species comprise alder, cherry, horse chestnut, lime, poplar, sycamore and willow spp. Trees are generally tall drawn up specimens with tall high canopies but with the occasional large wide spreading tree of sycamore or oak. There is an understorey of sparse elder, holly and hawthorn. Himalayan balsam is present throughout the area.
- 6.3 None of the plantations or individual standing trees have been subject to maintenance over several decades.

Access

- 6.4 Access for maintenance shall be from Walker Lane. There is access for large machinery such as tractor mounted flail mowers along the road only. Access by persons with hand-held equipment shall generally be via the same route.

Health and Safety/Risk Management

- 6.5 Appropriate measures need to be taken whilst working in proximity to public highway. Future work to plantations and trees and shall be undertaken by appropriately qualified arborists/ tree surgeons who hold the required certification to carry out works using lifting equipment, chain saws, winches and the like in accordance with health and safety legislation and recommendations of the Health Safety Executive.

Management Objectives

- 6.6 The following objectives shall apply:
- 6.6.1 To improve the age and species structure of the plantation to improve longevity and disease resistance.

- 6.6.2 To ensure good growth and maintenance of all vegetation for the future value of the vegetation as a whole and to facilitate restoration of unmanaged broadleaf compartments.
- 6.6.3 To maintain the health and reduce the risk of branch fall from mature trees.
- 6.6.4 To maintain and enhance wildlife habitats with particular focus on edge habitat.
- 6.6.5 To reduce/prevent invasive species.

Management Prescriptions

- 6.7 Undertake phased thinning of poorer, less vigorous poplars and pole trees within broadleaved plantation by up to 20%, increasing light levels to ground level and allowing better specimens space to develop canopies. Thinning to be on a 5 year rotation for up to 25 years.
- 6.8 Maintain a safe environment by removal of dead, dying, unstable/ leaning trees and damaged branches.
- 6.9 Remove hazards in the form of fallen trees and branches where they may impede desired maintenance access.
- 6.10 Restock the plantation up to 50% of the cleared areas by planting oak and mixed native broadleaved species. The remainder of the thinned areas shall be restocked by natural regeneration. Restock every five years in line with thinning regime for up to 25 years.
- 6.11 The plantation shall be inspected by a qualified arborist on a yearly basis to assess risk and dead wood and damaged branches shall be pruned to remove risk hazards.
- 6.12 The plantation shall be inspected on a yearly basis for non-native invasive species and eradication carried out as appropriate to species.
- 6.13 Inspect mature trees which fall with publicly accessible area on an annual basis and after a storm event to check for fallen or hanging branches, dead wood where there is the risk of branch failure. Branches shall be removed which present a risk in accordance with BS 3998:2010 Tree Work: Recommendations.

Operations

- 6.14 All tree felling and removal of dead or damaged branches of trees shall be in accordance with good arboricultural practice and BS 3998:2010 Tree Work: Recommendations.

- 6.15 Habitat quality of all plantation shall be monitored on a 5 yearly basis and adjustments to thinning, prunings and restocking adjusted appropriately.
- 6.16 All plantations shall be inspected within 48 hours following strong gales (wind force 9) in order to remove any damaged, dangerous or hanging branches.
- 6.17 All thinnings and prunings shall be collected and taken off site to the contractor's own tip unless left as wildlife brashwood piles. The amount of brashwood piles to be agreed with the landowner beforehand.
- 6.18 Remove Himalayan balsam within plantation by hand pulling prior to plants forming seed for 3 consecutive years. Where appropriate Himalayan balsam may be treated by chemical means in accordance with Environment Agency Guidelines within the recommended timescales of current best practice.
- 6.19 A litter pick and removal of any fly tipped material shall be carried out on a monthly basis. All litter and debris shall be taken off site to the contractor's own tip.

7.0 MANAGEMENT OF GRASSLAND AREAS

Existing grassland management

Aim

- 7.1 ***To maintain a grassland sward which shall ensure ongoing amenity value for local residents and provide a varied structure for the promotion of biodiversity.***

Description

Vegetation

- 7.2 These areas have existing amenity grassland which previously formed a fairway to the former Ingol Golf Course and will be limited to publicly accessible areas around the existing pond and the retained mature oak tree.

Access

- 7.3 Access for maintenance shall be from Walker Lane. There is limited access for large machinery such as tractor mounted flail mowers.

Health and Safety/Risk Management

- 7.4 Appropriate measures need to be taken whilst working in proximity to areas of public access so as to avoid damage to third parties, vehicles and safety of operatives.

Management Objectives

- 7.5 The following objectives shall apply:
- 7.5.1 To ensure that the existing grass is maintained to an appropriate height and that any newly sown grasses establish and are maintained to appropriate height.
 - 7.5.2 To ensure that area around the pond areas is managed to create long meadow/tussock grassland with marshy areas adjacent to the pond to develop a varied structure of higher value than the current shorter amenity grassland,
 - 7.5.3 To ensure good growth and maintenance of the grassland for the future value of the vegetation as a whole.
 - 7.5.4 To keep the area free from litter and fly tipped material.
 - 7.5.5 To ensure that appropriate visual surveillance of the site is maintained.

Management Prescriptions

- 7.6 Grassland shall be to allowed to establish and to provide a continuous grass sward. The area shall be kept free of invasive species and litter.

Operations

Existing grassland:

- 7.7 The existing grass shall be managed with a single cut reducing the height to approximately 150mm late in the season, between August and September, subject to weather conditions to allow the seeds of the later flowering species to fall before the cut. An optional earlier cut (light mowing) can be made in early February, if necessary, to manage re-growth if it is a mild winter. Cuttings shall be left in situ to maintain a litter layer of 70-100mm deep. The area shall not be cut less than 125mm above ground when cut.
- 7.8 After the establishment period (2+ years) the grassland shall be managed with single summer hay meadow cut with an autumn or spring mow if required to approximately 50mm. The grassland shall not be cut from spring to late July to allow plants to flower and set seed. Hay shall be left on site for 7 days to shed seed then removed. Minor weed growth shall be managed by spot herbicide treatment.
- 7.9 Cutting shall be commenced from the inside of the area, working outwards towards the boundary features. The opposite shall apply to management of vegetation around the pond. This systematic cutting will allow fauna such as invertebrates, amphibians, birds and small mammals to safely vacate the area temporarily.
- 7.10 The management of the grassland areas shall take a flexible approach and the exact dates will be dependent upon weather conditions. A phased (rotational) cutting regime is recommended (i.e. ideally the entire area should not be cut at the same time) in order to allow for more structured grassland and to provide some areas of refuge for amphibians and other wildlife.

General maintenance:

- 7.11 Any woody invasive species found shall be treated by the appropriate method (manual, mechanical or chemical) and within the recommended timescales of current best practice.

- 7.12 A litter pick and removal of any fly tipped material shall be carried out on a monthly basis. All litter and debris shall be taken off site to the contractor's own tip.

8.0 POND MANAGEMENT

Aim

- 8.1 *To maintain a habitat that provides suitable conditions for breeding and foraging amphibians including Great crested newts.*

Description

Vegetation

- 8.2 These areas have meadow grassland/ wildflower mix with wetted marshy zones surrounding the ponds.

Access

- 8.3 Access for maintenance shall be from Walker Lane. There is limited access for large machinery such as tractor mounted dredgers.

Health and Safety/Risk Management

- 8.4 Appropriate measures need to be taken whilst working in proximity to areas of public access so as to avoid damage to third parties, vehicles and safety of operatives.

Management Objectives

- 8.5 The following objectives shall apply:
- 8.5.1 To encourage the ecological value of the pond by long-term maintenance of the water body, and to ensure ongoing biodiversity value as habitat of principle importance and local BAP priority habitat.
 - 8.5.2 To keep the area free from litter and fly tipped material.
 - 8.5.3 To ensure that appropriate visual surveillance of the site is maintained.

Management Prescriptions

- 8.6 The pond shall be free of a build up of sediment.
The area shall be kept free of invasive species and litter.

Operations

Inspections

- 8.7 The ponds shall be monitored annually to assess colonisation by vegetation and any accumulation of sediment or debris. Annual routine management shall include removal of debris and rubbish.

General

- 8.8 Overly vigorous or invasive plant species may need to be cut back or removed from the ponds using appropriate techniques to minimise disturbance to wildlife. Management of aquatic vegetation shall be undertaken annually (little and often) with vegetation thinned rather than removed. Removed vegetation shall be hand sorted to ensure no animals are caught up in the vegetation.

Desilting

- 8.9 Should water levels within the deepest area of the pond fall below half a metre, desilting shall be required. The work shall be undertaken by a long armed excavator and where possible, entry and access to the pond shall be limited to one point or section of bank.
- 8.10 Note – Any build up of sediment requiring removal may require a licence from Natural England (NE). The appropriate ecological consulting body and NE shall be contacted prior to any such works commencing. Herbicides shall not be used within close proximity to ponds.
- 8.11 Aquatic vegetation management shall avoid the amphibian breeding season (March to June inclusive) when amphibians are most active at pond. The optimum period for undertaking such works are November to January.
- 8.12 The ponds shall also be monitored for the presence of fish. If fish are found to be present appropriate remedial actions shall be taken to remove them.

General maintenance

- 8.13 Any woody invasive species found shall be treated by the appropriate method (manual, mechanical or chemical) and within the recommended timescales of current best practice.
- 8.14 A litter pick and removal of any fly tipped material and debris shall be carried out on a monthly basis. All litter and debris shall be taken off site to the contractor's own tip.

end



APPENDIX 1



KEY

- Existing trees retained
- Root protection area
- Existing woodland areas
- Plot areas
- Perimeter fencing to plots
- 0.9m high timber and stock proof fencing to edge of pond
- Public footpath
- Proposed standard tree planting
- Proposed native scrub planting to facilitate wildlife connectivity
- Proposed native hedgerow
- Areas of amenity space with reduced mowing regime to encourage grassland species diversity
- Amenity seeded grass verge with frequent mowing regime

PLANTING SCHEDULE

TREES						
No's	Species	Area	Common name	Height (cm)	Form/Pot size	Notes
2	Acer campestre	Ag	Field maple	12-14	350x225	BR
3	Alnus glutinosa	Ag	Alder	12-14	350x225	BR
7	Betula pendula	Bp	Birch	12-14	350x225	BR
8	Prunus avium	Pa	Wild cherry	12-14	350x225	BR
9	Sorbus domestica	Sm	English ash	12-14	350x225	BR
1	Tilia cordata	Tc	Small-leaved lime	12-14	350x225	BR

HEDGING						
No's	Species	% mix	Common name	Height (cm)	Form/Pot size	Notes
300	Fagus sylvatica - single species hedge (0cm)	100%	Beech	60/80	B 1+2	See notes

NATIVE SCRUB (750m2)						
No's	Species	% mix	Common name	Height (cm)	Form/Pot size	Notes
55	Corylus avellana	15%	Hazel	60/80	B 1+1	Plant at 1.5m intervals
199	Calluna hecortensis	50%	Heathworts	40/60	B 1+2	Plant at 1.5m intervals
37	Ilex aquifolium	10%	Holly	40/60	2L	Plant at 1.5m intervals
37	Rosa canina	10%	Dog rose	40/60	BR	Plant at 1.5m intervals
55	Sambucus nigra	15%	Elder	60/80	B 1+1	Plant at 1.5m intervals

LANDSCAPE SPECIFICATION NOTES FOR PREPARATION AND PLANTING

(Generally to BS 4428:1989 - General Landscape Operations, excluding hardworks)

Trees

- All trees shall be to the specified size and comply with BS 3836-1:1992. All shall be well branched with a straight stem and leader shot and be free from pegs, and bark damage.
- Trees shall be planted in a pit 1200 dia x 750mm deep and backfilled after planting with imported topsoil incorporating 2 x 80L bags of Fison's Tree Planting and mulching compost.
- All trees shall be double high staked to good horticultural practice using 75mm peeled and pointed larch stakes and rubberised tree ties with spacer.

Whips and transplants for native scrub planting

- All whips and transplants shall be supplied and installed with 80mm diameter green tree shelters to transplants, fixed into ground with pegs. Do not apply to feathered stock.
- All conifers and holly species shall be supplied & installed with 250mm diameter fine mesh guard with 2 no. stakes.
- All stock shall be notch planted with the exception of feathered stock and holly species which shall be pit planted.

Seeding (amenity and wildflower)

- All areas to receive seeding shall be clear of debris and the like.
- All areas to receive grass seed shall be cultivated and brought to a fine tilth by raking and harrowing within the top 25mm. All debris, including stones of 25mm or over, brought to the surface shall be removed off site.
- Areas of amenity grass seed mix shall receive a suitable fertiliser, seven to ten days prior to seeding.
- Areas of wildflower seeding shall not receive fertiliser.
- The specified seed mix shall be sown at the supplier's recommended rate. The quantities of seed shall be divided in half, and sown evenly in transverse directions and the seed shall be raked or harrowed in. The seed shall not be drilled. Sowing shall be carried out during calm weather. All sowing is at the contractor's own risk and any areas where germination fails shall be re-seeded at the contractor's own expense.
- Areas of amenity grass seed mix shall receive a pre-emergent herbicide applied immediately after seeding.
- The specified seed mix shall be sown at the supplier's recommended rate (between 5 and 35 grams per m²). The quantities of seed shall be divided in half and sown evenly in transverse directions. The seed shall not be drilled. After sowing the seed shall be lightly harrowed or hand raked into the immediate surface and lightly rolled.
- Areas of amenity grass seed mix shall receive a pre-emergent herbicide applied immediately after seeding.
- When amenity grass mix is 100mm high it shall be lightly topped by approximately 25mm with an approved mower.
- Any areas which fail to germinate shall be re-cultivated and re-seeded, within one month of the original seeding.
- Areas of broad-leaved weeds shall be cleared by either hand pulling or spot treatment using a selective broadleaf herbicide.

REVISIONS

No.	Description	Date

Project: LAND OFF WALKER LANE, INGOL
 Title: Tree Constraints Plan
 Client: Melrose Limited
 Date: November 2022
 Scale: See bar scale
 Drawn: LAC
 Drawing No: 2425_02
 Checked: DS
 Revision: S100P Stage 2
 Status: Planning

appletons
 Landscape Institute
 Appletons, 17 Choleley Old Road, Bolton BL1 3AD, Tel: 01204 393000, Web: www.appletons.co.uk, Email: info@appletons.co.uk

Land off Walker Lane, Ingol

Landscape Masterplan





APPENDIX 2

HABITAT MANAGEMENT PLAN WORKS SCHEDULE

NOTE: This matrix lists the key routine maintenance operations required over a 25 year period together with an indication of when they should be undertaken throughout the year.

Item	OPERATION	YEARS 1-5 (no. of visits)												YEARS 6-25
		J	F	M	A	M	J	J	A	S	O	N	D	Jan - Dec
	General Operations:													
1	Litter and debris removal – all areas	2	2	2	2	2	2	2	2	2	2	2	2	As years 1-5
2	Removal of fallen leaves											1	1	As years 1-5
3	Weeding all areas				2	2	2	2	2	2	2	2		1 visit per month April to Nov
4	Watering (if required)				1	1	1	1	1	1				As years 1-5
5	Pruning hedgerows		1											On a 2 yearly cycle
5	Pruning dangerous trees	1					1							As years 1-5
6	Re-firming newly planted shrubs			1								1		As years 1-5
7	Checking rabbit guards and replacing as necessary											1		Remove guards, stakes and ties in year 6
8	Cutting grassland areas									1				As years 1-5
9	Annual check and removal of scrub											1		As years 1-5
10	Pest and disease control (check at every monthly visit)							1						As years 1-5
11	Replacement planting as required	1										1		As required
12	Inspection of pond.													
	Hard landscape elements:													
13	Weed/ moss removal					1		1		1				As years 1-5
14	Gully and drain clearance											1		As years 1-5
15	Fencing and enclosure – check condition and repair as required		1											As years 1-5
16	Hard surfaces & edgings – check condition and repair as required			1										As years 1-5
17	Lighting – check condition and repair as necessary	1												As years 1-5
18	Painting railings and lighting columns													In year 8 and every eighth year after

It should be noted that the matrix should be used as a guide to times only. It does not include every operation listed in the Maintenance Plan but all checking and intermittent actions should occur during the routine visits. The appointed maintenance contractor is responsible for the appearance and condition of the landscape external areas and shall be prepared to undertake specific maintenance tasks outside the above periods throughout the year to satisfy management or safety objectives.



APPENDIX 3

HABITAT CREATION

Bird and Bat Boxes

Nesting birds

1. Bird boxes shall be erected on retained trees and on suitable trees / posts within Eyes Wood. These shall be sited facing north to east, to avoid exposure to direct sunlight, which may cause overheating of chicks in the nest. The boxes shall be placed at least four metres from ground level. Examples of commercially available bird boxes are provided below:



1no. 1MR Schwegler Avianex
<http://www.nhbs.com/title/158599/1mr-schwegler-avianex>



2no. 2H Schwegler Robin Box
<http://www.nhbs.com/title/161277/2h-schwegler-robin-box>



1no. 2GR Schwegler Nest Box
<http://www.nhbs.com/title/158595/2gr-schwegler-nest-box>



1no. 3SV Schwegler Nest Box with Predator Protection
<http://www.nhbs.com/title/173230/3sv-schwegler-nest-box-with-predator-protection>

Roosting bats

2. Bat boxes shall be installed on retained trees, proposed houses and on suitable trees / posts along the River. Bat boxes shall be sited above three metres in height, ideally facing or close to areas of landscape planting or existing linear habitat features on south or south east facing elevations. Examples of commercially available bat boxes that can be attached to trees are provided below.



2no. 2F Schwegler Bat Box (General Purpose)
<http://www.nhbs.com/title/158629/2f-schwegler-bat-box-general-purpose>



1no. 1FS Schwegler Large Colony Bat Box
<http://www.nhbs.com/title/160552/1fs-schwegler-large-colony-bat-box>



1no. 1FF Schwegler Bat Box With Built-in Wooden Rear Panel
<http://www.nhbs.com/title/158636?title=1ff-schwegler-bat-box-with-built-in-wooden-rear-panel>



2no. 1FFH Schwegler Universal Bat Box
<http://www.nhbs.com/title/177932/1ffh-schwegler-universal-bat-box>

3. Advice from a suitably qualified ecologist shall be sought to determine exact locations of boxes if required.