

APPENDIX 10.18
LOCAL WILDLIFE SITE IMPACT ASSESSMENT (JUNE 2020)

**HALSNEAD GARDEN VILLAGE NORTH,
KNOWSLEY, MERSEYSIDE -**

**IMPACT ASSESSMENT FOR LOCAL WILDLIFE
SITES**

2020



ces ecology
consultant ecologists

**HALSNEAD GARDEN VILLAGE NORTH,
KNOWSLEY, MERSEYSIDE –**

**IMPACT ASSESSMENT FOR LOCAL
WILDLIFE SITES**

2020

**JUNE 2020
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CONTENTS

	<u>Page No.</u>
EXECUTIVE SUMMARY	1.
1.0 INTRODUCTION	2.
2.0 POLICY & LEGISLATIVE CONTEXT	2.
3.0 METHODOLOGY	4.
4.0 BASELINE LWS INFORMATION	6.
5.0 RESULTS	8.
6.0 POTENTIAL EFFECTS	11.
7.0 CONCLUSION	18.
8.0 REFERENCES	19.

Appendices:

Appendix A: Site Location Plan

Appendix B: Proposed Development Layout Plan

Appendix C (i): Lickers Lane Wood LWS Citation

Appendix C (ii): Sandfield Park Woodland LWS Citation

Appendix C (iii): Big Water and Big Water Wood LWS Citation

Appendix C (iv): The Old Wood, North LWS Citation

Appendix D: Photographic Plates

Appendix E: Species List

EXECUTIVE SUMMARY

- Cheshire Ecological Services Ltd. (CES Ecology) was commissioned to conduct an Impact Assessment in relation to the potential ecological effects on Local Wildlife Sites (LWS) resulting from the proposed residential development of land near Halsnead Park, Whiston, Merseyside.
- The purpose of this Impact Assessment was to assess the significance of any potential ecological effects on Local Wildlife Sites resulting from the proposed development, and to present proportionate mitigation and compensation measures if necessary.
- The Site was located to the south of Whiston and comprised two separate site areas; site area A (located to the immediate south of Lickers Lane) and site area B (located to the immediate east of Windy Arbor Road).
- There are twenty-five LWSs within a 2.5km radius of the centre of the Site. Lickers Lane Wood LWS is within the Site boundary; Woodland, Sandfield Park LWS is located immediately adjacent the Site's eastern boundary; Big Water and Big Water Wood and The Old Wood, North LWS are located at distances of 170m and 370m to the south of the Site. The impact assessment is largely focused on these four sites.
- Information used to inform this impact assessment included the Local Wildlife Site Selection Guidelines for the Merseyside Region, which was reviewed against the LWS citations for Lickers Lane Wood LWS and the findings of a walkover inspection/site visit of these sites in May 2020 by CES Ecology.
- The proposed development will result in the loss of approximately 6.5% of the total area of Lickers Lane Wood LWS, which contains native bluebell (*Hyacinthoides non-scripta*); a species cited under the current LWS selection point scoring system.
- No direct development impacts are predicted for Sandfield Park Woodland LWS or any other local wildlife sites. However, indirect impacts from construction 'run off' during development are possible in the absence of mitigation. Post-development human interference impacts are considered likely; largely resulting from increased recreational pressures.
- In the absence of mitigation, development of the site has the potential to adversely affect the status of LWSs by the loss and degradation of habitats and important ground flora, such as native bluebell (a regionally important species of conservation concern). However, in the absence of LWS threshold scoring values for the Knowsley region, it has not been possible to determine levels of significance for the predicted adverse development effects on Local Wildlife Sites.
- Appropriate avoidance and mitigation measures have been formulated to redress the predicted development effects on Local Wildlife Sites and the successful implementation of these measures will effectively ensure the proposed development is in accord with local and national planning policy in respect of biodiversity and Local Wildlife Sites.

1.0 INTRODUCTION

- 1.1 Cheshire Ecological Services Ltd. (CES Ecology) conducted a suite of ecological surveys and assessments at land near Halsnead Park, Whiston in 2017 and 2018, where residential development was proposed.
- 1.2 An assessment of potential impacts upon surrounding Local Wildlife Sites was undertaken in 2018, in relation to land to the immediate south of Lickers Lane.
- 1.3 No development has been brought forward to date and a new planning application for residential development at the Site (which now encompasses two areas of land) is proposed. An updated Extended Phase 1 Habitat (EP1) survey was undertaken in respect of the new proposals in May 2020, which recommended that the Local Wildlife Site Impact Assessment be updated in line with the new proposals, in order to determine if potential impacts upon Local Wildlife Sites have changed.
- 1.4 The Site was located to the south of Whiston and comprised two separate site areas; site area A (located to the immediate south of Lickers Lane) which totalled approximately 9.7Ha and site area B (located to the immediate east of Windy Arbor Road) which totalled approximately 2.2Ha. Collectively the two site areas are termed the 'Site' (refer to Appendix A – Site Location Plan).
- 1.5 At the time of the updated EP1 survey, site area A comprised an arable field which had not recently been managed, areas of woodland, scattered trees, semi-improved and marshy grassland, tall ruderal herbs, scrub and areas of bare ground. Site area B comprised buildings, areas of woodland, scrub, tall ruderal herbs, introduced shrubs and hard-standing. Scattered trees were also present throughout the site.
- 1.6 The proposals are for approximately 277 dwellings and a 100 bed care home (refer to Appendix B – Proposed Development Layout Plan).
- 1.7 The desk-based study element of the Extended Phase 1 Habitat survey identified that there are twenty-five non-statutorily designated Local Wildlife Sites (LWS) located within a 2.5km radius of the centre of the Site. One of which; Lickers Lane Wood LWS, falls within the boundary of site area A and another, Sandfield Park Woodland LWS, is located immediately adjacent to eastern boundary of site area A.
- 1.8 Local Wildlife Sites (LWS) are selected at the county/regional level and collectively play a critical role in the conservation of the UK's natural heritage. They are afforded a level of protection via planning policies and planning guidance.

2.0 POLICY & LEGISLATIVE CONTEXT

- 2.1 The proposed development site is located within Halsnead Park, which is located to the south of the civil parish of Whiston, within the Metropolitan Borough of Knowsley.
- 2.2 Under Policy SUE2c of the Knowsley Local Plan Core Strategy (January 2016), the area proposed for development is within an area that has been released from the greenbelt and allocated for Knowsley's development requirements up to 2028. This forms part of one of nine Sustainable Urban Extensions, the pertinent one being Sustainable Urban Extension – South of Whiston and Land South of M62.
- 2.3 The following planning policies are of particular relevance to this assessment:

2.4 Policy CS8: Green Infrastructure, of the Knowsley Local Plan Core Strategy (January 2016) states:

Knowsley's existing Green Infrastructure and its beneficial functions will be protected, managed and/or enhanced, primarily to: Sustain and promote biodiversity (including designated sites, priority habitats and protected and endangered species) in accordance with importance and contribution to ecological networks';

*To achieve the above, planning powers and other interventions will be used to: Protect and enhance **strategically important areas** of greenspace; Promote effective movement of wildlife through a network of **strategic green links**, by protecting, maintaining and improving existing and new open spaces, water courses (including water quality) and biodiversity assets;*

'New development must be served by Green Infrastructure to meet the needs of residents and the local environment, in a manner which will: Seek to protect, maintain and where possible enhance biodiversity within and around new developments according to their designation and significance to provide space for nature; and provide adequate mitigation and/or, as a last resort, compensation for Green Infrastructure or biodiversity loss, in circumstances where harm resulting from the development is otherwise unavoidable.'

2.5 Knowsley's strategically important green links are:

- a) *Alt Corridor (Huyton) – stretching from Huyton Village through South Alt Park, Alt Park, Alt Meadows and into Stockbridge Village;*
- b) *Valley Corridor (Kirkby) – stretching through Valley Meadow, St. Chad's Park, Millbrook Park, Millennium Green and Mill Dam;*
- c) *Whiston to Cronton Corridor – stretching through Cronton, Stadt Moers Park and Whiston Greenway;*
- d) *Halewood Triangle – Halewood Park linkage with the Trans-Pennine Trail and to the national cycle network;*
- e) *M57 Green Belt Corridor; and*
- f) *Knowsley Hall Estate – including Knowsley Safari Park and **Local Wildlife Sites***

2.6 The Halsnead Garden Village Master Plan Supplementary Planning Document (June 2017) notes that one of the key opportunities with regards to the landscape of the Halsnead Garden Village is to 'Create wildlife corridors and habitats, including within and between designated local wildlife sites'. Seven non-statutory Local Wildlife Sites are located within the Halsnead Garden Village, one of which lies within site area A – Lickers Lane Wood LWS. This LWS lies to the north of the site.

2.7 The National Planning Policy Framework (2019) sets out national planning policy. Chapter 15 consists of policies of relevance to conserving and enhancing the natural environment. Policies of particular relevance to the proposed development are summarised below:

'Planning policies and decisions should contribute to and enhance the natural and local environment by'... 'protecting and enhancing valued landscapes, sites of biodiversity'... 'minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures' (Paragraph 170).

‘When determining planning applications, local planning authorities should apply the following principles... development resulting in the loss or deterioration of irreplaceable habitats (such as Ancient Semi-Natural Woodland and ancient or veteran) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists’ (Paragraph 175).

- 2.8 The following pieces of legislation are of particular relevance to this assessment:
- 2.9 **Wildlife and Countryside Act 1981** (as amended, including the Countryside Rights of Way Act 2000) provides legislative protection for certain species, including certain species of conservation concern, such as widespread reptiles, amphibians and nesting birds, and non-native invasive species such as Himalayan balsam. The Act also provides the mechanism for the designation and protection of SSSIs and National Nature Reserves (NNRs). The main provisions of the Act relevant to the proposed development are Section 1, which applies to the protection of all wild birds, Section 9, which applies to the protection of wild animals listed on Schedule 5, Section 13, which applies to the protection of wild plants listed on Schedule 8, and Section 14, which applies to the control of non-native species of plant and animal listed on Schedule 9 of the Act.
- 2.10 **Natural Environment and Rural Communities Act 2006** places a duty upon public bodies to consider enhancement of biodiversity within all of their actions. Species of Principal Importance for the purpose of conserving biodiversity under Section 41 (S41) of the NERC ACT 2006, need to be taken into consideration by a public body when performing its functions with a view to conserving biodiversity. The S41 list (for England) contains a total of 942 species of Principal Importance. Species of Principle Importance are also referred to as Priority species.
- 2.11 The **UK Biodiversity Action Plan** (published in 1994) was the UK Government’s response to the Convention on Biological Diversity, which the UK signed up to in 1992 in Rio de Janeiro. The Action Plan identifies a number of habitats and species as priorities for conservation concern, including species of mammal, bird, reptile, amphibian, invertebrate and plant. The UK BAP list of priority habitats and species has now been superseded by the S41 list of species and habitats of Principal Importance (for England), however, as it is still widely recognised, the two should be considered interchangeable.
- 2.12 The **North Merseyside Biodiversity Action Plan** identifies several habitats and species as conservation priorities at a county/regional context, and includes brown hare, bats, skylark, lowland mixed broadleaved woodland and urban grassland. Government Circular: Biodiversity & Geology (16 Aug 2005) states that species and habitats identified by Local Biodiversity Partnerships are capable of being a material consideration at planning.

3.0 METHODOLOGY

- 3.1 To inform this impact assessment, the existing available LWS data for LWS’s in close proximity to the site were reviewed, and an updated walkover inspection of both site areas was undertaken by CES Ecology on 6th May 2020. During this inspection Lickers Lane Wood and Sandfield Park Woodland LWSs were also visited. An inspection of Big Water and Big Water Wood LWS, and The Old Wood, North LWS was undertaken on 26th May 2020.

3.2 The suite of field survey reports produced by CES Ecology in connection with the proposed development were reviewed to provide current data regarding the status of the habitats and species known to be associated with the proposed development site, which includes Lickers Lane Wood LWS. This consists of:

- Halsnead Park, Whiston, Merseyside - Extended Phase 1 Habitat Survey (July 2017)
- Halsnead Park, Whiston, Merseyside- Badger Survey (July 2017)
- Halsnead Park, Whiston, Merseyside - Bat and Barn Owl Survey (July 2017)
- Halsnead Park, Whiston, Merseyside – Bat Survey (July 2017)
- Halsnead Park, Whiston, Merseyside – Bat Activity Survey (2017)
- Halsnead Park, Whiston, Merseyside – Bat and Barn Owl Roost Potential Assessment of Trees (2017)
- Halsnead Park, Whiston, Merseyside – Aerial Survey of Trees (January 2018)
- Halsnead Park, Whiston, Merseyside - Great Crested Newt Survey (July 2017)
- Halsnead Park, Whiston, Merseyside - Reptile Survey (2017)
- Halsnead Park, Whiston, Merseyside - Breeding Bird Appraisal (November 2017)
- Land off Lickers Lane - An Invertebrate Scoping Assessment (October 2017)
- Halsnead Garden Village North - Extended Phase 1 Habitat Survey (May 2020)
- Halsnead Garden Village North – Badger Survey (May 2020)
- Halsnead Garden Village North – Great Crested Newt Survey (June 2020)
- Halsnead Garden Village North – Bat Activity Survey (2020)
- Halsnead Garden Village North – Wall Brown Survey (2020)
- Halsnead Garden Village North – Bat and Barn Owl survey of buildings, and BRP assessment of trees (2020)
- Halsnead Garden Village North – Aerial bat survey of trees (June 2020)

3.3 As part of the EP1 desk based study, CES Ecology reviewed the following two reports by Merseyside Environmental Advisory Service (MEAS). These were also reviewed to inform this impact assessment:

- Ecological Appraisal Part 1: Extended Phase 1 Habitat Survey Report; Land at south Whiston and south of the M62, Cronton (February 2014)
- Ecological Appraisal Part 2: Phase 2 Ecology Survey and Habitat Assessment Report; Land at south Whiston and south of the M62, Cronton (July 2014)

3.4 The data gathered during this 2020 walkover survey was used to make an informed judgment of likely qualification/continued LWS qualification of Lickers Lane Wood LWS, under current LWS selection criteria for the region.

3.5 Given the distance from the Site, and habitats present at the these four LWSs, an assessment was made of the likely impacts that development may have on them in the absence of mitigation, during both the construction and operational phase of development.

3.6 Where it was considered necessary, appropriate mitigation has been recommended.

4.0 BASELINE LWS INFORMATION

- 4.1 The biological data-search provided by Merseyside Biobank as part of the CES Ecology 2020 Extended Phase 1 Habitat survey highlighted the presence of twenty-five Local Wildlife Sites (LWS) within a 2.5km radius of the centre of the Site.
- 4.2 Given the scale and nature of the development, and the inclusion of site area B into the scheme, it is considered appropriate to focus the assessment on Lickers Lane Wood and Woodland, Sandfield Park LWS's, however the assessment will also include Big Water and Big Water Wood LWS and The Old Wood North LWS. These LWSs are located at distances of 170m and 370m to the south of Site area B.

Lickers Lane Wood LWS

- 4.3 Lickers Lane Wood was first designated as a Local Wildlife Site in 1995, and the citation was last reviewed in 2003 (refer to Appendix C (i)), when the site was described as comprising a narrow area of broadleaf woodland with a dense canopy and associated neutral grassland.
- 4.4 In 2003 the combination of the following 'factors' led to it being identified as a LWS:

H1 Habitat Type Rarity: Unimproved acid grassland and unimproved neutral grassland, both BAP habitats and regionally important.

H2 Habitat Diversity on Site: On account of 11 habitats being recorded.

H3 Contiguity: Nearness of other sites, 22 LWS within 1km.

SP1 Rarity: English bluebell (WCA Schedule 8; species of conservation concern; regionally important) and Smaller Cat's-tail (Locally rare)

SP2 Diversity: 81 plant species.

SP3 Naturalness: 86.4% of the plants are native to North Merseyside

Sandfield Park Woodland LWS

- 4.5 Sandfield Park Woodland was designated as a Local Wildlife Site in 1995, and the citation was last reviewed in 2003 (refer to Appendix C (ii)), when the site was described as comprising mature broadleaf woodland with a pond, acidic grassland and scrub.
- 4.6 In 2003 the combination of the following 'factors' lead to it being identified as a LWS:

H1 Habitat Type Rarity: One regionally important habitat.

H2 Habitat Diversity on Site: On account of 12 habitats being recorded.

H3 Contiguity: Nearest of other sites, 23 within 1km.

SP1 Rarity: English bluebell (WCA Schedule 8; species of conservation concern; regionally important) and Smaller Cat's-tail (Locally rare)

SP2 Diversity: 95 plant species.

SP3 Naturalness: 87.4% of the plants are native to North Merseyside

Big Water and Big Water Wood LWS

4.7 This was designated as a LWS in 1995, and the citation was last reviewed in 2003 (refer to Appendix C (iii)), when the site was described as broadleaf woodland, bordering a lake that is regularly fished with a good mix of aquatic and emergent plants.

4.8 In 2003 the combination of the following 'factors' lead to it being identified as a LWS:

H1 Habitat Type Rarity: Two Priority BAP and regionally important habitat, namely Swamp single species dominant and standing water.

H2 Habitat Diversity on Site: On account of 12 habitats being recorded.

H3 Contiguity: Nearest of other sites, 37 within 1km.

SP1 Rarity: English bluebell (WCA Schedule 8; species of conservation concern; regionally important), Northern Dock (Regionally Important and Locally rare), and Arrow-head, Yellow Marsh Cress and Greater Duckweed (Locally rare).

SP2 Diversity: 104 plant species.

SP3 Naturalness: 87.5% of the plants are native to North Merseyside

Animals – Mam1: Possible breeding water vole – additional confirmation required

The Old Wood, North LWS

4.9 This was designated in 2003, with the last revision being July 2003 (refer to Appendix C (iv)). The site was described as a mature broadleaf woodland set in a clough valley with rock outcrops and a former quarry. The woodland was separated from The Old Wood South by construction of the M62 motorway.

4.10 In 2003 the combination of the following 'factors' lead to it being identified as a LWS:

H1 Habitat Type Rarity: One regionally important habitat, namely natural rock exposure; other exposure, acid/neutral.

H2 Habitat Diversity on Site: On account of 11 habitats being recorded.

H3 Contiguity: Nearest of other sites, 36 within 1km.

SP1 Rarity: English bluebell (WCA Schedule 8; species of conservation concern; regionally important).

SP2 Diversity: 60 plant species.

SP3 Naturalness: 88.3% of the plants are native to North Merseyside.

5.0 RESULTS

Lickers Lane Wood LWS

- 5.1 Since the 2018 LWS impact assessment, habitats at Lickers Lane Wood have not significantly changed. Three broad habitat types were identified during the walkover survey, consisting of semi-natural broadleaved woodland, dense scrub and tall ruderal/poor semi-improved grassland (see Appendix D: Photographic Plates).
- 5.2 The western extent of Lickers Lane Wood LWS was dominated by bramble scrub. Elm was the main canopy tree, however the trees appeared to be dead or in extremely poor condition.
- 5.3 The scrub community is likely to conform most closely with a W24 *Rubus fruticosus* - *Holcus lanatus* NVC community. 'Other Scrub Communities' are considered regionally important within the Urban Mersey Basin according to 'A Biodiversity Audit for North West England'. However, the areas of scrub habitat within this LWS are not considered to be of sufficient extent to qualify as regionally important in accordance with "A Biodiversity Audit of North West England". As such it is not considered to be a qualifying feature for LWS designation.
- 5.4 A narrow strip of tall ruderal vegetation mixed with poor semi-improved grassland, interspersed with stands of dense bramble scrub were present along the southern boundary of Lickers Lane Wood LWS. In areas of tall ruderal/grasses cock's-foot was the dominant species with other plants including Yorkshire fog, common hogweed, common nettle, bramble, thistles and cow parsley. Also present was an area with cherry sp saplings and an area where raspberry was abundant.
- 5.5 There were occasional small clearings present within the southern boundary where English bluebell was abundant. Also present were low numbers of non-native bluebells.
- 5.6 Sycamore was found to be the woodland's dominant canopy species with oak occasional. Other species present within the canopy at low densities were ash, cherry, and elm (most of the elm were dead).
- 5.7 Several sycamore, elm, cherry and elder saplings were present in the understory. Other species recorded within the understory included yew, rowan, hawthorn, holly and rhododendron.
- 5.8 The ground flora was dominated by English bluebell, although the occasional non-native bluebell was also present. Ivy-leaved speedwell, red campion, bramble, ivy, herb-Robert and ground ivy were amongst the other woodland ground flora species present.
- 5.9 With sycamore dominant within the woodland canopy and the woodland not resembling a native lowland mixed deciduous woodland, it is not considered that this habitat conforms to a typical UK BAP priority habitat or regionally important habitat. However, the presence of native bluebells at high density gives the woodland regional importance.
- 5.10 No areas of unimproved acid or neutral grassland were recorded anywhere within Lickers Lane Wood LWS; it is considered that these areas have since succeeded into tall ruderal/poor semi-improved grassland and bramble. However, any potential remnants may be restorable with appropriate management and should therefore remain a consideration.

- 5.11 Lickers Lane Wood LWS was considered to score points for the following combination of factors:

H2 Habitat Diversity on Site: 15 points (5 x 3): 'For each semi-natural habitat on site'- i.e. bramble scrub, tall ruderal and semi-natural broad-leaved woodland.

H3 Contiguity: The guidelines state 5 points are awarded for: 'More than or fifteen sites in 1 kilometre'. The 2003 citation indicates that there were twenty-two sites within 1km and so 5 points were given as a factor leading to qualification as a LWS. At the time of writing, CES Ecology can identify nine sites within 1km. In which case, Lickers Lane Wood would not receive any points for Contiguity. CES Ecology considers it unlikely that the number of Local Wildlife Sites within 1km has decreased so significantly since 2003 and that the scoring was more likely based upon the number of LWSs within 2km. There are twenty-two LWSs within 2km of Lickers Lane Wood LWS (including Lickers Lane Wood itself). The site would therefore be eligible for 5 points under Contiguity if the number of sites was calculated within a 2km buffer.

SP1 Higher Plants Rarity: 3 points for hosting English bluebell. It is possible that Lickers Lane Wood would score another 3 points if Smaller cat's-tail is still found to be present.

SP2 Higher Plants Diversity: 1 point since 'Less than 76 species present'. Although the survey will not have recorded all higher plants on site, as this would require multiple surveys throughout the year it seems highly unlikely that the number of total species would exceed 76.

SP3 Higher Plants Naturalness: 5 points: 'More than or 80% plant species native to North Merseyside'

- 5.12 This reaches a total of 29 points, or 32 points if smaller cat's-tail is to still be present.
- 5.13 Based on the previous surveys undertaken by CES Ecology in relation to the proposed development (including bat, bird, badger, reptile, GCN surveys), it does not appear that Lickers Lane Wood would meet any other criteria under criterion 'Other Groups'.
- 5.14 The Guidelines apportion points to qualifying habitats and species, unfortunately, thresholds for the point scoring system are not provided to indicate the required level for qualification or reselection as LWS.
- 5.15 In the absence of the threshold values for LWS qualification, it is not possible to ascertain whether Lickers Lane Wood LWS continues to qualify as LWS.
- 5.16 **The development will result in the loss of approximately 740m² of this LWS. Habitats to be lost include tall ruderal/poor semi-improved grassland and scrub. A low number of dead elm trees will also be removed from the western extent.**

Sandfield Park Woodland LWS

- 5.17 An area of Sandfield Park Woodland LWS that is located immediately adjacent to the proposed development site was included within the walkover survey.

- 5.18 The northwest extent of the LWS was dominated by rhododendron with little to no ground flora.
- 5.19 Other trees recorded further south and east were willow, oak, rowan, yew, hawthorn, ash, and sycamore.
- 5.20 Ground flora species such as raspberry, plantains, green alkanet, bracken, cleavers and silverweed were present where rhododendron was absent.
- 5.21 The western portion of the LWS, which is adjacent to the proposed development site was not considered to be Priority Habitat, being dominated by the Schedule 9 species rhododendron.
- 5.22 **This LWS is not due to be directly impacted by the development.**

Big Water and Big Water Wood LWS

- 5.23 This LWS comprises of small pockets of semi-natural broadleaved deciduous woodland, bounding a lake which is heavily used by anglers. At the time of the walkover assessment the canopy was noted as dominated by sycamore with occasional oak, and an understorey of sycamore, yew, elder and an abundance of rhododendron.
- 5.24 Large quantities of litter were recorded around the site and within the lake.
- 5.25 Evidence of significant fishing activity was recorded around the entire periphery of the lake and erosion of the bank was evident in a number of locations.
- 5.26 Bankside vegetation included yellow iris, bulrush, numerous reed and sedge species and soft rush, with occasional mature trees.
- 5.27 During a survey of the lake for water vole, undertaken by MEAS in July 2014, no evidence of water vole was recorded.
- 5.28 This LWS is linked to site area B by woodland, which contains a drainage channel that leads into Big Water. The channel was holding pools of water in places along its length during the site visit but the water has no 'flow' as the levels were too low.
- 5.29 **This LWS is not due to be directly impacted by the development.**

The Old Wood, North LWS

- 5.30 This LWS is also designated as ancient woodland. It comprises semi-natural broadleaved deciduous woodland, with a canopy dominated by sycamore and occasional beech and hornbeam. Understorey species include yew and birch and dense area of rhododendron.
- 5.31 Ground flora typically comprised common nettle, bramble, wood avens, broad-buckler fern and non-native bluebell was recorded.
- 5.32 The woodland has a rock exposure which is designated as a regionally important geological site (RIGS). At the base of this feature is a drainage channel (located within a natural gully with steep woodland banks on either side). This channel runs down the

centre of the site, from north to south, from Big Water and Big Water Wood LWS, and flows beneath the M62.

5.33 There is an overflow point at the southern end of Big Water, which links into this channel. There was no open or flowing water within the channel and the overflow point was dry at the time of the survey.

5.34 **This LWS is not due to be directly impacted by the development.**

6.0 POTENTIAL EFFECTS

CONSTRUCTION

Lickers Lane Wood LWS

6.1 During the construction phase, the following activities have been identified as having the potential to adversely affect the status of Lickers Lane Wood LWS.

6.1.1 The proposed site layout plan indicated that the development will result in the loss of low numbers of dead elm trees, and an area of the LWS of approximately 740 metres squared, which would represent a loss of approximately 6.5% of its total area. This loss is to facilitate the site access road, and a further residential street and pavement. Habitats to be lost include tall ruderal/poor semi-improved grassland and dense scrub. This could impact the sites ability to qualify under criteria H1, H2, SP1 and SP2, if habitat and species diversity is reduced. This impact would be reversible to an extent through planting and appropriate management of the LWS, however the overall footprint of the LWS and the volume of habitats within it will be reduced.

6.1.2 However, due to the selection criteria being based on a point scoring system, the loss of even a small area of habitat or species coverage within the LWS could potentially bring the site's scoring capability to below the qualifying threshold (once that has been established). It can be said with confidence that the areas proposed to be lost do support native bluebell, and this is one of the qualifying features under criteria SP1 Higher Plants Rarity. Similarly, if the areas proposed to be lost also support smaller cat's-tail, then this too could potentially bring the site's scoring capability to below the qualifying threshold.

6.1.3 Construction, including excavation and the tracking of heavy machinery within close proximity of the woodland has the potential to cause root asphyxiation to retained trees within the LWS, which in turn could affect suitability of conditions to support species for designation under SP1 and SP2, such as native bluebell. Affected trees may lose vigour or die. This impact would be reversible through planting or natural regeneration of trees, however the duration of the impact would be long-term given the likely time it would take for these trees to reach a comparable maturity. In addition, such activities in close proximity to the LWS could also impact on other habitats within it, such as the tall ruderal vegetation and scrub. A reduction in the number of habitats present within the LWS could affect the qualifying features of the site under criteria H2. This impact could be reversible through natural regeneration and the duration would be short term if affected areas remain undeveloped.

- 6.1.4 Loss of connectivity between the wider area and the LWS by removal of surrounding non-LWS trees and vegetation within the construction phase could impact upon the site's ability to support species which utilise the LWS as a stepping stone or wildlife corridor, in a transient manner, potentially affecting the contiguity of the LWS, under criteria H3. The impact of severance of connections between Local Wildlife Sites (particularly focusing on Lickers Lane Wood and Sandfield Park Woodland LWS) could be reversible through planting.
- 6.1.5 Lighting is an additional factor which could potentially cause a decrease in connectivity between Lickers Lane Wood LWS and the surrounding area, including Sandfield Park Woodland LWS. Lighting of areas during periods of darkness can affect the way in which nocturnal species such as badgers and bats utilise habitats and can create barriers which species will not cross. The effects of light spillage onto Lickers Lane Wood LWS and the surrounding area to the east during the construction phase would be short-term.

Sandfield Park Woodland LWS

- 6.2 During the construction phase, the following activities have been identified as having the potential to adversely affect the status of Sandfield Park Woodland LWS.
 - 6.2.1 The proposed development site layout plan does not indicate the direct loss of any land within Sandfield Park Woodland LWS. However, indirect effects on the immediately adjacent area of LWS is possible.
 - 6.2.2 The western edge of the Sandfield Park Woodland LWS is the area closest to the proposed development area and is comprised of dense rhododendron. It is of reduced wildlife conservation value in comparison with the remainder of the LWS. Should any development activities cause adverse impacts on this area (eg. root asphyxiation) this is not likely to affect the condition of the wider LWS or its capability to qualify as such.
 - 6.2.3 Loss of connectivity between the wider area and the LWS through habitat degradation caused by such indirect impacts could impact upon the site's ability to support species which utilise the LWS as a stepping stone or wildlife corridor, in a transient manner, potentially affecting the contiguity of the LWS, under criteria H3. The impact of severance of connections between Local Wildlife Sites (particularly focusing on Lickers Lane Wood and Sandfield Park Woodland LWS) could be reversible through planting.
 - 6.2.4 Lighting is an additional factor which could potentially cause a decrease in connectivity between Sandfield Park Woodland LWS and the surrounding area. Lighting of areas during periods of darkness can affect the way in which nocturnal species such as badgers and bats utilise habitats and can create barriers which some species will not cross. The effects of light spillage on Sandfield Park Wood LWS and the surrounding area to the west during the construction phase would be short-term.

Big Water and Big Water Wood and The Old Wood, North Local Wildlife Sites

- 6.3 During the construction phase, the following activities have been identified as having the potential to adversely affect the status of Big Water and Big Water Wood and The Old Wood, North LWSs.

- 6.3.1 Direct impacts upon these areas on account of construction activities such as tree root damage is considered highly unlikely. However, given the presence of the drainage channel that links into both of these sites, located approximately 50m to the east of site area B, it is possible that contaminants could enter these designated sites via 'run off' from construction activities. Contaminants from 'run off' may be detrimental to flora and fauna recorded at the site, which could in turn decrease the number of species and/or habitats present which are both qualifying factors for these LWSs under SP2 and H2.
- 6.3.2 Other indirect effects such as light pollution during construction activities are considered unlikely given the distance from the site and the existing barrier of retain woodland at site area B.

OCCUPATION

Lickers Lane Wood LWS

- 6.4 During the occupation phase, the following factors have been identified as having the potential to adversely affect the status of Lickers Lane Wood LWS.
- 6.4.1 Occupation of gardens within close proximity of the LWS could result in damage to these areas for such reasons as tipping of garden or waste material, encroachment of gardens into these areas, or the encroachment of invasive species such as rhododendron or cotoneaster, common garden plants, which can outcompete native flora. There is potential for these non-native varieties to spread via seed dispersal, growth, and tipping of garden waste. This may affect the condition of the habitats and species composition within Lickers Lane Wood LWS, impacting upon criteria SP1, SP2 and SP3. This impact could be reversible through an appropriate management scheme for the woodland, however the duration would likely be long term due to repeat tipping incidents or natural growth and seed dispersal of invasive species within adjacent gardens.
- 6.4.2 Unmitigated lighting of the road networks and residential security lighting could potentially cause a decrease in connectivity between Lickers Lane Wood LWS and the surrounding area. This could impact upon the site's ability to support species which utilise the LWS as a stepping stone or wildlife corridor, in a transient manner, potentially affecting the contiguity of the LWS, under criteria H3: contiguity. Lighting of areas during periods of darkness can affect the way in which nocturnal species such as badgers and bats utilise habitats and can create barriers which some species will not cross. Lighting of Lickers Lane Wood LWS and the surrounding area to the east during the occupation phase would likely be irreversible and the duration long term.
- 6.4.3 The development is likely to result in an increase in recreational pressures on this LWS. An informal path was evident, however increased footfall could potentially affect the ground flora, specifically where the native bluebell, a species of conservation concern, and if the smaller cat's ear is still present. This could affect the site's qualifying features including H2: habitat diversity, SP1: plant rarity, and SP2: plant diversity. Other potential factors which may contribute to a reduction in these three criteria include:
- litter and fly tipping (which is already prevalent in the area)
 - damage and disturbance by dogs, and other domestic animals
 - anti-social behaviour such as vandalism, graffiti, barbeques

- theft and destruction of wildlife and property
- damage by vehicles

Impacts of increased footfall during the occupation phase would likely be long term and irreversible.

Sandfield Park Woodland LWS

6.5 During the occupation phase, the following factors have been identified as having the potential to adversely affect the status of Sandfield Park Woodland LWS.

6.5.1 Gardens within close proximity to woodland or green space can result in damage to these areas for such reasons as tipping of garden or waste material, encroachment of gardens into these areas, or the encroachment of invasive species such as rhododendron or cotoneaster, common garden plants, which can outcompete native flora. There is potential for these non-native varieties to spread via seed dispersal, growth, and tipping of garden waste. This may affect the condition of the habitats and species composition within Sandfield Park Woodland LWS, impacting upon criteria SP1, SP2 and SP3. This impact could be reversible through an appropriate management scheme for the woodland, however the duration would likely be long-term due to repeat tipping incidents or natural growth and seed dispersal of invasive species within adjacent gardens.

6.5.2 Unmitigated security lighting of the residential units adjacent to the western boundary of this LWS and the retained tree line adjacent Lickers Lane could potentially cause a decrease in habitat connectivity between Sandfield Park Woodland LWS and the surrounding area. This could impact upon the site's ability to support species which utilise the LWS as a stepping stone or wildlife corridor, in a transient manner, potentially affecting the contiguity of the LWS, under criteria H3. Lighting of areas during periods of darkness can affect the way in which nocturnal species such as badgers and bats utilise habitats and can create barriers which some species will not cross. Unmitigated lighting of Sandfield Park Woodland LWS, the retained tree line and the surrounding area to the east during the occupation phase would likely be irreversible and the duration long term.

6.5.3 The development is likely to result in an increase in recreational pressures on this LWS. Increased footfall could potentially affect the ground flora, specifically the native bluebell, a species of conservation concern, and smaller cat's ear, locally rare, if still present. This could affect the site's qualifying features including H2, habitat diversity, SP1 plant rarity, and SP2 plant diversity. Other potential factors which may contribute to a reduction in these three criteria include:

- litter and fly tipping
- damage and disturbance by dogs, and other domestic animals
- anti-social behaviour such as vandalism, graffiti, barbeques
- theft and destruction of wildlife and property
- damage by vehicles

Impacts of increased footfall during the occupation phase would likely be long term and irreversible.

Big Water and Big Water Wood, The Old Wood North and other LWSs

- 6.6 During the occupation phase, the impacts of 'run off' from the new development are considered likely to be negligible on account of the inclusion of sustainable urban drainage ponds and an appropriate drainage scheme for the Site.
- 6.7 Local Wildlife Sites are used regularly by members of the public for recreational activities such as dog walking and fishing, and can be utilised even if the site is not open to the public, by increased incidences of trespassing. Recreational disturbance and damages can result in negative impacts on wildlife and habitats. The creation of approximately 277 residential units and a 100 bed care home is likely to increase recreational pressures on Local Wildlife Sites, not just in the immediate area, but those further afield as well. With reference to Yorkshire Wildlife Trusts recent report; Human Impacts on Nature Reserves – The Influence of Nearby Settlements (September 2017), potential impacts on LWSs resulting from the occupation of the new development may include (but are not limited to):
- litter and fly tipping
 - damage and disturbance by dogs, and other domestic animals
 - anti-social behaviour such as vandalism, graffiti, barbeques
 - theft and destruction of wildlife and property
 - damage by vehicles
- 6.8 This report has indicated a significant negative relationship between proximity of sites to settlement and the frequency of damage and disturbance (Rylatt *et al* 2017). Evidence suggests that nature reserves within 100m of settlements are at a higher risk compared to reserves located over 1km from the nearest settlement, with litter and fly tipping being the most persistent damage. Nevertheless, litter and fly tipping remained a frequent occurrence at all reserves within 1km as well as those over 1km from areas of settlement. Incidences of damage by vehicles was the only factor that did not correlate directly with distance, with the greatest number of incidence occurring at reserves between 100m and 500m from areas of settlement.
- 6.9 Impacts of increased recreational pressures on LWSs between 100m to 2km from the proposed development site are considered to be wide ranging, but generally decreasing with distance from the site. Most of these pressures are considered to be reversible.

CUMULATIVE IMPACTS

- 6.10 The proposed development site forms part of the proposed Halsnead Garden Village which totals approximately 174Ha and spans the M62 to the north and south. The Halsnead Garden Village will provide approximately 1600 residential properties, a new primary school and green corridors to the north of the M62. To the south of the M62 will be approximately 22.5Ha of employment land and a new Country Park on the site of the former Cronton Colliery.
- 6.11 Given the scale of the Garden Village development and the proximity of the Local Wildlife Sites to the development, short and long-term in combination/cumulative impacts resulting from construction and post-development human interference are considered to be potentially 'significant' if mitigation and avoidance measures are not implemented by other separate developments within the Halsnead Garden Village project.

MITIGATION

- 6.12 Under HSPD8 Green Infrastructure and open space, the Halsnead Masterplan Supplementary Planning Document (2017) identifies the following specific ecological measures to be designed within the green space framework:

'Creation of a minimum 15m buffer zone around woodland groups to retain semi-mature broadleaf woodland'.

'Mitigation of impact upon the identified Local Wildlife Sites within the site'.

'Designing wildlife corridors and green space connection within and connections to ecological framework outside of the site; for example...links to other wildlife sites'.

- 6.13 A degree of mitigation has been built into the current proposals in that connectivity between Lickers Lane Wood and Sandfield Park Woodland LWS will be to a certain extent maintained by a line of retained trees along Lickers Lane, with the exception of a break where the main access road will enter the site. It is recommended that as much of the woodland here be retained as possible.
- 6.14 Under the current scheme, it is not possible to provide a 15m buffer between the woodland areas of LWSs.
- 6.15 Additional mitigation measures are recommended to be incorporated into the proposed development as follows:

CONSTRUCTION

- a) It is recommended that a 15m buffer zone around mature broadleaf woodland as described in HSPD8 Green Infrastructure and Open Space, of the Halsnead Master Plan Supplementary Planning Document (2017) is incorporated into the site layout where practicable.
- b) To avoid inadvertent or accidental damage to Lickers Lane Wood LWS and Sandfield Park Woodland LWS, solid security fencing should be erected around their perimeters prior to the commencement of development works. This should provide a physical barrier that will prevent any construction vehicles from straying onto the retained/protected areas and causing inadvertent damage, including root asphyxiation. The fencing should also include sufficient provision for root protection zones, which are usually equal to branch spread.
- c) Following the establishment of root protection zones, in the unlikely event that any inadvertent damage is caused to trees or other vegetation within Lickers Lane Wood and, Sandfield Park Woodland LWS, a contingency should be put in place to ensure that: i) working practice is amended to ensure further damage does not occur; ii) Merseyside Environmental Advisory Service are consulted with regards to any replacement planting, and; iii) funds are made available to deliver any necessary replanting.
- d) Solid security fencing and root protection zones, as per points B and C, should be implemented around the retained trees adjacent to Lickers Lane, in between Lickers Lane Wood LWS and Sandfield Park Woodland LWS, in order to help maintain connectivity between the two LWS's.

- e) Lighting levels adjacent to both Lickers Lane Wood LWS, Sandfield Park Woodland LWS, and the retained trees between them should be minimised wherever possible to reduce potential impacts upon nocturnal animals such as badgers and bats. It is recommended that any lighting on site during the construction phase be kept to a minimum; duration of such lighting should be downward-facing and minimised wherever possible, and every effort should be made to reduce light spillage onto woodland. Consideration should be given to using bollard type lighting and/or using low pressure sodium lamps rather than high pressure sodium or mercury lamps; if mercury lamps are to be used they should be fitted with filters.
- f) Consideration should be given to turning off lighting adjacent to the woodland during certain periods (such as between midnight and 5.30am). This will reduce energy consumption and will give wildlife darker periods during which they can forage.
- g) Where the bluebell dominated woodland between Lickers Lane Wood LWS and Sandfield Park Woodland LWS, or any habitat containing native bluebell is proposed to be lost, the bluebells may be transplanted to suitable adjacent woodland that is currently unoccupied by native bluebells.
- h) Non-native bluebells can hybridise with native varieties, creating hybrids and diluting the gene pool. These should be removed and replaced by the native bluebells. Bluebells can also be transplanted to areas within Lickers Lane Wood which are currently occupied by dense stands of ground elder and also bramble (only where it seems unlikely that bramble has replaced neutral or acid grassland). The best method is soil placement of the intact soil profile. Careful handling of the soil during translocation is required so that plants are not damaged and bulbs are planted at the correct depth. Soil should be transferred in the autumn so as to limit disruption to the vegetation. Alternatively, bluebells can be transplanted to alternative sites identified elsewhere.
- i) The formulation and implementation of a Construction Environmental Management Plan (CEMP) will be required to detail protective measures mentioned above as well as details of measures to prevent contaminated 'run off' entering the drainage channel adjacent to site area B.

OCCUPATION

- j) The same lighting restrictions as per point F and G above should be adhered to during the occupation phase, with regards to both street lighting and any external housing/garden security lighting, especially that which is in close proximity to woodland.
- k) Ensuring that each new property is provided with a Knowsley Council blue bin for green waste before or soon after occupation should mitigate the risk of tipping garden waste on the adjacent LWS's, and any other LWS's in the area.
- l) The provision of both dog waste bin facilities, and general waste bins at strategically positioned locations near to areas of public green space should be considered, to help promote responsible usage of green spaces including Local Wildlife Sites.
- m) Interpretation boards, highlighting the important features of Lickers Lane Wood LWS, such as the presence of native bluebell, should be incorporated into the development, to highlight to 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.

- n) The proposed pathways through the LWS woodland should follow the current route of paths in the woodland as closely as possible. This will avoid any additional damage to the ground flora. Edging paths with rails would discourage the public straying from the path and putting pressure on the ground flora.
- o) The Halsnead Master Plan Supplementary Planning Document (2017) indicates that part of the development will include the creation of a country park at the former Cronton Colliery. This should help to alleviate recreational pressure on local wildlife sites by channelling the public towards areas specifically designed as public open space.
- p) The retained areas of woodland, including Lickers Lane Wood LWS, within the Site, and any newly created areas of public open space should be subject to a long term Habitat Management Plan. The plan should seek to manage these areas in a way that is for the benefit of wildlife.
- q) 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.

ENHANCEMENT

- 6.16 Removal of invasive species from Lickers Lane Wood LWS and Sandfield Park Woodland LWS, as well as within the proposed development site should be carried out. It is of paramount importance that the Japanese knotweed is removed since it can spread and cause structural damage to buildings and roads. The non-native bluebell should be selectively pulled from the ground to prevent its further spread through the woodland. Other non-native species that should be managed appropriately are cotoneaster and rhododendron.
- 6.17 In accordance with National Planning Policy Framework (2012), development should seek to contribute to the natural environment and provide net gains where possible. To achieve this, it is recommended that all amenity planting within the new development is of locally native species, which would complement habitat present on the adjacent local wildlife sites. This may include species such as crab apple (*Malus sylvestris*), rowan (*Sorbus aucuparia*) and silver birch (*Betula pendula*).

7.0 CONCLUSION

- 7.1 In the absence of mitigation, development of the site does have the potential to adversely affect the status of Lickers Lane Wood, Sandfield Park Woodland, Big Water and Big Water Wood and The Old Wood, North Local Wildlife Sites by the loss and degradation of habitats and important ground flora, such as native bluebell (a regionally important species of conservation concern). Factors which may cause an impact include site layout, construction activities (such as 'run off'), encroachment of non-native invasive species such as common garden plants, increased public access and recreational pressures.

- 7.2 In the absence of threshold scoring values for Local Wildlife Site selection in the Knowsley region, it has not been possible to determine levels of significance for the predicted adverse development effects on Local Wildlife Sites.
- 7.3 Nevertheless, appropriate avoidance and mitigation measures have been formulated to redress the predicted development effects on Local Wildlife Sites. The successful implementation of these measures will effectively ensure the proposed development is in accord with local and national planning policy in respect of biodiversity and Local Wildlife Sites.

8.0 REFERENCES

Department for Communities and Local Government (March 2012) *National Planning Policy Framework*

Halsnead Garden Village Masterplan Supplementary Planning Document (June 2017)
Knowsley Council. (January 2016) *Knowsley Local Plan Core Strategy*
Merseyside Environmental Advisory Service, (2008) – *North Merseyside Local Wildlife Sites Selection Guidance*

Merseyside Environmental Advisory Service (2014) – Ecological Appraisal Part 1: Extended Phase 1 Habitat Survey Report; Land at south Whiston and south of the M62, Cronton

Merseyside Environmental Advisory Service (2014) – Ecological Appraisal Part 2: Phase 2 Ecology Survey and Habitat Assessment Report; Land at south Whiston and south of the M62, Cronton (July 2014)

Yorkshire Wildlife Trust (September 2017) Human Impacts on Nature Reserves – The Influence of Nearby Settlements.

Regional Biodiversity Steering Group for North West England (January 1999) Wild About the North West: A Biodiversity Audit of North West England. Wpo/np/bioaudit/3774.

Appendices

Appendix A: Site Location Plan

Lickers Lane Wood LWS

Site area A

Woodland, Sandfield Park LWS

Site area B

Big Water and Big Water Wood LWS

The Old Wood, North LWS

Legend

 Development site boundary

 Local Wildlife Site

 Indicative location of area of Licker Lane Wood LWS to be lost to development

 Area where dead elm trees will be removed

 Indicative location and direction of drainage channel

Project: Halsnead Garden Village North, Knowsley

Map: Site Location Plan

CES Ref: CES/1349/06-2020/LO

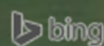
Scale: Not to scale / indicative

Date: June 2020

CES Ecology
Bickley Hall Farm
Bickley
Malpas
Cheshire
SY14 8EF

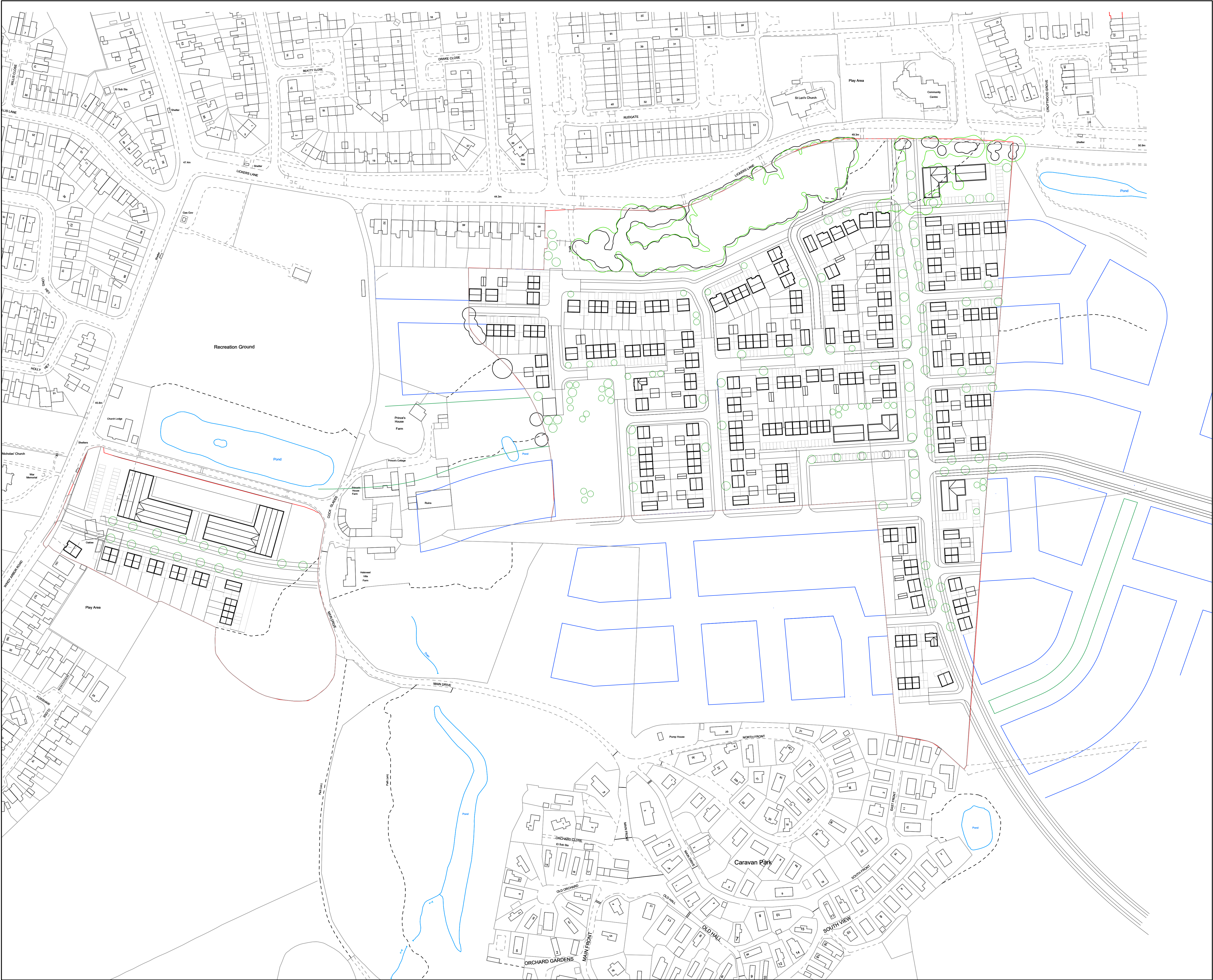


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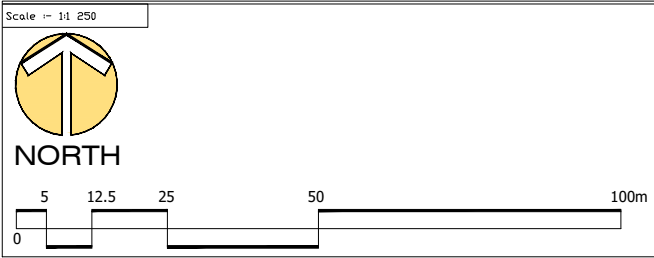
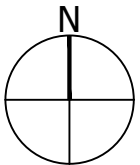


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Appendix B: Proposed Development Layout Plan



LEGEND



Project
Halsnead North

Drawing Title
Illustrative Masterplan

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Project No 31631	Drawing No 04	Revision F	

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Appendix C (i): Lickers Lane Wood LWS Citation

SBI 13. Lickers Lane Wood
Scale 1:5000

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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/scarse 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>)
-------------------------------	---

Appendix C (ii): Sandfield Park Woodland LWS Citation

SBI 14. Woodland, Sandfield Park
Scale 1:5000

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Environmental
Advisory Service



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>)
-------------------------------	---

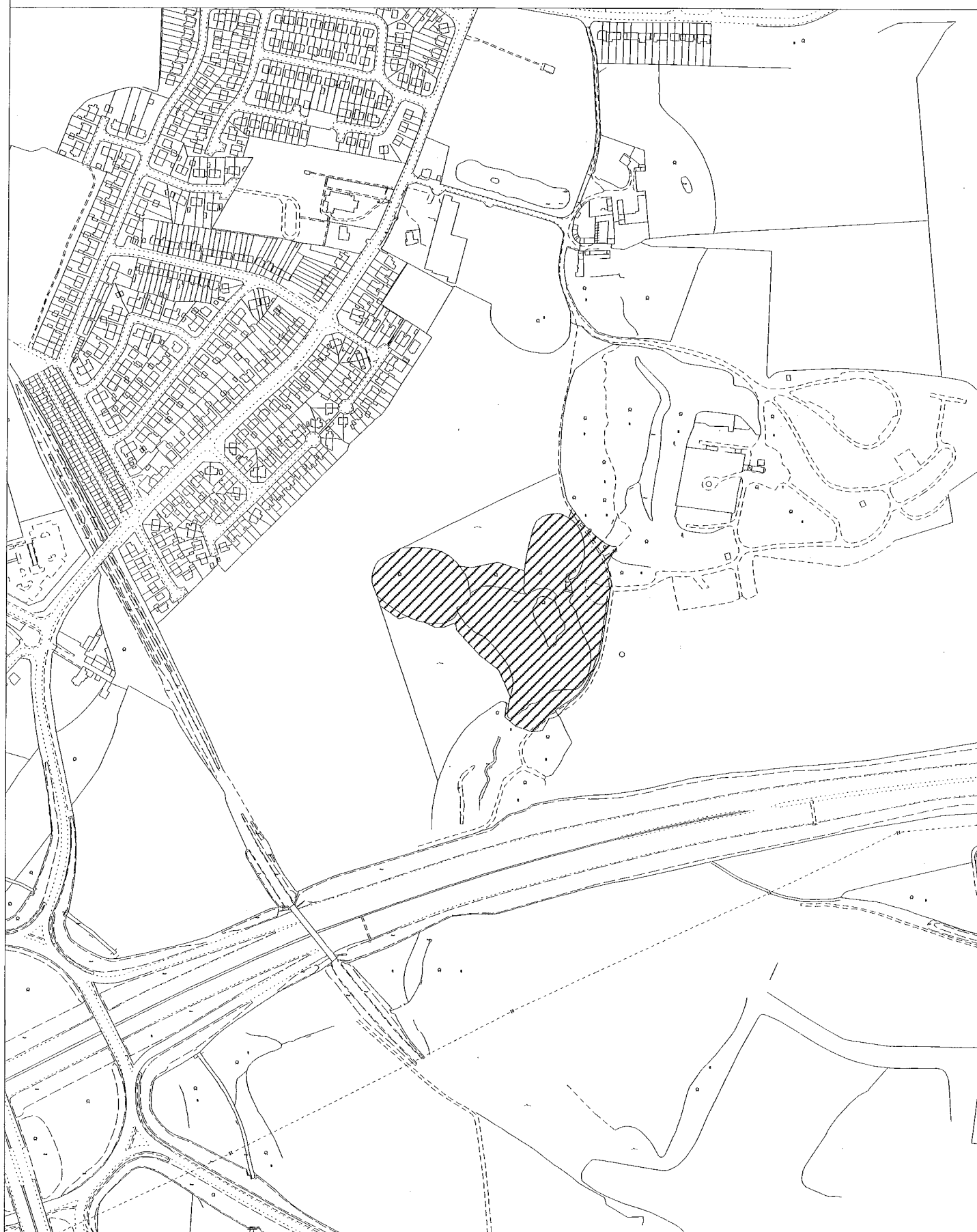
Appendix C (iii): Big Water and Big Water Wood LWS Citation

**SBI 16. Big Water and Big Water
Wood, Halsnead
Scale 1:5000**

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Environmental
Advisory Service



Site Name: Big Water and Big Water Wood, Halsnead Park

Site Area: 3.25 hectares

National Grid Reference: SJ469898

Date of Designation: 1995

District: Knowsley

Date of Last Revision: July 2003

SBI Number: 16

CITATION: A lake that is regularly fished with good mix of aquatic and emergent plants. Broadleaf woodland borders the lake.

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. 12 habitats recorded. 37 sites within 1 Km. --
PLANTS		
SP1; SP2; SP3; SP4.	Rarity Diversity Naturalness Nationally Rare	1 WCA Schedule 8; 1 species of conservation concern; 2 regionally important; 4 locally rare species. Total of 104 plant species. One of 34 sites with 100 or more species. 87.5% 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/scarc Region rare breeding Breeding assemblage Rarity Exceptional populations Exceptional population Roost Assemblage Breeding	-- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- Additional confirmation required – Water vole.

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.

Appendix C (iv): The Old Wood, North LWS Citation

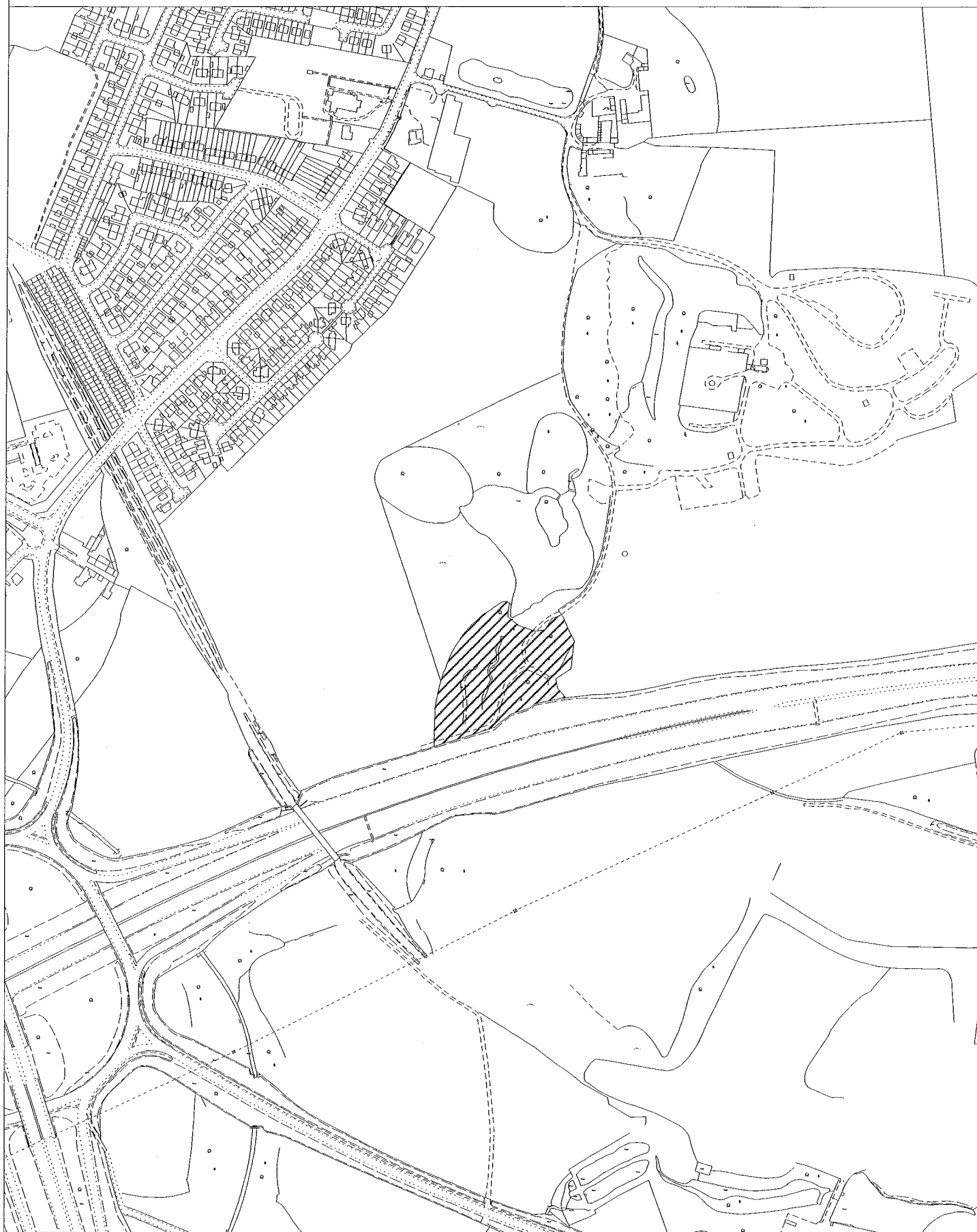
SBI 49. The Old Wood, north
Scale 1:5000

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Compiled by EAS 30th August 2003



Environmental
Advisory Service



Appendix D: Photographic plates



Plate 1 – Lickers Lane Wood LWS (viewed from Lickers Lane)



Plate 2 – Western end of Lickers Lane Wood LWS where dead elm trees will be removed, showing existing footpath



Plate 3 – Area of tall ruderal/poor semi-improved grassland and scrub to be lost to the development



Plate 4 – Woodland, Sandfield Park LWS (will not be directly impacted by development)



Plate 5 – View of Big Water and Big Water Wood LWS (will not be directly impacted by the development)



Plate 6 – View of Old Wood North LWS (will not be directly impacted by the development)



Plate 7 – View of drainage channel located within woodland between site area B and Big Water Wood LWS

Appendix E: Species List

Complete Species List for Lickers Lane Wood, Whiston

Scientific name	Common name	Abundance
<i>Acer pseudoplatanus</i>	Sycamore	Dominant
<i>Aegopodium podagraria</i>	Ground-elder	Abundant
<i>Anthriscus sylvestris</i>	Cow parsley	Frequent
<i>Cirsium arvense</i>	Creeping thistle	Frequent
<i>Cirsium vulgare</i>	Spear thistle	Occasional
<i>Convolvulus</i> sp.	Bindweed	Frequent
<i>Cotoneaster</i> sp.	Cotoneaster sp.	Rare
<i>Crataegus monogyna</i>	Hawthorn	Occasional
<i>Dactylis glomerata</i>	Cocksfoot	Frequent
<i>Epilobium/Chamerion</i> sp.	Willowherb	Frequent
<i>Fagus sylvatica</i>	Beech	Occasional
<i>Fallopia japonica</i>	Japanese knotweed	Rare
<i>Ficaria verna</i>	Lesser celandine	Occasional
<i>Fraxinus excelsior</i>	Ash	Occasional
<i>Galium aparine</i>	Cleavers	Frequent
<i>Geranium robertianum</i>	Herb-robert	Frequent
<i>Geum urbanum</i>	Wood avens	Frequent
<i>Hedera helix</i>	Ivy	Frequent
<i>Heracleum sphondylium</i>	Hogweed	Occasional
<i>Holcus lanatus</i>	Yorkshire-fog	Abundant
<i>Hyacinthoides non-scripta</i>	Bluebell	Abundant
<i>Hyacinthoides</i> sp.	Bluebell	Occasional
<i>Ilex aquifolium</i>	Holly	Occasional
<i>Plantago major</i>	Greater plantain	Occasional
<i>Poa annua</i>	Annual meadow-grass	Frequent
<i>Prunus</i> sp.	Cherry (mainly saplings)	Occasional
<i>Pteridium aquilinum</i>	Bracken	Occasional
<i>Quercus robur</i>	Oak	Occasional
<i>Ranunculus repens</i>	Creeping buttercup	Frequent
<i>Rhododendron</i> sp.	Rhododendron	Rare
<i>Ribes sanguineum</i>	Flowering currant	Rare
<i>Rosa</i> sp.	Rose sp.	Occasional
<i>Rubus fruticosus</i> agg.	Bramble	Frequent
<i>Rubus</i> sp.	Raspberry sp.	Occasional
<i>Rumex obtusifolius</i>	Broad-leaved dock	Occasional
<i>Sambucus nigra</i>	Elder	Occasional
<i>Senecio jacobaea</i>	Ragwort	Occasional
<i>Silene dioica</i>	Red campion	Frequent
<i>Sonchus</i> sp.	Sow-thistle sp.	Occasional
<i>Sorbus aucuparia</i>	Rowan	Occasional
<i>Stachys sylvatica</i>	Hedge woundwort	Occasional
<i>Stellaria media</i>	Common chickweed	Occasional
<i>Taraxacum officinale</i> agg.	Dandelion	Occasional
<i>Taxus baccata</i>	Yew	Rare
<i>Ulmus minor</i>	Elm	Occasional
<i>Urtica dioica</i>	Common Nettle	Abundant
<i>Veronica hederæ</i>	Ivy-leaved speedwell	Occasional

*** The abundance of all recorded botanical species identified in potential Biodiversity Action Plan Priority habitats was assessed using the DAFOR scale. The DAFOR scale is a broad interpretive assessment whereby the surveyor assigns one of the following categories to the abundance of the species; Dominant, Abundant, Frequent, Occasional or Rare.**

N.B. These species lists represent those species identified during the survey. Those species which were not in growth or could not be identified due to the growth stage are not included. Exotic species (such as garden escapes) may also have been omitted from the above lists. However, it is considered that the information gathered during the survey was sufficient to provide an accurate assessment of the site.



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