

Habitat Creation and Management Plan

LICKERS LANE HALSNEAD

Report prepared for Nuvu Developments

Prepared by Simon Brain. Chartered arboriculturist. PGCE (Bio. Rec.)

Version 3 updated

15.01.2024

1.	Introduction	3
1.1	Background to the Project	3
1.2	Site Location and Context	3
1.3	Existing ecological reporting and purpose of this report	3
1.3.1	Author Information	3
2.	Existing ecological interest	4
2.1	Existing ecological appraisal	4
2.2	Existing ecological appraisal – opportunities for enhancement	4
3.	Ecological aims and objectives	4
3.1	Aim and objectives	4
4.	Site specific enhancement measures - Proposals	4-11
4.1.	Habitat and species measures - site specific proposals	4-10
4.2	External factors	11
Appendix		
Appendix 1 Woodland Management Plan Version 3		

1. Introduction

1.1 Background to the project

The client is in the process of discharging reserved matters for Application No: 20/00399/OUT OUTLINE APPLICATION FOR PROPOSED RESIDENTIAL DEVELOPMENT OF UP TO 277 NO. DWELLINGS (USE CLASS C3) AND AN APARTMENT DEVELOPMENT OF UP TO 100 UNITS FOR OVER 55'S (USE CLASS C3) TOGETHER WITH NEW VEHICULAR ACCESS TO LICKERS LANE AND WINDY ARBOR ROAD, LANDSCAPING AND ASSOCIATED WORKS (INC. DEMOLITION OF BUILDINGS) (APPROVAL SOUGHT FOR ACCESS - ALL OTHER MATTERS RESERVED). This report is compiled in relation to the development proposed on Land to the south of Lickers Lane specifically to discharge planning condition 6 which states:

“6. Prior to the commencement of any part of the development approved as part of any subsequent reserved matters, or phase of development as previously agreed in writing with the Local Planning Authority (including site clearance), a Habitat Management Plan shall be submitted to and approved in writing by the Local Planning Authority. The Habitat Management Plan shall include details of a management strategy for a period of 30 years to maximise gains in biodiversity within the wider site and shall be implemented in full accordance with the agree recommendations.

Reason: To ensure the required level of ecological mitigation is provided within the site. “.

1.2 Site Location and Context

The site is located within the Halsnead area in a semi urban environment and enclosed by existing agricultural, residential, and commercial land uses. The habitat on site comprises of semi natural woodland, scattered trees, scrub, modified grassland and bare earth habitat. The CES Halsnead EP1 2020 baseline was reported as;

“A comprised an arable field which was out of farming use at the time of the survey, areas of woodland, semi-improved and marshy grassland, tall ruderal herbs, scrub and areas of bare ground”.

1.3 Existing ecological reporting and purpose of this report

Section 40 of the Natural Environment and Rural Communities Act 2006 places a statutory duty on all public authorities in England to conserve biodiversity.

This management plan has been informed by the landscape detail and Woodland Management Plan approved by the reserved matters application for the Land to the south of Lickers Lane and using the base ecological data contained in the CES Halsnead EP1 2020 which represents the baseline at the time the outline planning application was submitted.

1.3.1 Author information

Simon Brain has attained a Post Graduate Certificate in Biological Recording and has attended residential FSC Field Courses for Land mammal identification, Songbird identification, Barn Owls (CIEEM) and Advanced Bird Survey Techniques (Level M) and various bat mitigation and training courses and several European workshops. He holds a NE Class 2 bat license (17334-CLS). In addition he is a Chartered arboriculturist.

2. Existing ecological interest

2.1 Existing ecological appraisal

The approved biodiversity report (CES Halsnead EP1 2020) has identified the following general biodiversity measures that shall apply to the sites re development:

- Woodland Management Plans
- Fauna, bats and birds. Suitable lighting provision, artificial roosting provision. Artificial nesting provision

- Neutral Grassland introductions to buffer development from the woodland and create eco tones between the built and green infrastructures
- Native tree and shrub planting through a landscaping plan
- Gaps in boundary treatments for badgers and hedgehogs and attenuation ponds are proposed

This habitat management plan is concerned with the establishment and maintenance of the artificial nesting and roosting provision, tree and shrub planting, hedgerows and management of attenuation ponds, boundary features and the wildflower area and the woodland aspects identified in the woodland management plan.

3. Ecological aims and objectives

3.1 Aims and objectives

The aim of this plan is to provide a specifications, guidelines and proposals for general and site specific habitat management as mentioned in section 2.1. The objective is to increase and maintain the biodiversity value of the site through enhancement for a minimum of 30 years as is stated in the planning condition.

4. Site specific enhancement measures - Proposals

4.1. Habitat and species measures – site specific proposals

4.1.1 Woodland Management Plans (WMP)

The proposed enhancements and 30 year management plan for Lickers Lane Wood and Sandfield Park Wood is detailed in the Woodland Management Plan included at Appendix 1.

4.1.2 Fauna, bats and birds.

Consented units are to be fitted with artificial nesting provisions, a total of 60

provisions shall be made (25% of consented units approved by reserved matters application reference 23/02378/REM).

Provisions will be made as follows:

- Inbuilt sparrow nest boxes ISP Schwegler sparrow terrace (20no. all north facing)
- Inbuilt swift brick Manthorpe swift brick (20no. all north facing)
- House Marten cups (20no. all north facing)

Tree based bat boxes will be fitted to trees within the woodland as directed by the ecologist and naged (replaced if damaged) by the managemnt committee.

4.1.3 Grassland introductions

The created grassland areas within the site (including public open spaces and road verges and embankments) will require regular monitoring and annual maintenance to achieve 'good' condition, allowing the more desirable species to flourish and to reduce the presence of unwanted species that will attempt to colonise the area. The following sets out the UKHAB criteria as to what is a good condition other neutral grassland.

Aim:

- The appearance and composition of the vegetation closely matches characteristics of UKHAB type definition. Indicator species are easily and clearly visible throughout the sward.
- Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for insects, birds, and small mammals to live and breed.
- Cover of bare ground between 1% and 5% of total habitat area to provide an important resource to insects.
- Cover of bracken is less than 20% and cover of scrub is less than 5%.

- There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981). Combined cover of species indicative of sub optimal condition¹ and physical damage (such as excessive poaching, damage from machinery use or storage) accounts for less than 5% of total area.
- There is greater than 9 species per meter squared.

Management:

- For the first year of growth, cut to 5cm in May, then cut every 2 months or when sward reaches approximately 15cm. Stop cutting by August to allow wildflowers to seed. Final cut to 5cm will be in October.
- From the second year onwards, cut to 5cm in March or April, then make a second cut to 5cm in October.
- From the second year onwards, designate some areas to receive a cut to 5cm during August in order to produce a more varied habitat that will encourage different species of wildflower.
- Remove all arisings from the area, dispose of in designated areas
- The area will be monitored every second year and a formal report generated

4.1.4 Native tree and shrub planting through a landscaping plan

Recommended Species: At least 70% of trees should be native species such as Field maple, Alder, Hazel, Beech, Spindle, Holly, Blackthorn, Penduculate Oak, Whitebeam and service tree, taking into account the requirement to plant trees that will be appropriate for anticipated changes in climate. The proposed trees shown on the Stantec landscape GA are largely located around the LWS Lickers Lane woodland, POS areas and the street trees on Main Street, Access Streets, Residential Avenue and Lanes. Native shrubs should include the following species and as shown on Stantec landscape GA drawing proposed shrub planting (POS mix)

AMENITYTREE

ENVIRONMENTAL PLANNING CONSULTANTS

Common name	Latin name
Large shrubs	
Dogwood	<i>Cornus sanguinea</i>
Spindle	<i>Euonymus europaeus</i>
Sea Buckthorn	<i>Hippophae rhamnoides</i>
Wild privet	<i>Ligustrum vulgare</i>
Rhamnus cathartica	<i>Buckthorn</i>
Rosa canina	<i>Dog rose</i>
Purple willow	<i>Salix pupurea</i>
Eared willow	<i>Salix aurita</i>
Welsh whitebeam	<i>Sorbus leptophylla</i>
	<i>Sorbus minima</i>
Wayfaring tree	<i>Viburnum lantana</i>
Guelder rose	<i>Viburnum opulus</i>
Medium shrubs	
Broom	<i>Cytisus scoparia</i>
Field rose	<i>Rosa arvensis</i>
Soft downy rose	<i>Rosa mollis</i>
Sweet briar	<i>Rosa rubiginosa</i>
English whitebeam	<i>Sorbus anglica</i>
Gorse	<i>Ulex europaeus</i>
Western gorse	<i>Ulex gallii</i>
Small shrubs	
Burnet rose	<i>Rosa pimpinellifolia</i>
Butchers broom	<i>Ruscus aculeatus</i>
Dwarf willow	<i>Salix herbacea</i>
Woolly willow	<i>Salix lanata</i>
Creeping willow	<i>Salix repens</i>

Considerations:

- Trees will adapt to natural conditions. Additional watering will only be required during a particularly long dry spell or if trees are planted out with of the tree planting season (October to March inclusive). The developer and management committee will be responsible for watering the trees
- Up to 30% of street trees will not establish and therefore supplementary planting over the following three years will be required to achieve prescribed numbers over the longer term.

Creation Methodology:

- Advanced nursery stock trees or larger will be planted within optimal tree planting season (October to March inclusive).
- Suitable wooden stakes will be used to support the trees.
- Weeds will be controlled around the base of the trees by applying organic mulch (10cm depth in a 50cm buffer around trees), this will also assist with water retention. This will be applied in early summer until trees are successfully established (minimum 3 years).
- All shrubs / hedges shall be pruned to remove deadwood, overhanging / tangles and damaged branches. Winter flowering shrubs shall be pruned in the spring. Shrubs flowering in March to July shall be pruned immediately after flowering and shrubs flowering in July to October shall be cut back to old wood in the winter. Shrubs that require spring pruning to provide seasonal colour shall be pruned in March and shrubs that require seasonal pruning to promote continual flowering shall be pruned appropriately.

Monitoring

- All urban tree planting will be monitored every 2 years for a 30 year period and any failed plants will be replaced.

Non-Native invasive plants.

The Wildlife and Countryside Act 1981 as amended 1981, is the principal legislation dealing with non-native species. *Cotoneaster horizontalis* and *Rhododendron Ponticum* are an invasive species listed in schedule 9 Part 2 – Plants and they have been confirmed as present on site. Japanese knotweed is present on site.

It is therefore an offence to plant or otherwise cause to grow (or allow to grow on others land) in the wild any plant listed in Schedule 9 to the Act. They are not notifiable plants, but roots can be difficult to remove and are classified as controlled waste and therefore will require disposal at a licensed landfill as controlled waste or chipping and transport off site for burning.

In addition to these plants checks will be made for the presence of Japanese Knotweed and if found it shall be excluded from the works areas.

Method Statement for Management of Non-native vascular plants.

The management of non-native species (bluebell, cotoneaster and rhododendron) in woodland shall be carried out by a supervising EcOW. The EcOW shall identify the locations of these plants and oversee their physical manual hand dug removal by providing a compliance report. Japanese Knotweed is present in the LWS and the wider site and its eradication from site will be the subject of an eradication plan.

The plants are to be removed from site and therefore precautions and measures are required for removal from site.

The following shall occur in the manner and sequence described:

- Before any other works commence on site the areas of the plant will be identified by a suitably qualified botanical ecologist who shall identify their location on the existing site plans and mark a 3m exclusion zone (10m for knotweed) around the plants during the initial site visit.

- Once the full extent of the invasive plant has been established across the site it shall be carefully excavated in the presence of a suitable ecologist who shall monitor the following methodology:
 - All excavations in the exclusion zone shall be supervised until the ecologist has confirmed all plant parts have been removed.
 - Japanese Knotweed in the LWS will be removed by chemical treatment as proposed in the WMP.
 - The ecologist shall direct the excavations of the root mass of the plant using small excavators and hand digging techniques to confirm the location and extraction of all the plant parts including the root systems.
 - The material shall be dug from site and transported to a registered waste facility and burnt.
 - The ecologist shall provide a short summary report complete with images.

Knotweed is confirmed on site and it shall remain excluded and an appropriate expert shall be appointed to manage its eradication.

Hedgerows

New hedgerows in POS, street frontages and woodland shall be managed by the developer and management committee.

Objectives:

- To ensure early establishment and healthy development.
- To create well established hedgerows with connectivity to other important bio diversity elements.
- To enhance biodiversity.
- To enhance appearance and visual interest.

Maintenance Operations:

- In the first two years of planting, new hedgerow plants are to be monitored at each maintenance visit to ensure they are upright, firm, and stable and good health.
- Checks shall be made to ensure all stakes / grow tubes of hedgerow plants are properly adjusted. Removal of grow tubes is dependent on plant development but generally, occurs years 3-5.
- Hedgerows should be maintained and watered to field capacity throughout the first and second years of planting. They should be watered by hose or irrigation drip lines.
- Careful monitoring during watering shall be necessary to minimise risk of failures, leaks or damage to property.
- Any damaged or dying plants are to be replaced in the following dormant season.
- Hedgerows should be maintained in a grass free strip 75cm wide for the first 3 year or until established.
- Hedgerows should be pruned to a height of 1250mm high by 750mm wide, pruning to take place Autumn and Spring, outside of the nesting season.

Attenuation ponds

Management and maintenance of attenuation ponds and surrounding habitats. Areas HE1 and HE2 are attenuation areas for bio retention / rain garden herb mix located on the Village Green and along the Main Street.

Objectives:

- To ensure early establishment and healthy development.
- To create well established plants.
- To enhance biodiversity.
- To enhance appearance and visual interest.

Maintenance Operations:

- In the first two years of planting, plants are to be monitored at each maintenance visit to ensure they are upright, firm, and stable an good health.
- Checks shall be made to ensure water levels are suitable at the beginning and end of summer

Wildflower planting and areas identified as bulb mix

Objectives:

- To ensure early establishment and healthy development.
- To create well established plants.
- To enhance biodiversity provide habitats for reptiles, insects, bees and butterflies.
- To enhance appearance and visual interest.

Maintenance Operations:

- Refer to planting plans for guidance on the proposed areas of wildflower seed mix.
- Cutting to be carried out using appropriate large wheeled, rotary mower to avoid injuries to reptiles unless otherwise specified.
- Remove any litter, debris, stones and earth clods larger than 25mm in any dimension prior to mowing.
- Sward heights to be kept to a minimum 15cm with one cut per year in September after the first year. Foot paths through wildflower areas should be mown at the time of general amenity grass cutting to a height of 30-60mm.
- No fertiliser or nutrients are to be added:
- Top dress if required with additional appropriate native seed origin seed if slow to establish.

Year 1:

AMENITYTREE

ENVIRONMENTAL PLANNING CONSULTANTS

- First cut 5cm March / April (Spring seeding first cut in May).
- Cut every 2 months or when sward reaches 15cm.
- Final cut September / October.
- Allow cut grass to dry and disperse seed before removing arisings.
- The requirements in the first year are to control weeds and reduce competition from grasses. Cut sward to a height of 5cm every 2 months or when the sward reaches 15cm. Remove all cut material to avoid smothering the sward. Where persistent weeds exist, spot treat with Glyphosate or dig out.

Future Years:

- One cut in September to 15cm.
- Remove all cuttings.
- Allow cut grass to dry and disperse seed before removing arisings.
- The requirements in future years is to maintain a species diverse sward of value to wildlife.

Provision of gaps in boundary treatments for badgers and hedgehogs

Gaps in boundary treatments for badgers and hedgehogs shall be 30cm openings throughout all the sites boundary treatments.

Fly tipping

The strategy for the monitoring of fly-tipping in public open space (including the woodland) shall be for regular monitoring of the site in relation to this issue. It will be the clear responsibility of the developer and management committee to undertake.

Furniture

The installation and maintenance of litter and dog waste bins in appropriate locations near to areas of public green space and within the woodland shall occur in all areas of greenspace and be part of management through the appointed landscape contractor.

Two information boards for Lickers Lane Wood shall be installed at all entry and exit points to highlight the important features of Lickers Lane Wood LWS. The boards shall highlight the presence of native bluebell to bring to the attention of the general public the importance of protecting the ground flora within this LWS and sticking to the designated footpaths. Indicative locations for the information boards are shown on the approved landscape plans. However, their detailed location alongside the siting of the path through the woodland and location of the litter bins are matters to be agreed with the local planning authority by way of condition.

4.2 External factors

The Habitat Management Plan requires inclusion in the Construction Environmental Management Plan (CEMP).



ENVIRONMENTAL PLANNING CONSULTANTS

Woodland Management Plan (WMP) Version 3 updated

Halsnead – Lickers lane
RESERVED MATTERS APPLICATION 23/02378/REM

Prepared for: Nuvu Developments

Prepared by Simon Brain *Chartered arboriculturist*

15.01.2023

Version 3

Contents

1.0	Introduction and instructions.....	4
2.0	Site: location and descriptions	4
3.0	Woodland Survey – Species, Habitat, Landscape.....	5-6
4.0	Proposed Developments	6
5.0	Stakeholder engagement and threats to woodland protection	6-8
6.0	Outline Woodland Management; aims and objectives	8-11
7.0	Outline Woodland Management Plan; management recommendations ..	11-12
8.0	Funding	13
9.0	Conclusions	13

Appendix 1 - WMP areas

Appendix 2 - LWS maps and citations (Lickers Lane LWS and Sandfield Park Woodland LWS)

Woodland Management Plan

Prepared by ATC Ltd on behalf of Nuvu Developments

Contact details for Owner/Occupier	Contact details for ATC Ltd	
Nuvu Developments	Mr Simon Brain, Willow Hill Cottage, School Lane, Burwardsley, Chester, CH3 9NX. 01829 770075	
Date Woodland visited: 22 nd September 2022	Weather Conditions: Blustery sunshine	
Address of Wood	Approx Grid Reference	Revision status
Land to south of Lickers Lane	SJ 47270 90512	Version 3
Administrative Boundary	Total Area of woodland (app)	Area Soil type
Knowsley	2.5 acres	Freely draining slightly acid but base-rich soils
Woodland Management Plan Period	Review dates	Public Access
Thirty years to commence upon the start of development on site.	(2, 5 and 10,20 and 30 year intervals prescriptive).	Yes
Site Designations/Constraints LWS		
European Protected Species All EPS and priority 1 species require confirmation of absence or presence and impact / mitigation details if required before any tree works can commence.		

1.0 Introduction

1.1 Instruction

This preliminary Woodland Management Plan (WMP) has been prepared for Nuvu Developments to support the management and development of the woodland areas located at Lickers Lane, Halshead as required by planning condition 30 which states;

“ Any subsequent reserved matters application shall be accompanied by a Woodland Management Plan setting out the management and maintenance proposed for the woodlands within the site boundary for the written approval of the Local Planning Authority. The Plan shall include details for dealing with habitat damage, how recreation pressures on the woodland will be dealt with and details of information boards. The approved details shall be implemented in full and maintained thereafter.

My name is Simon Brain; I have twenty years professional experience as an arboricultural and woodland consultant and have attained Chartered status with the Institute of Chartered Foresters.

2.0 Site location and description

2.1 Location

The site is located across the area of land as shown in Appendix one.

2.2 Descriptions

The total study area consists of approximately 2.5 acres of semi natural broadleaf woodland. The site consists generally of an even aged high canopy tree species dominated by Sycamore. Oak, Sycamore and Ash are also present in the high canopy and in addition, Hawthorn are present in smaller numbers. Natural regeneration occurs in the area, occasional *Ilex aquafolium* (Holly) and *Corylus avellana* (Hazel) are present. There are several ‘honorary’ native species such as *Acer pseudoplatanus* (Sycamore) that have developed in the high canopy. An herb / ground vegetation layer is present exhibiting numerous woodland plants.

2.3 Local Wildlife Site (LWS) designations

There are two LWS designations relevant to the WMP which are identified in The Environmental Statement dated 09.08.2023. The table below lists the LWS habitat type and potential risk to LWS including the proposed control measures to avoid habitat degradation.

LWS Title	Distance to site	Habitat type	Potential applicable risks from development given habitat type	Proposed methods to control potential impacts / reasons for lack of impact considered unlikely
Lickers Lane Wood	On site at Lickers Lane	Woodland	Direct damage to asset. Indirect contamination to asset	The submitted Woodland Management plan must be always followed including silvicultural and non-native vascular plant controls. The submitted AIA must install tree protection fencing to act as a physical barrier which can eliminate instances of direct damage in the construction phase. Silt fencing around the LWS boundary is required and shall be monitored. Waste stream monitoring to avoid debris and rubbish being deposited and degrading habitat. Annual monitoring suggested.
Woodland Sandfield Park	Immediately adjacent to Lickers Lane	Woodland with a pond, acidic grassland and scrub.	Indirect contamination to asset	The submitted AIA must install tree protection fencing to act as a physical barrier which will eliminate instances of direct damage in the construction phase. Silt fencing around the LWS boundary is required for remaining listed habitat and shall be monitored. Waste stream monitoring to avoid debris and rubbish being deposited and degrading habitat. Annual monitoring suggested.

A review of the LRC data including citations and maps (included in Appendix 2) for each LWS which has identified features of the LWS that require consideration.

Lickers Lane Wood

The features within the citation (Plants) are as follows.

- English Bluebell (*Hyacinthoides non-scripta*)
- Smaller Cat's-tail (*Phleum bertolonii*)

These plants are the designated species that are responsible for the LWS designation and must under all circumstances be protected by the following means.

- A site walkover shall be carried out by the ecologist to identify the locations of these plants which shall be subsequently mapped

- Non native Bluebell shall be removed from site and a compliance report shall be produced to demonstrate this. Non native eradications shall be monitored throughout the 30 year lifespan of the WMP.
- Expansion of these 2no. native plants shall be carried out by planting of bulbs and reseeded of the identified grass as shown on landscape plans within the following identified areas Bulb mixes B1-B8 shall contain native Bluebell and WF3 / WF1 / AG3 shall contain smaller cats tail
- This shall be carried out following plant mapping and an identification of suitable receptor site for new planting. Emorsgate Seeds shall be the nominated provider of the Smaller Cats tail seed and Naturescape shall provide Bluebell bulbs. The aim of the plant introductions shall be to ensure the viability of the species within the woodland and to increase their respective coverage.

Sandfield Park LWS is located off site but its designation features are the same plants as Lickers Lane.

2.4 Development proposals

Within the LWS woodland on site the development proposals contain the following:

- WF3 shade tolerant wildflower grass mix.
- WF1 Wildflower treasure trove mix
- Bulb mixes B1-B8
- AG3 supreme shade

It is noted that these proposals will contain bluebell and smaller cats ear as detailed in section 2.3

The development proposal for these areas does include the provision of a new footpath. The footpath shall not be installed until bluebell and small cats ear has been identified and mapped on the site. At this point the footpath will be installed to avoid the positions of these plants and edge railings along route of the footpath to prevent additional informal pathways being created which will create damage to ground flora. All retained trees shall have at least a 500mm

separation from the new footway to allow for future growth in accordance with BS5837:2012. The footway shall be positioned to avoid any tree removal. The footway shall be constructed to APN1 no dig footway construction. The precise siting of the path and a method statement for its construction is to be secured by a condition attached to the reserved matters approval.

3.0 Woodland Survey – Species, Habitat, Landscape

3.1 Species

Those tree species listed below have been identified in the woodland.

Common Name	Botanical Name	Code	Group (Broadleaf, Conifer)
Alder	<i>Alnus</i> spp	AR	B
Ash	<i>Fraxinus excelsior</i>	AH	B
Beech	<i>Fagus sylvatica</i>	BE	B
Birch (downy/silver)	<i>Betula pubescens/pendula</i>	BI	B
Bird cherry	<i>Prunus padus</i>	BCH	B
Blackthorn	<i>Prunus spinosa</i>	PSP	B
Common alder	<i>Alnus gultinosa</i>	CAR	B
Common lime	<i>Tilia europaea</i>	CLI	B
Elm	<i>Ulmus</i> spp	EM	B
Goat willow	<i>Salix caprea</i>	GWL	B
Hawthorn species	<i>Crataegus</i> spp	HAW	B
Hazel	<i>Corylus avellana</i>	HAZ	B
Holly species	<i>Ilex</i> spp	HOL	B
Horse chestnut	<i>Aesculus hippocastanum</i>	HCH	B
Large-leaved lime	<i>Tilia platyphyllos</i>	LLI	B
Lime	<i>Tilia</i> spp	LI	B
Oak (robur/petraea)	<i>Quercus</i> spp	OK	B
Rowan	<i>Sorbus aucuparia</i>	ROW	B
Scots pine	<i>Pinus sylvestris</i>	SP	C
Silver birch	<i>Betula pendula</i>	SBI	B
Sweet chestnut	<i>Castanea sativa</i>	SC	B
Sycamore	<i>Acer pseudoplatanus</i>	SY	B
Whitebeam	<i>Sorbus aria</i>	WHI	B
Wild cherry/gean	<i>Prunus avium</i>	WCH	B

4.0 Proposed development

4.1 Description

Reserved matters approval to include layout, scale, appearance, and landscaping in relation to the erection of dwellings on the site. Indicative locations for the information boards are shown on the approved landscape plans. However, their detailed location alongside the siting of the path through the woodland and location of the litter bins are matters to be agreed with the local planning authority by way of condition.

5.0 Stakeholder engagement and woodland protection

5.1 Stakeholder / interested party engagement

It is envisaged that there shall be a number of operations available to interested parties such as tree planting, brash and timber stacking, bat box installation, small tree felling and wildlife monitoring (passive and static animal and plant surveys). It is hoped that local species-specific bodies can be approached such as the South Lancs Group.

5.2 Woodland protection - Threats to the Woodland

Plant Health

The only notable tree disease present in the woodlands is Ash dieback. This is a disease that is defoliating several Ash trees across the UK and specific management of dying ash trees is required over the management plan length. In addition, *Pseudomonas syringae* pv *aesculi*, is also present even though the number of *Aesculus hippocastanum* trees present in the study area is very limited.

Mammal predation, particularly Grey Squirrels is however a significant threat to the extent of natural regeneration. Planting is therefore required for the future sustainability of the woodland. Tree damage from predation is present throughout the woodland and a control programme is preferred to maintain the viability of introduced woodland trees and plants. A control programme of Grey Squirrels needs to consider a ratio of <5 per Ha, prior to April which is

maintained by trapping or poisoning in baited cages throughout the active period when damage is caused (Apr-Jul).

Detrimental environmental change caused by pollution; flooding / soil erosion is considered unlikely. There was no evidence of anti-social behaviour across the site.

The CES LWS Impact Assessment Rev July 2020 identifies Japanese Knotweed in the woodland. The following RAMS are required: Three-year chemical treatment shall apply including monitoring for a further 2 years from which any future control will be assessed.

Climate change has proven to very recently challenged traditional forest management techniques largely due to the identification of an extensive list of new tree disease and pest outbreaks in the UK (FC England Managing Risk Fig 9)

Practical advice to combat climate change in this woodland shall consist of:

- Planting a wider range of species for future tolerance of climate change but also to reduce a reliance what is a small species range in the UK (72% of hardwood forest are reliant on five species FC Managing Risk 2014)
- Tree species selection capable of resilience based on future climatic predictions

6.0 Outline and detailed Woodland Management Plans to include original baseline and proposed enhancements from The CES LWS Impact Assessment Rev July 2020 9Appendix 10.18) and CES Halsnead EP1 2020 (Appendix 10.11)

6.1 Aims and Objectives.

The following outline objectives shall apply:

- To engage the landowners and local community in active woodland management

- Improvement of species abundance and species richness within those areas of unaffected semi natural woodland
- Accounting for the needs of species associated (or potentially associated) with the woodland that require a mosaic of habitats
- Maintenance of a woodland that is suitably safe for pedestrian access
- Maximise woodland structure by selective intervention

The following specific aims shall apply:

- Arboricultural management for individual trees to create niche habitat
- Control of undesirably invasive species throughout the site to include Japanese Knotweed
- Development and protection of veteran trees
- Tree planting using species to create woodland structure throughout the site
- Progressively re-structuring of the even aged areas to achieve an improved range of age classes
- Re-structuring by coupe felling, this shall apply to selected areas of low-quality natural regeneration.
- Establish monitoring intervals to allow repeatable data gathering to allow analysis for change in local distribution of species
- Maintain stakeholder partnership programme and volunteer involvement

The techniques by which these specific aims shall be delivered are:

- Natural regeneration of sycamore predominately covers the woodland scrub layer. Such regeneration shall be removed in the initial year of works in and replanted with suitable native plant species in order to create a graduated strip of vegetation providing eco tones and niche habitat.

- The Control of undesirably invasive species throughout the site shall focus on the monitoring of these species for the WMP duration as per section 7 of the Outline Management Strategy details.
- Veteran trees are to be created in the woodland and they shall undergo individual management aimed at improving the longevity of these trees and their contribution to biodiversity. Many exhibits arboricultural defects such as deadwood, cavity, decay etc and because of non-intervention exhibit subsiding limbs, deadwood and broken parts that require removal / management for safety. All such works require consultation with ecologists and cannot be undertaken until formal permission from the ecologist has been approved. The installation of bird and bat boxes is provided on veteran trees.
- Woodland structure shall be reinforced and improved by installing suitable plants that form an intermediate layer in the woodlands structure such as *Sorbus*, *Corylus* and *Crataegus*.
- The review dates for the woodland management plans are specified Outline Management Strategy details in section 7.
- A stakeholder partnership with the local community is envisaged in the form of volunteer assistance during the implementation of aspects of the works, for example tree planting.
- Introduction of native bulb plants in compliance to the Stantec Landscape GA plans (B1, B2, B3, B4, B5, B6, B7 and B8. See Plant schedule for mixes).

6.2 Detailed Woodland Management Plans to include original baseline and proposed enhancements from CES reporting.

The CES LWS impact assessment covers protective measures for the woodland in paragraph 6 for the construction phases. The measures that are proposed for the Lickers Lane woodland protection are:

- Installation of the Construction Exclusion Zone as specified within the AIA
- Appropriate lighting scheme adjacent to the LWS

Indirect impacts on Sandfield Brook LWS

- Appropriate lighting scheme adjacent to the LWS

Indirect impact on Big Water and Big Water Wood

- Silt fencing will be installed to avoid any run off into drainage ditches

In reference to appropriate lighting in the LWS. This could be achieved by:

- Ensuring lights are only erected where they are needed, illuminated only during the time period that they will be used, and at levels that enhance visibility.
- Using narrow spectrum bulbs, to lower the range of species affected by lighting, and avoiding the use of light sources that emit ultraviolet.
- Ensuring that there are no bare bulbs or lights that point upwards.
- Ensuring that the spread of light is kept near to or below the horizontal plane.
- Reducing the height of the lighting columns since light at a low level reduces ecological impact.
- Ensuring only low level lighting that is as directional as possible is provided and that light emitted from these fixtures is below 3 lux at ground level.
- LED lighting, ideally amber LED (bat-lamps) that have a negligible UV component may be a preferred option since these show a low

insect attractiveness comparable to low pressure sodium lamps and they are more directional, thus reducing light spill

- Where possible, external lights should comprise sensor activated lamps) so that lights are only operational when they are needed.
- Avoiding the illumination of habitat features used by bats, notably the boundary tree and linear hedgerows.

During tree works the creation and management of log piles and hibernacula in retained areas of woodland (WMP) is recommended.

Six information boards for Lickers Lane Wood shall be installed at all entry and exit points to highlight the important features of Lickers Lane Wood LWS. The boards shall highlight the presence of native bluebell to bring to the attention of the general public the importance of protecting the ground flora within this LWS and sticking to the designated footpaths. The public should be discouraged from allowing dogs to roam freely through the woodland.

The management of new hedgerows in the woodland shall be managed as per the HMP and landscape plans. Hedges shall be inspected annually until they are established and trimmed for maintenance.

The strategy for the monitoring of fly-tipping in public open space (including the woodland) shall be for annual monitoring of the site in relation to this issue. It will be the clear responsibility of the developer and management committee to undertake.

The installation and maintenance of litter and dog waste bins in appropriate locations near to areas of public green space and within the woodland shall occur and be part of management through the appointed management company. Indicative locations for the litter bins are shown on the approved landscape plans. However, their detailed location alongside the siting of the path through the woodland and location of the information boards are matters to be agreed with the local planning authority by way of condition.

Formal footpath through Lickers Lane Woodland LWS will consist of edging rails, to prevent additional informal pathways which would damage ground flora following the current route of paths in the woodland as closely as possible. I would note that the details of the precise siting of the path and a method statement are proposed to be secured by condition.

Bat boxes (8no Schwegler generalist boxes) shall be installed in woodland and shall be inspected annually, replacing if damaged.

The management of non-native species (Non-native bluebell, Japanese knowweed, cotoneaster and rhododendron) in woodland shall be carried out by a supervising EcOW. The EcOW shall identify the locations of these plants and oversee their physical manual hand dug removal by providing a compliance report. The CES LWS Impact Assessment Rev July 2020 identifies Japanese Knotweed in the woodland. It is present on the wider site and its eradication from site will be the subject of an eradication plan.

New residents should each be provided with a Wildlife Information Pack, that educates them on the importance of the retained green spaces, the reasons for designation (LWSs), and the actions that they can take to minimise impacts upon these important areas.

7.0 Outline Woodland Management Plans

7.1 Outline Management Strategy details.

W1 Woodland – Individual woodland work programme

Activity, scope and Specification	1	2	3	4	5	6	10	15	20
Control and Monitor of undesirably invasive species using EcOW compliance reporting	Yes	Yes	Yes	Yes monitor	Yes monitor	Yes monitor	Yes monitor	Yes	Yes
Appropriate lighting scheme adjacent to the LWS to be monitored by EcOW	Yes								
Installation of CEZ around protected habitats by AcOW	Yes	Yes	Yes						
During tree works the creation and management of log piles and hibernacula in retained areas of woodland	Yes		Yes monitor			Yes monitor			
monitoring of fly-tipping in public open space		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Management and maintenance of attenuation ponds and surrounding habitats		Yes		Yes		Yes		Yes	Yes
Bat boxes (8no Schwegler generalist boxes) shall be installed in woodland and shall be inspected annually, replacing if damaged	Yes		Yes		Yes		Yes	Yes	Yes
Six information boards for Lickers Lane Wood (WMP) shall be installed at all entry and exit points. The installation and maintenance of litter and dog waste bins in appropriate locations near to areas of public green space	Yes								
Progressive re-structuring of honorary native species such as Sycamore to create wider glade areas. This shall consist of a 10% thinning ratio of all standing trees. Halo thinning for any existing conifer. Remove and replace low quality regeneration with native trees and shrubs		Yes			Yes 10%		Yes 10%		Yes 10%
Tree planting shall be undertaken as follows: In areas dominated by Sycamore intermediate layer species shall be introduced at approximate 2m intervals with adequate rabbit and stem protection and Beech and Oak will be planted at 5m intervals throughout the Woodland. Native conifer shall be planted throughout and intermediate layer planting of hazel, mountain ash and thorn The planted areas shall be inspected and 'beaten up' / failed trees replaced		Yes Yes		Yes (monitor) Yes (monitor)		Yes (monitor) Yes (monitor)		Yes (monitor) Yes (monitor)	Yes (monitor) Yes (monitor)
Development and protection of veteran trees There are no veterans in the woodland however several large over mature trees are suitable for veteranisation techniques. For example, has several examples of trees that are likely to be lost over the next twenty years due to their condition but if pruned the deadwood resource could be extended significantly. Where veteran trees can be identified halo thinning shall be undertaken around the tree very gradually and throughout the WMP		Yes	Yes	Yes	Yes	Yes (monitor)			Yes
Coupe felling. It is intended that several small areas (20m square) can be created by coupe felling a cluster of tree stems. Given the resultant development of ground vegetation bulb introduction of native plants shall be paused until year 5	Yes	Yes (monitor veg. types)		Native bulb planting	Yes (dep on monitoring result)		Yes (dep on monitoring result)	Yes	Yes (monitor veg. types)
Removal of natural regenerating, suppressed and malformed trees throughout of woodland areas (max 20% of overall woodland to include 10% standing tree thinning)	Yes	Yes			Yes (monitor)				Yes

Activity, scope and Specification	1	2	3	4	5	6	10	15	20
Volunteer involvement in planting, supervised tree felling's, timber stacking, vegetation and animal surveys and habitat improvements. Bird and Bat boxes to be installed in trees in accordance with local bat/bird group advice.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Monitoring of vascular plants by survey specifically of smaller cats ear and bluebell	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

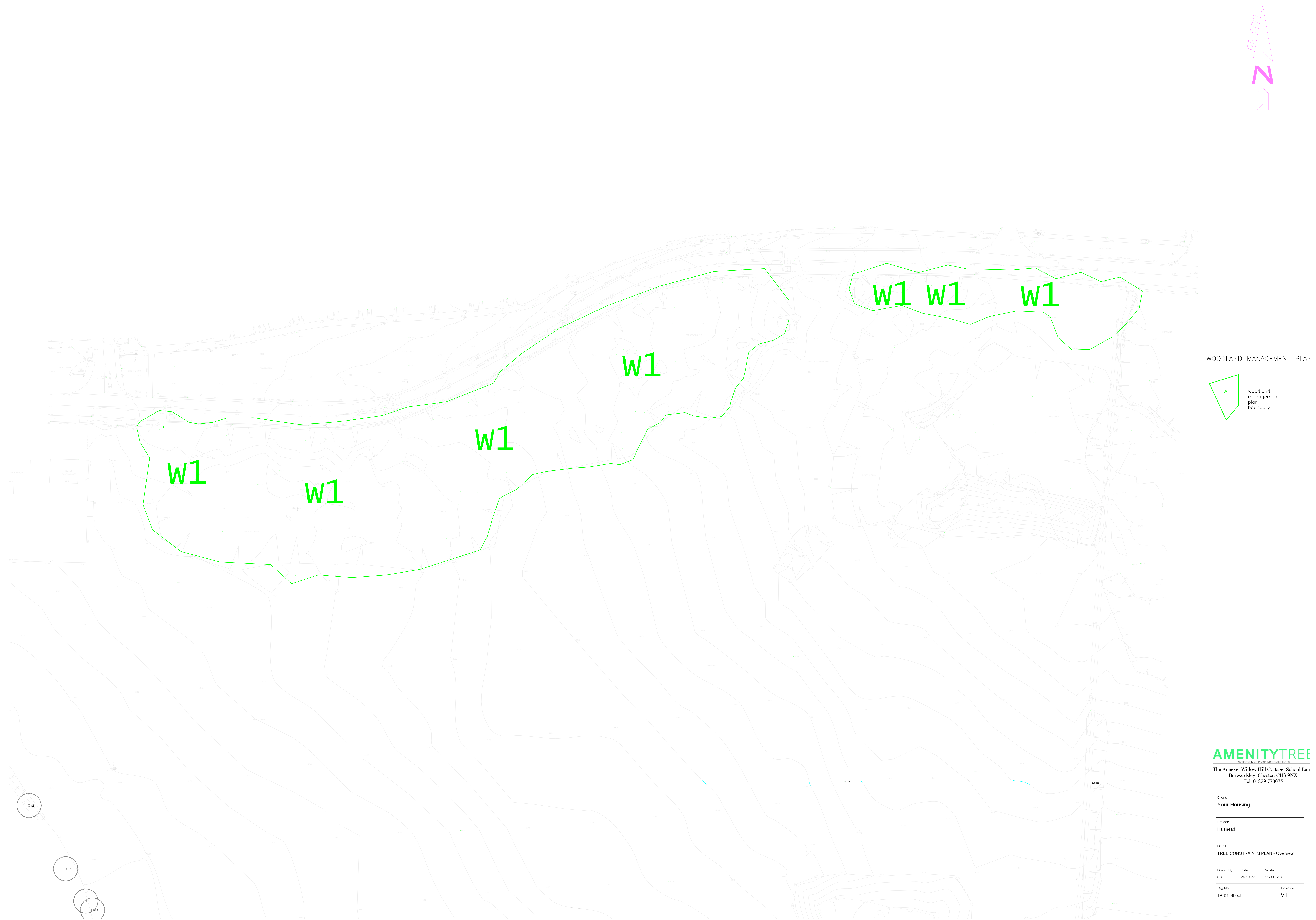
8.0 Funding

- 8.1 A residential management company would be established by the developer whom shall be solely responsible for the funding of the WMP for the lifetime of the development. The land manager will be established by the developer and that organisation shall be responsible for the implementation of the development.

9.0 Conclusions

- 9.1 The woodland area is small being only 2.5 acres in total. It is an even aged semi natural broadleaf woodland containing a small number of conifer species. It exhibits good levels of natural regeneration, scrub, and field layers with a variety of woodland plants growing within the study areas. It has attained a some conservation value status by virtue of size, species, and habitat range as well as for its significant wider amenity value in the landscape.
- 9.2 As a result of the existing high levels of biodiversity it is generally accepted that minimal intervention will be used as a management strategy. Such minimal intervention is aimed at increasing the overall biodiversity of the woodland through simple woodland management techniques as expressed in section 6

Appendix 1 - WMP areas



SBI 13. Lickers Lane Wood
Scale 1:5000

Reproduction from the Ordnance Survey Mapping with permission
of the Controller of Her Majesty's Stationary Office (c) Crown Copyright.
Unauthorised reproduction infringes Crown copyright and may lead to
prosecution or civil proceedings. Knowsley MBC LA0761201

Compiled by EAS 30th August 2003



Environmental
Advisory Service



Site Name: Lickers Lane Wood, Whiston

Site Area: 1.11 hectares

National Grid Reference: SJ472905

Date of Designation: 1995

District: Knowsley

Date of Last Revision: July 2003

SBI Number: 13

CITATION: A long, narrow broadleaf woodland with a dense canopy and associated neutral grassland.

APPRAISAL: This site has been evaluated against the guidelines approved by the Council for selection of Sites of Biological Interest. The site's evaluation against the guidelines is set out below.

Guideline		Comment
HABITATS		
H1; H2; H3; H4.	Rarity Diversity Nearness Isolation	2 Priority BAP Habitats, 2 regionally important. 11 habitats recorded. 22 sites within 1 Km.
PLANTS		
SP1; SP2; SP3; SP4.	Rarity Diversity Naturalness Nationally Rare	1 WCA Schedule 8; 1 species of conservation concern; 1 regionally important; 1 locally rare species. Total of 81 plant species. 86.4% of the plants are native to North Merseyside. Colonisation has been unaided by man and the site has been physically altered. --
ANIMALS		
General SP5; Birds B1; B2; B3; B4; B5. Dragonflies Od1; Od2. Butterflies Bf1; Bf2. Amphibians A1; A2. Reptiles R2; Bats Bat1; Bat2. Mammals Mam1.	Rare/priority Non-breeding population Breeding population Regional rare/scare Breeding assemblage Assemblage, breeding, wintering, passage. Breeding Regional rare/scarc Region rare breeding Breeding assemblage Rarity Exceptional populations Exceptional population Roost Assemblage Breeding	-- -- -- -- -- -- -- -- -- -- -- -- -- -- --

SUMMARY: The combination of these factors has led to this site being identified as a Site of Biological Interest.

NOTE: Validated data from 1981 to July 2003 have been used in this assessment. Other data may become available to support this designation.

Lickers Lane Wood

Status of features of nature conservation importance

Habitats

2 Priority BAP habitats	Unimproved acid grassland Unimproved neutral grassland
--------------------------------	---

2 Regionally Important Habitats (North West Biodiversity Audit)	Unimproved acid grassland Unimproved neutral grassland
--	---

Plants

1 Wildlife and Countryside Act - Schedule 8 species	English Bluebell (<i>Hyacinthoides non-scripta</i>)
--	---

1 Species of Conservation Concern	English Bluebell (<i>Hyacinthoides non-scripta</i>)
--	---

1 Regionally important species (North West Biodiversity Audit)	English Bluebell (<i>Hyacinthoides non-scripta</i>)
---	---

1 Locally rare species	Smaller Cat's-tail (<i>Phleum bertolonii</i>)
-------------------------------	---

SBI 14. Woodland, Sandfield Park
Scale 1:5000

Reproduction from the Ordnance Survey Mapping with permission
of the Controller of Her Majesty's Stationary Office (c) Crown Copyright.
Unauthorised reproduction infringes Crown copyright and may lead to
prosecution or civil proceedings. Knowsley MBC LA0761201
Compiled by EAS 30th August 2003



Environmental
Advisory Service



Site Name: Woodland, Sandfield Park

Site Area: 1.65 hectares

National Grid Reference: SJ475905

Date of Designation: 1995

District: Knowsley

Date of Last Revision: July 2003

SBI Number: 14

CITATION: A mature, predominantly broadleaf woodland with a pond, acidic grassland and scrub.

APPRAISAL: This site has been evaluated against the guidelines approved by the Council for selection of Sites of Biological Interest. The site's evaluation against the guidelines is set out below.

Guideline		Comment
HABITATS		
H1; H2; H3; H4.	Rarity Diversity Nearness Isolation	1 regionally important. 12 habitats recorded. 23 sites within 1 Km.
PLANTS		
SP1; SP2; SP3; SP4.	Rarity Diversity Naturalness Nationally Rare	1 WCA Schedule 8; 1 species of conservation concern; 1 regionally important; 1 locally rare species. Total of 95 plant species. 87.4% of the plants are native to North Merseyside. Colonisation has been aided by man and the site has been physically altered. --
ANIMALS		
General SP5; Birds B1; B2; B3; B4; B5. Dragonflies Od1; Od2. Butterflies Bf1; Bf2. Amphibians A1; A2. Reptiles R2; Bats Bat1; Bat2. Mammals Mam1.	Rare/priority Non-breeding population Breeding population Regional rare/scare Breeding assemblage Assemblage, breeding, wintering, passage. Breeding Regional rare/scarce Region rare breeding Breeding assemblage Rarity Exceptional populations Exceptional population Roost Assemblage Breeding	-- -- -- -- -- -- -- -- -- -- -- -- -- -- --

SUMMARY: The combination of these factors has led to this site being identified as a Site of Biological Interest.

NOTE: Validated data from 1981 to July 2003 have been used in this assessment. Other data may become available to support this designation.

Woodland Sandfield Park

Status of features of nature conservation importance

Habitats

1 Regionally Important Habitats (North West Biodiversity Audit)

Plants

1 Wildlife and Countryside Act - Schedule 8 species	English Bluebell (<i>Hyacinthoides non-scripta</i>)
--	---

1 Species of Conservation Concern	English Bluebell (<i>Hyacinthoides non-scripta</i>)
--	---

1 Regionally important species (North West Biodiversity Audit)	English Bluebell (<i>Hyacinthoides non-scripta</i>)
---	---

1 Locally rare species	Smaller Cat's-tail (<i>Phleum bertolonii</i>)
-------------------------------	---