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*Land off New Brighton Road, New Brighton, Flintshire*

# Hedgerow Regulations Assessment Survey Report

**Compiled by Ecology Services Ltd.**

Employees are members of the Chartered Institute of Ecology and Environmental Management.

*on behalf of*

Stewart Milne Homes North West England

**May 2021**



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## 1.0 Introduction

- 1.1 Ecology Services Limited was commissioned by Stewart Milne Homes North West England in June 2018 to carry out a Hedgerow Regulations Assessment of approximately 3.4ha of land off New Brighton Road, New Brighton, Flintshire, CH7 6RB, hereinafter referred to as 'the site'. The centre of the site is located by National Grid Reference (NGR); 325190, 365560. The location and boundary of the site are shown on Drawing 1. An updated preliminary ecological appraisal was undertaken in March 2021 which found no significant changes to the hedgerows and the hedgerow assessment undertaken in 2018 is considered to remain valid.
- 1.2 The site is located in a rural area on the northern outskirts of the village of New Brighton in Flintshire, north Wales. In general terms, the site comprises a grassland field bordered by hedgerows with occasional mature trees, and a historic defunct hedgerow/ treeline with mature trees and shrubs running north-south through the centre of the site.
- 1.3 The Hedgerow Regulation Assessment (1997) survey was recommended following a Preliminary Ecological Appraisal (PEA) of the site carried out by Ecology Services Ltd in June 2018, updated in March 2021, which identified hedgerows within the site that have the potential to be impacted by the development proposals and which may classify as "Important" under the Hedgerow Regulations 1997.
- 1.4 The purpose of the Hedgerow Regulation Assessment survey was to assist the Client in:
- Determining the ecological, historical and cultural value of affected hedgerows.
  - Identifying hedgerows that qualify as "important" under the Hedgerow Regulations 1997 and as such, become legally protected.
  - Identifying methods to mitigate any loss of important and non-important hedgerows, and their associated features.
  - Identifying an optimal replanting methodology to reflect species being affected or removed.
- 1.5 The site is proposed for residential development with associated infrastructure and landscaping (see Drawing 2). The majority of the hedgerows will be retained, with the loss of short sections for creation of site accesses.
- 1.6 This report states the survey methodology, presents the survey results and makes outline recommendations to lessen the impacts of the development proposals.

## 2.0 Legislation & Planning Policy

- 2.1 The below sections provide an overview upon legislation and current planning policy relating to hedgerows surveyed within this report.

### ***Hedgerow Regulations 1997***

- 2.2 The Hedgerow Regulations 1997 are made under Section 97 of the Environment Act 1995 and came into operation on the 1<sup>st</sup> June 1997. They aim to protect important hedgerows in the countryside by controlling their removal through a system of notification to the Local Planning Authority.

- 2.3 A hedgerow is defined as any boundary line of shrubs or trees that is over 20m in length, is less than 5m wide at the base and any gaps that are present are less than 20m in length.
- 2.4 A hedgerow can only be considered for classification as “important” if it is over 20m in length (or which meets a hedgerow at either end) and has existed for 30 years or more.
- 2.5 Once this initial criterion is met, a further hedgerow assessment survey is undertaken to gather further information about the species composition and associated features of the hedgerow to determine whether it can be classified as “important” under the Hedgerow Regulations 1997.

***Environment (Wales) Act 2016***

- 2.6 Part 1 of the Environment (Wales) Act 2016 places a duty on every public authority in Wales to maintain and enhance biodiversity in the exercise of functions in relation to Wales, and in so doing promote the resilience of ecosystems, so far as consistent with the proper exercise of those functions. In complying with this, a public authority must have regard to living organisms and types of habitat listed in Part 1 Section 7 of Act. The species and habitats listed in Section 7 are those considered to be of Principal Importance for the purpose of conserving biodiversity in Wales.
- 2.7 Hedgerows that are over 20m in length and are composed of at least 80% of one or more UK native species are classed as a Habitat of Principal Importance for their conservation value within the landscape.

***Planning Policy Wales (PPW)***

- 2.8 In brief the Planning Policy Wales Edition 11 (February 2021) sets out the Welsh Government’s objectives for biodiversity and ecological networks. Development plan strategies, policies and development proposals must consider the need to: support the conservation of biodiversity, in particular the conservation of wildlife and habitats; ensure action in Wales contributes to meeting international responsibilities and obligations for biodiversity and habitats; ensure statutorily and non-statutorily designated sites are properly protected and managed; safeguard protected and priority species and existing biodiversity assets from impacts which directly affect their nature conservation interests and compromise the resilience of ecological networks and the components which underpin them, such as water and soil, including peat; and secure enhancement of and improvements to ecosystem resilience by improving diversity, condition, extent and connectivity of ecological networks. Planning Policy Wales states that trees, woodlands, copses and hedgerows are of great importance for biodiversity. Planning authorities should protect trees, hedgerows, groups of trees and areas of woodland where they have ecological value, contribute to the character or amenity of a particular locality, or perform a beneficial and identified green infrastructure function.
- 2.9 Hedgerows can provide suitable habitat for foraging, breeding, refuge and hibernation opportunities for a number of European Protected Species (EPS) as well as many UK protected and notable species, for example; great crested newts (*Triturus cristatus*), song thrush (*Turdus philomelos*), hedgehog (*Erinaceus europaeus*) and bats (*Chiroptera sp.*) etc.

### 3.0 Methodology

3.1 The hedgerows were assessed using the criteria set out in the Hedgerow Regulations 1997. A standard procedure for local hedgerow surveys in the UK was followed as defined by the Defra (2007) "*Hedgerow Survey Handbook*". All 'essential assessment elements' were recorded in addition to relevant 'optional assessment elements'.

3.2 Each hedgerow was measured and the number of 30m sections for surveying was determined by using Table 1. The numbers of woody species and ground flora species within each 30m section were recorded.

**Table 1: Sampling Method**

Length of hedgerow	Number of 30m Sections to survey for woody species and ground flora
0 - 30 metres	1
31 - 100 metres	1
101 - 200 metres	2
>200 metres	3

3.3 Hedgerows that are connected to habitats such as ponds, broad-leaved woodland and other hedgerows create wildlife corridors, linking habitats in the wider landscape. Each hedgerow was assessed to see if it was connected to any of these habitats. The following point system was utilised:

- Connected to another hedgerow = 1 point
- Connected to a broad-leaved woodland (over 0.25 hectares) = 2 points
- Connected to a pond = 2 points

3.4 Other data collated about each hedgerow included:

- Hedgerow height and width
- Percentage of gaps
- Hedgerow type (shrubby hedgerow with trees, line of trees and shrubby hedgerow)
- Shape (trimmed & dense, intensively managed, untrimmed, tall & leggy, untrimmed with outgrowths, recently coppiced and recently laid)
- Adjacent land use
- Adjacent to bridleway, footpath or road
- Nutrient enrichment (Percentage of nettle, cleavers and docks)
- Hedgerow standard trees present

3.5 To determine if the hedgerow can be classified as important under the Hedgerow Regulations 1997, each hedgerow was also assessed to see if any associated features were also present (Table 2).

**Table 2: Associated Features**

i)	Presence of hedgebank or wall for at least half of total length
ii)	Presence of ditch for at least half of total length
iii)	Presence of parallel hedge within 15 metres
iv)	Total gap length less than 10% of total hedgerow length
v)	1 standard tree* in hedgerow less than 50 metres in length
vi)	2 standard trees* in hedgerow between 50 metres and 100 metres in length
vii)	Average of 1 standard tree* every 50 metres for hedgerow more than 100 metres in length
viii)	3 woodland species (see Appendix 3) within 1 metre of hedgerow edge
ix)	4 points worth of connections

\* Standard trees require a minimum trunk diameter of 20cm in a single trunk and 15cm if multiple stems are present.

### Criteria for Designation as an 'Important Hedgerow'

- 3.6 If a hedgerow meets any one or more of the following criteria, it indicates that it is an 'important hedgerow' under the Hedgerow Regulations (Table 3):

**Table 3: Criteria for Designation**

<b>A</b>	Marker for pre-1850 parish/township boundary.
<b>B</b>	Marker for pre-1600 estate or manor boundary.
<b>C</b>	Marker for "field system", Pre-Enclosure Act.
<b>D</b>	Scheduled Ancient Monument or Archaeological site.
<b>E</b>	Presence of protected or endangered species (e.g. badger sett).
<b>F</b>	7** woody species (See Appendix 4).
<b>G</b>	6** woody species (including black poplar ( <i>Populus nigra</i> ), large-leaved lime ( <i>Tilia platyphyllos</i> ), small-leaved lime ( <i>Tilia cordata</i> ) or wild service tree ( <i>Sorbus.torminalis</i> ).
<b>H</b>	6** woody species + 3 Associated Features.
<b>I</b>	5** woody species + 4 Associated Features.
<b>J</b>	Adjacent to a public right of way (excludes adopted highways) and has 4** woody species + 2 Associated Features (excluding iii & ix).

\*\*The Wildlife and Countryside Act 1981 (as amended) Part 2 Criteria, Wildlife and Landscape 7.(2) Where the hedgerow in question is situated wholly or partly in the county (as constituted on 1st April 1997) of the City of Kingston upon Hull, Cumbria, Darlington, Durham, East Riding of Yorkshire, Hartlepool, Lancashire, Middlesbrough, North East Lincolnshire, North Lincolnshire, Northumberland, North Yorkshire, Redcar and Cleveland, Stockton-on-Tees, Tyne and Wear, West Yorkshire or York (14), the number of woody species stated in paragraphs (a) to (d) of sub-paragraph (1) is to be treated as reduced by one.

### Survey Limitations

- 3.7 Some species of early flowering spring plants listed as 'woodland species' in Schedule 2 of the Regulations may not have been visible at the time of year that the surveys took place. See Appendix 3 Schedule 2 Woodland Species for list of species.
- 3.8 No protected, notable or invasive species were recorded within the hedgerows at the time of the surveys. However, this criterion can be assessed through reviewing the findings of detailed protected species surveys carried out at the site by including surveys for great crested newts and roosting bats.
- 3.9 The survey includes assessment for the importance of hedgerows under criteria E to J only (wildlife and landscape) and excludes assessment of the hedgerows under criteria A to D (archaeology and history) which is beyond the remit of this study.

## 4.0 Survey Results & Evaluation

- 4.1 All the data collated on each hedgerow is detailed in Appendix 1. Very few hedgerows are classified as being important solely on species richness. This is partly because the classification of a hedgerow can usually be sub-divided into 'historically important' (criteria A to D) or 'ecologically important', (criteria E to J) and occasionally both.
- 4.2 A total of 8 hedgerows and hedgerow units within the site were subject to survey during the hedgerow assessment. The results of the assessment show that hedgerow H1 meets criteria F and J, H2 meets criterion F and H6 meets criterion H, for designation as "ecologically important" hedgerows under Part II Wildlife and Landscape of The Hedgerow Regulations.

- 4.3 Hedgerows H3, H4, H5, H7 and H8 did not possess the minimum number of woody species and associated features at the sample points to qualify as important hedgerows.
- 4.4 Further research would be required to establish whether the hedgerows within the site meet the criteria A, B, C and D in Section 3.9 to qualify as important hedgerow under Part II Archaeology and History.

## **5.0 Conclusions & Recommendations**

- 5.1 The hedgerow survey recorded three sections of hedgerow within the site as being 'important' under The Hedgerow Regulations, including two hedgerows (H1 and H2) located along the south-western boundaries of the site and one hedgerow (H6) protruding into the central area of the site from the northern boundary. Hedgerows H1 and H2 will be retained whereas H6 will be lost. Full planning consent will be required prior to any removal of 'important' hedgerows. Although hedgerows H3, H4, H5, H7 and H8 do not meet the criteria to qualify as important hedgerows, many of these are species-rich and all hedgerows are considered in combination to be of value as habitat corridors, facilitating the movement of wildlife across the site and the wider area. H3, H4, H7 and H8 will be retained, however H5 will be lost.
- 5.2 Any loss of hedgerow habitat, whether it is classed as important or not, should be avoided where possible. Where loss cannot be avoided, this should be minimised and mitigated for to ensure that no net loss of biodiversity results from the site's development with due regard for the classification of all hedgerows over 20m long that are composed of at least 80% of one or more native species as Habitats of Principal Importance. The majority of the hedgerows will be retained with loss of hedgerow limited to provide road access into the site (affecting H4 and H7) and to facilitate development in the central western areas of the site resulting in the loss of the short hedgerows H5 and H6.
- 5.3 Retained hedgerows and trees within and adjacent to the site should receive adequate provision for root protection in accordance with BS 5837:2012 'Trees in relation to design, demolition and construction' or the advice of a suitably qualified arboriculturalist. This may involve the use of appropriate tree/ hedgerow protection fencing to exclude construction works from root zones. A buffer of at least 5m should be maintained along retained hedgerows which prohibits storage of materials or machinery within these areas.
- 5.4 All hedgerow loss should be compensated through the creation of new hedgerows or scrub lines and/ or enhancement of existing linear vegetated corridors within the site with the aim of creating new ecologically important hedgerows. Compensatory hedgerows and linear scrub habitats should be appropriately located in order to maintain and, where possible, enhance opportunities for the movement of wildlife around and across the site.
- 5.5 It is advised that all hedgerows lost should be replaced, where practicable, on a minimum like-for-like basis. Newly created hedgerows should aim to fall under the UK Hedgerow Principal Habitat criteria, i.e. over 20m in length and consist of at least 80% cover of one or more woody native species. Any associated features such as ditches should also be reinstated where present.

- 5.6 Any new hedgerows created within the site should comprise a species-rich mix of UK native species and be of local provenance where possible. In accordance with the species recorded within hedgerows at the site during the surveys, it is recommended that new hedgerows comprise a selection of the following species: hawthorn, blackthorn, hazel, *Rosa* sp., holly, pedunculate oak, European gorse and common alder.
- 5.7 A method statement for creation of new hedgerows is outlined below:

**Hedgerow Creation:**

- Ideally new hedgerows should be planted between December and March when the ground is relatively moist and the saplings are dormant, and should be carried out by an experienced contractor.
- The area required for the hedgerows should be stripped of any turf. The turfs can then be broken up into loose soil which can then be used to create a linear bank for the new hedgerow plants.
- Any associated features such as ditches should also be created at this stage.
- The hedgerows should be notch planted as a double staggered row with approximately 40cm gap between each sapling and 4-6 saplings per metre.
- Notch planting involves cutting a slit or L shape in the soil and holding it open with a spade whilst inserting the sapling. Insert the saplings carefully so that the roots spread downwards, and ensure the sapling is covered up to the original soil mark on the stem.
- All new hedgerows will require protection from grazing animals such as rabbits by installing appropriately sized biodegradable tree guards.

**Hedgerow Management:**

- During the growing season the newly planted hedgerow whips should be watered to ensure that the soil is kept constantly moist. When watering, it is important to make certain that the whips receive sufficient quantity. In dry weather or on dry sites the soil around the whips should be thoroughly soaked. It is recommended that there is a minimum of five watering visits per annum.
- All newly planted diseased/ dead whips will be removed and replaced and if new planting is required this should be undertaken during the winter months and shall be of native species and of local provenance (see Section 5.7).
- Once the hedgerow is established, approximately after the third growing season, 1/3 of the hedgerow should be cut each year to allow different vegetative structures to establish. Cutting should take place between early December and early March.
- Hedgerow height and width should not exceed 3m.
- Hand trimming should be considered as opposed to machine cutting to produce and maintain more deadwood. Arisings should be stored in piles at intervals along the base of the hedgerow to create habitat piles to benefit a range of species.
- A 2m buffer zone around the base of the hedgerow should be cut alternate years to prevent scrub succession, to be undertaken outside breeding bird season.

**Hedgerow Monitoring:**

- Hedgerows should be inspected annually to check that the newly planted hedgerows are in good condition and any dead plants replaced as necessary.
- The hedgerows should be monitored annually for up to five years.



- 5.8 The Wildlife and Countryside Act (WCA) 1981, states that all wild birds are protected. Under the WCA, it is an offence to kill, injure or take any wild bird, to take damage or destroy the nest of any wild bird, or to take or destroy the egg of any wild bird. It is therefore, recommended that any management of newly planted hedges such as trimming are conducted outside the breeding bird season. The breeding bird season is generally regarded as between March and September inclusive.

## **6.0 References**

Defra (2007) Hedgerow Survey Handbook: A standard procedure for local surveys in the UK 2nd Edition. Defra. London.

Joint Nature Conservation Committee (2001-2006). List of UK Species/Habitats of Principal Importance.

Statutory Instrument 1997 No. 1160. The Hedgerows Regulations 1997. OPSI. Online. Available from: <http://www.legislation.gov.uk/uksi/1997/1160/contents/made> [Accessed November 2018]

Statutory Instrument 2016 anaw 3. Environment (Wales) Act 2016. OPSI. Online. Available from: <http://www.legislation.gov.uk/anaw/2016/3/contents/enacted> [Accessed November 2018]

Welsh Government (2021). Planning Policy Wales Edition 11.

**APPENDIX 1**  
Hedgerow Assessment Table

<b>Hedge Reference Number:</b>	<b>H1</b>	<b>H2</b>	<b>H3</b>	<b>H4</b>
Date surveyed:	04/09/2018	04/09/2018	04/09/2018	04/09/2018
Grid reference: (centre of hedge)	325089, 365572	325131, 365502	325195, 365449	325235, 365625
<b>Initial Criteria (Y/N)</b>				
Hedgerow > 20m in length	Y	Y	Y	Y
Hedgerow > 30 years old	Y	Y	Y	Y
<b>Hedgerow Characteristics</b>				
Total length (m)	41	155	50	202
Total length of gaps (m)	0	0	0	4
% gaps	0	0	0	2
Height (m)	8	4.5	8	3
Width (m)	2m	2.5	3	2
Hedgerow type	Shrubby hedge	Shrubby hedge	Shrubby hedge	Shrubby hedge
Hedgerow shape	Trimmed & dense	Trimmed & dense	Untrimmed	Trimmed & dense
Mature trees	Y	Y	Y	N
Adjacent land use	Semi-improved grassland	Semi-improved grassland/ road	Semi-improved grassland/ road	Semi-improved grassland/ road
Number of Sections	1	2	1	3
Section Length (m)	41	78 / 78	50	67 / 67 / 68
Sample Start Point (m)	5.5	24 / 102	10	19 / 86 / 153
Sample Mid Point (m)	20.5	39 / 117	25	34 / 101 / 168
Sample Finish Point (m)	35.5	54 / 132	40	49 / 116 / 183
Adjacent to public right of way	Y (footpath)	N	N	N
Protected species present	N	N	N	N
<b>Connections score</b>				
Total number of other hedgerows connected to each end of the hedgerow = 1 point	2	1	1	2
Connections to a broad-leaved woodland over 0.25ha = 2 points	-	-	-	-
Connections to a pond = 2 points	-	-	-	-
Total connection points	2	1	1	2
<b>Species composition</b>				
Section 1	7	7	3	2
Section 2	-	7	-	6
Section 3	-	-	-	6
Average woody species	7	7	3	4.66
<b>Associated Features</b>				
Associated features present	Y (iv,v)	Y (iv,vii)	Y (iv)	Y (iii, iv)
Total associated features	2	2	1	2
<b>Age/earliest reference date</b>	Over 30 years	Over 30 years	Over 30 years	Over 30 years
<b>Important Hedgerow</b>	<b>Yes</b>	<b>Yes</b>	<b>No</b>	<b>No</b>
<b>Qualifying Criteria</b>	<b>(F,J)</b>	<b>(F)</b>	-	-

<b>Hedge Reference Number:</b>	<b>H5</b>	<b>H6</b>	<b>H7</b>	<b>H8</b>
Date surveyed:	04/09/2018	04/09/2018	04/09/2018	04/09/2018
Grid reference: (centre of hedge)	325126, 365623	325133, 365619	325098, 365646	325058, 365630
<b>Initial Criteria (Y/N)</b>				
Hedgerow > 20m in length	Y	Y	Y	Y
Hedgerow > 30 years old	Y	Y	Y	Y
<b>Hedgerow Characteristics</b>				
Total length (m)	22	47	72	101
Total length of gaps (m)	0	0	1	0
% gaps	0	0	1	0
Height (m)	8	6	4	2.5
Width (m)	3.5	3.5	2	2
Hedgerow type	Shrubby hedge with trees	Shrubby hedge with trees	Shrubby hedge	Shrubby hedge
Hedgerow shape	Untrimmed	Untrimmed	Trimmed & dense	Trimmed & dense
Mature trees	Y	Y	N	Y
Adjacent land use	Semi-improved grassland	Semi-improved grassland	Semi-improved grassland/ road	Semi-improved grassland
Number of Sections	1	1	1	2
Section Length (m)	22	47	72	22/ 79
Sample Start Point (m)	0	9	21	0/ 46
Sample Mid Point (m)	11	24	36	11/ 61
Sample Finish Point (m)	22	39	51	22/ 76
Adjacent to public right of way	N	N	N	N
Protected species present	N	N	N	N
<b>Connections score</b>				
Total number of other hedgerows connected to each end of the hedgerow = 1 point	1	1	4	3
Connections to a broad-leaved woodland over 0.25ha = 2 points	-	-	-	-
Connections to a pond = 2 points	-	-	-	-
Total connection points	1	1	4	3
<b>Species composition</b>				
Section 1	5	6	5	3
Section 2	-	-	-	7
Section 3	-	-	-	-
Average woody species	5	6	5	5
<b>Associated Features</b>				
Associated features present	Y (iii, iv, v)	Y (iii, iv, v)	Y (iii, iv, ix)	Y (ii,iv,vii)
Total associated features	3	3	3	3
<b>Age/earliest reference date</b>	Over 30 years	Over 30 years	Over 30 years	Over 30 years
<b>Important Hedgerow</b>	<b>No</b>	<b>Yes</b>	<b>No</b>	<b>No</b>
<b>Qualifying Criteria</b>	-	<b>(H)</b>	-	-

## APPENDIX 2

### Species Lists

#### Hedgerow 1

<b>Common Name</b>	<b>Scientific name</b>
Common alder	<i>Alnus glutinosa</i>
Common hawthorn	<i>Crataegus monogyna</i>
Damson plum**	<i>Prunus domestica</i>
Dog rose	<i>Rosa canina</i>
European ash	<i>Fraxinus excelsior</i>
Hazel	<i>Corylus avellana</i>
Holly	<i>Ilex aquifolium</i>
Pedunculate oak	<i>Quercus robur</i>
Bramble	<i>Rubus fruticosus</i> agg.
Cock's-foot	<i>Dactylis glomerata</i>
Spear thistle	<i>Cirsium vulgare</i>
Ivy	<i>Hedera helix</i>
Common bent	<i>Agrostis capillaris</i>
Broad-leaved dock	<i>Rumex obtusifolius</i>
Black bryony	<i>Dioscorea communis</i>
Cleavers	<i>Galium aparine</i>
Common vetch	<i>Vicia sativa</i>

\* Woodland species (ground flora) included on Schedule 2 Regulation 2(3) and Schedule 1, Part I of the Hedgerow Regulation 1997

\*\* Woody species not included on Schedule 3 Regulation 2(3) and Schedule 1, Part I

#### Hedgerow 2

<b>Common Name</b>	<b>Scientific name</b>
Common alder	<i>Alnus glutinosa</i>
Common hawthorn	<i>Crataegus monogyna</i>
Dog rose	<i>Rosa canina</i>
European ash	<i>Fraxinus excelsior</i>
Hazel	<i>Corylus avellana</i>
Holly	<i>Ilex aquifolium</i>
Pedunculate oak	<i>Quercus robur</i>
Blackthorn	<i>Prunus spinosa</i>
Sycamore**	<i>Acer pseudoplatanus</i>
Black bryony	<i>Dioscorea communis</i>
Common nettle	<i>Urtica dioica</i>
Cock's-foot	<i>Dactylis glomerata</i>
Creeping thistle	<i>Cirsium arvense</i>
Bramble	<i>Rubus fruticosus</i> agg.
Hedge woundwort	<i>Stachys sylvatica</i>
Hogweed	<i>Heracleum sphondylium</i>
Traveller's joy	<i>Clematis vitalba</i>
Male fern*	<i>Dryopteris filix-mas</i>
Cow parsley	<i>Anthriscus sylvestris</i>
Yorkshire fog	<i>Holcus lanatus</i>
Greater stitchwort	<i>Stellaria holostea</i>
Common vetch	<i>Vicia sativa</i>

\* Woodland species (ground flora) included on Schedule 2 Regulation 2(3) and Schedule 1, Part I of the Hedgerow Regulation 1997

\*\* Woody species not included on Schedule 3 Regulation 2(3) and Schedule 1, Part I

### Hedgerow 3

<b>Common Name</b>	<b>Scientific name</b>
Common hawthorn	<i>Crataegus monogyna</i>
Holly	<i>Ilex aquifolium</i>
Pedunculate oak	<i>Quercus robur</i>
Common nettle	<i>Urtica dioica</i>
Ivy	<i>Hedera helix</i>
Creeping thistle	<i>Cirsium arvense</i>
Hedge bindweed	<i>Calystegia sepium</i>

\* Woodland species (ground flora) included on Schedule 2 Regulation 2(3) and Schedule 1, Part I of the Hedgerow Regulation 1997

\*\* Woody species not included on Schedule 3 Regulation 2(3) and Schedule 1, Part I

### Hedgerow 4

<b>Common Name</b>	<b>Scientific name</b>
Common hawthorn	<i>Crataegus monogyna</i>
European ash	<i>Fraxinus excelsior</i>
European gorse	<i>Ulex europaeus</i>
Pedunculate oak	<i>Quercus robur</i>
Hazel	<i>Corylus avellana</i>
Dog rose	<i>Rosa canina</i>
Holly	<i>Ilex aquifolium</i>
Sycamore**	<i>Acer pseudoplatanus</i>
Willow (goat/ grey)	<i>Salix</i> sp.
Blackthorn	<i>Prunus spinosa</i>
Bittersweet	<i>Solanum dulcamara</i>
Common honeysuckle	<i>Lonicera periclymenum</i>
Bramble	<i>Rubus fruticosus</i> agg.
Common ragwort	<i>Jacobaea vulgaris</i>
Sedge species (not wood sedge)	<i>Carex</i> sp.
Common bird's-foot trefoil	<i>Lotus corniculatus</i>
Creeping thistle	<i>Cirsium arvense</i>
Yorkshire fog	<i>Holcus lanatus</i>
Hard rush	<i>Juncus inflexus</i>
Tufted hair-grass	<i>Deschampsia cespitosa</i>
Tufted vetch	<i>Vicia cracca</i>
Timothy	<i>Phleum pratense</i>
Common knapweed	<i>Centaurea nigra</i>
Sweet vernal-grass	<i>Anthoxanthum odoratum</i>
Common bent	<i>Agrostis capillaris</i>
Wood sage*	<i>Teucrium scorodonia</i>
Yarrow	<i>Achillea millefolium</i>
Common nettle	<i>Urtica dioica</i>
Greater stitchwort	<i>Stellaria holostea</i>
Crested dog's-tail	<i>Cynosurus cristatus</i>
Bracken	<i>Pteridium aquilinum</i>

\* Woodland species (ground flora) included on Schedule 2 Regulation 2(3) and Schedule 1, Part I of the Hedgerow Regulation 1997

\*\* Woody species not included on Schedule 3 Regulation 2(3) and Schedule 1, Part I

### Hedgerow 5

<b>Common Name</b>	<b>Scientific name</b>
Common hawthorn	<i>Crataegus monogyna</i>
European ash	<i>Fraxinus excelsior</i>
Hazel	<i>Corylus avellana</i>
Dog rose	<i>Rosa canina</i>
Holly	<i>Ilex aquifolium</i>
Whitebeam species (non-native)**	<i>Sorbus</i> sp.
Sycamore**	<i>Acer pseudoplatanus</i>
Bramble	<i>Rubus fruticosus</i> agg.
Cock's-foot	<i>Dactylis glomerata</i>
False oat-grass	<i>Arrhenatherum elatius</i>
Common bent	<i>Agrostis capillaris</i>
Common ragwort	<i>Jacobaea vulgaris</i>

\* Woodland species (ground flora) included on Schedule 2 Regulation 2(3) and Schedule 1, Part I of the Hedgerow Regulation 1997

\*\* Woody species not included on Schedule 3 Regulation 2(3) and Schedule 1, Part I

### Hedgerow 6

<b>Common Name</b>	<b>Scientific name</b>
Common hawthorn	<i>Crataegus monogyna</i>
European ash	<i>Fraxinus excelsior</i>
Hazel	<i>Corylus avellana</i>
Dog rose	<i>Rosa canina</i>
Holly	<i>Ilex aquifolium</i>
Common elder	<i>Sambucus nigra</i>
Bramble	<i>Rubus fruticosus</i> agg.
Creeping thistle	<i>Cirsium arvense</i>
Cock's-foot	<i>Dactylis glomerata</i>
Common nettle	<i>Urtica dioica</i>
Ivy	<i>Hedera helix</i>

\* Woodland species (ground flora) included on Schedule 2 Regulation 2(3) and Schedule 1, Part I of the Hedgerow Regulation 1997

\*\* Woody species not included on Schedule 3 Regulation 2(3) and Schedule 1, Part I

### Hedgerow 7

<b>Common Name</b>	<b>Scientific name</b>
Common hawthorn	<i>Crataegus monogyna</i>
European ash	<i>Fraxinus excelsior</i>
Pedunculate oak	<i>Quercus robur</i>
Dog rose	<i>Rosa canina</i>
Holly	<i>Ilex aquifolium</i>
Sycamore**	<i>Acer pseudoplatanus</i>
Common honeysuckle	<i>Lonicera periclymenum</i>
Bramble	<i>Rubus fruticosus</i> agg.
Common bent	<i>Agrostis capillaris</i>
Common nettle	<i>Urtica dioica</i>
Rosebay willowherb	<i>Chamerion angustifolium</i>
Cow parsley	<i>Anthriscus sylvestris</i>

\* Woodland species (ground flora) included on Schedule 2 Regulation 2(3) and Schedule 1, Part I of the Hedgerow Regulation 1997

\*\* Woody species not included on Schedule 3 Regulation 2(3) and Schedule 1, Part I

## Hedgerow 8

<b>Common Name</b>	<b>Scientific name</b>
Common hawthorn	<i>Crataegus monogyna</i>
Common elder	<i>Sambucus nigra</i>
Dog rose	<i>Rosa canina</i>
Common hawthorn	<i>Crataegus monogyna</i>
European ash	<i>Fraxinus excelsior</i>
Holly	<i>Ilex aquifolium</i>
Aspen	<i>Populus tremula</i>
Cotoneaster species (non-native)**	<i>Cotoneaster</i> sp.
Black poplar	<i>Populus nigra</i> subsp. <i>betulifolia</i>
Bramble	<i>Rubus fruticosus</i> agg.
Perennial ryegrass	<i>Lolium perenne</i>
Cock's-foot	<i>Dactylis glomerata</i>
Hogweed	<i>Heracleum sphondylium</i>
Yorkshire fog	<i>Holcus lanatus</i>
Great willowherb	<i>Epilobium hirsutum</i>
Common nettle	<i>Urtica dioica</i>
Black bryony	<i>Dioscorea communis</i>
Male fern*	<i>Dryopteris filix-mas</i>

\* Woodland species (ground flora) included on Schedule 2 Regulation 2(3) and Schedule 1, Part I of the Hedgerow Regulation 1997

\*\* Woody species not included on Schedule 3 Regulation 2(3) and Schedule 1, Part I

**APPENDIX 3**  
Woodland Species

**SCHEDULE 2**

Regulation 2(3) and Schedule 1, Part I.

**WOODLAND SPECIES**

Barren strawberry ( <i>Potentilla sterilis</i> )	Nettle-leaved bell-flower ( <i>Campanula trachelium</i> )
Bluebell ( <i>Hyacinthoides non-scripta</i> )	Oxlip ( <i>Primula elatior</i> )
Broad buckler fern ( <i>Dryopteris dilatata</i> )	Pignut ( <i>Conopodium majus</i> )
Broad-leaved helleborine ( <i>Epipactis helleborine</i> )	Primrose ( <i>Primula vulgaris</i> )
Bugle ( <i>Ajuga reptans</i> )	Ramsons ( <i>Allium ursinum</i> )
Common cow-wheat ( <i>Melampyrum pratense</i> )	Sanicle ( <i>Sanicula europaea</i> )
Common dog violet ( <i>Viola riviniana</i> )	Scaly male-fern ( <i>Dryopteris affinis</i> )
Common polypody ( <i>Polypodium vulgare</i> )	Small cow-wheat ( <i>Melampyrum sylvaticum</i> )
Dog's mercury ( <i>Mercurialis perennis</i> )	Soft shield fern ( <i>Polystichum setiferum</i> )
Early dog violet ( <i>Viola reichenbachiana</i> )	Sweet violet ( <i>Viola odorata</i> )
Early purple orchid ( <i>Orchis mascula</i> )	Toothwort ( <i>Lathraea squamaria</i> )
Enchanter's nightshade ( <i>Circaea lutetiana</i> )	Tormentil ( <i>Potentilla erecta</i> )
Giant fescue ( <i>Festuca gigantea</i> )	Wild strawberry ( <i>Fragaria vesca</i> )
Goldilocks buttercup ( <i>Ranunculus auricomus</i> )	Wood anemone ( <i>Anemone nemorosa</i> )
Great bell-flower ( <i>Campanula latifolia</i> )	Wood avens ( <i>Geum urbanum</i> )
Greater wood-rush ( <i>Luzula sylvatica</i> )	Wood false-brome ( <i>Brachypodium sylvaticum</i> )
Hairy brome ( <i>Bromus ramosus</i> )	Wood horsetail ( <i>Equisetum sylvaticum</i> )
Hairy woodrush ( <i>Luzula pilosa</i> )	Wood meadow-grass ( <i>Poa nemoralis</i> )
Hard fern ( <i>Blechnum spicant</i> )	Wood melick ( <i>Melica uniflora</i> )
Hard shield fern ( <i>Polystichum aculeatum</i> )	Wood millet ( <i>Milium effusum</i> )
Hart's tongue ( <i>Asplenium scolopendrium</i> )	Wood sage ( <i>Teucrium scorodonia</i> )
Heath bedstraw ( <i>Galium saxatile</i> )	Wood sedge ( <i>Carex sylvatica</i> )
Herb paris ( <i>Paris quadrifolia</i> )	Wood sorrel ( <i>Oxalis acetosella</i> )
Herb-robert ( <i>Geranium robertianum</i> )	Wood speedwell ( <i>Veronica montana</i> )
Lady fern ( <i>Athyrium filix-femina</i> )	Wood spurge ( <i>Euphorbia amygdaloides</i> )
Lords-and-ladies ( <i>Arum maculatum</i> )	Woodruff ( <i>Galium odoratum</i> )
Male fern ( <i>Dryopteris filix-mas</i> )	Yellow archangel ( <i>Lamiaeum galeobdolon</i> )
Moschatel ( <i>Adoxa moschatellina</i> )	Yellow pimpernel ( <i>Lysimachia nemorum</i> )
Narrow buckler-fern ( <i>Dryopteris carthusiana</i> )	



**APPENDIX 4**  
Woody Species

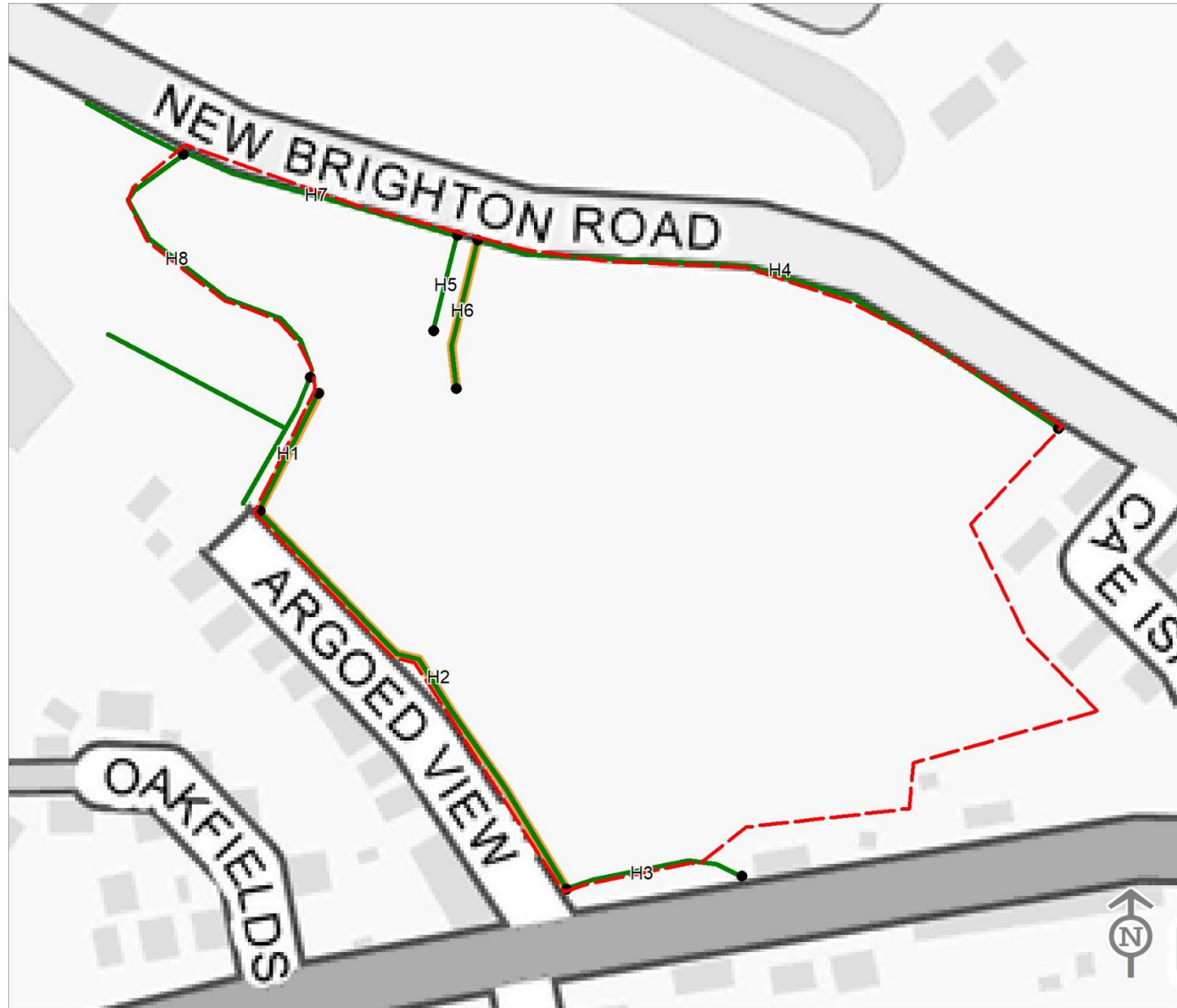
**SCHEDULE 3**

Regulation 2(3) and Schedule 1, Part I

**WOODY SPECIES**

Alder ( <i>Alnus glutinosa</i> )	Hawthorn, midland ( <i>Crataegus laevigata</i> )
Apple, crab ( <i>Malus sylvestris</i> )	Hazel ( <i>Corylus avellana</i> )
Ash ( <i>Fraxinus excelsior</i> )	Holly ( <i>Ilex aquifolium</i> )
Aspen ( <i>Populus tremula</i> )	Hornbeam ( <i>Carpinus betulus</i> )
Beech ( <i>Fagus sylvatica</i> )	Juniper, common ( <i>Juniperus communis</i> )
Birch, downy ( <i>Betula pubescens</i> )	Lime, large-leaved ( <i>Tilia platyphyllos</i> )
Birch, silver ( <i>Betula pendula</i> )	Lime, small-leaved ( <i>Tilia cordata</i> )
Black-poplar ( <i>Populus nigra</i> subsp. <i>betulifolia</i> )	Maple, field ( <i>Acer campestre</i> )
Blackthorn ( <i>Prunus spinosa</i> )	Mezereon ( <i>Daphne mezereum</i> )
Box ( <i>Buxus sempervirens</i> )	Oak, pedunculata ( <i>Quercus robur</i> )
Broom ( <i>Cytisus scoparius</i> )	Oak, sessile ( <i>Quercus petraea</i> )
Buckthorn ( <i>Rhamnus cathartica</i> )	Osier ( <i>Salix viminalis</i> )
Buckthorn, alder ( <i>Frangula alnus</i> )	Pear, Plymouth ( <i>Pyrus cordata</i> )
Butcher's-broom ( <i>Ruscus aculeatus</i> )	Pear, wild ( <i>Pyrus pyraster</i> )
Cherry, bird ( <i>Prunus padus</i> )	Poplar, grey ( <i>Populus x canescens</i> )
Cherry, wild ( <i>Prunus avium</i> )	Poplar, white ( <i>Populus alba</i> )
Cotoneaster, wild ( <i>Cotoneaster integerrimus</i> )	Privet, wild ( <i>Ligustrum vulgare</i> )
Currant, downy ( <i>Ribes spicatum</i> )	Rose ( <i>Rosa</i> species)
Currant, mountain ( <i>Ribes alpinum</i> )	Rowan ( <i>Sorbus aucuparia</i> )
Dogwood ( <i>Cornus sanguinea</i> )	Sea-buckthorn ( <i>Hippophae rhamnoides</i> )
Elder ( <i>Sambucus nigra</i> )	Service-tree, wild ( <i>Sorbus torminalis</i> )
Elm ( <i>Ulmus</i> sp.)	Spindle ( <i>Euonymus europaeus</i> )
Gooseberry ( <i>Ribes uva-crispa</i> )	Spurge-laurel ( <i>Daphne laureola</i> )
Gorse ( <i>Ulex europaeus</i> )	Walnut ( <i>Juglans regia</i> )
Gorse, dwarf ( <i>Ulex minor</i> )	Wayfaring-tree ( <i>Viburnum lantana</i> )
Gorse, western ( <i>Ulex gallii</i> )	Whitebeam ( <i>Sorbus</i> sp.)
Guelder rose ( <i>Viburnum opulus</i> )	Willow ( <i>Salix</i> sp.)
Hawthorn ( <i>Crataegus monogyna</i> )	Yew ( <i>Taxus baccata</i> )

**Drawing 1:**  
Hedgerow Assessment Survey Summary Plan



Land off New Brighton Road,  
New Brighton

**Drawing 1:**  
Hedgerow Assessment  
Survey Summary Plan

Map Ref: (NGR) 325193, 365564  
Map Scale: 1:1,000 @ A3

**Key**

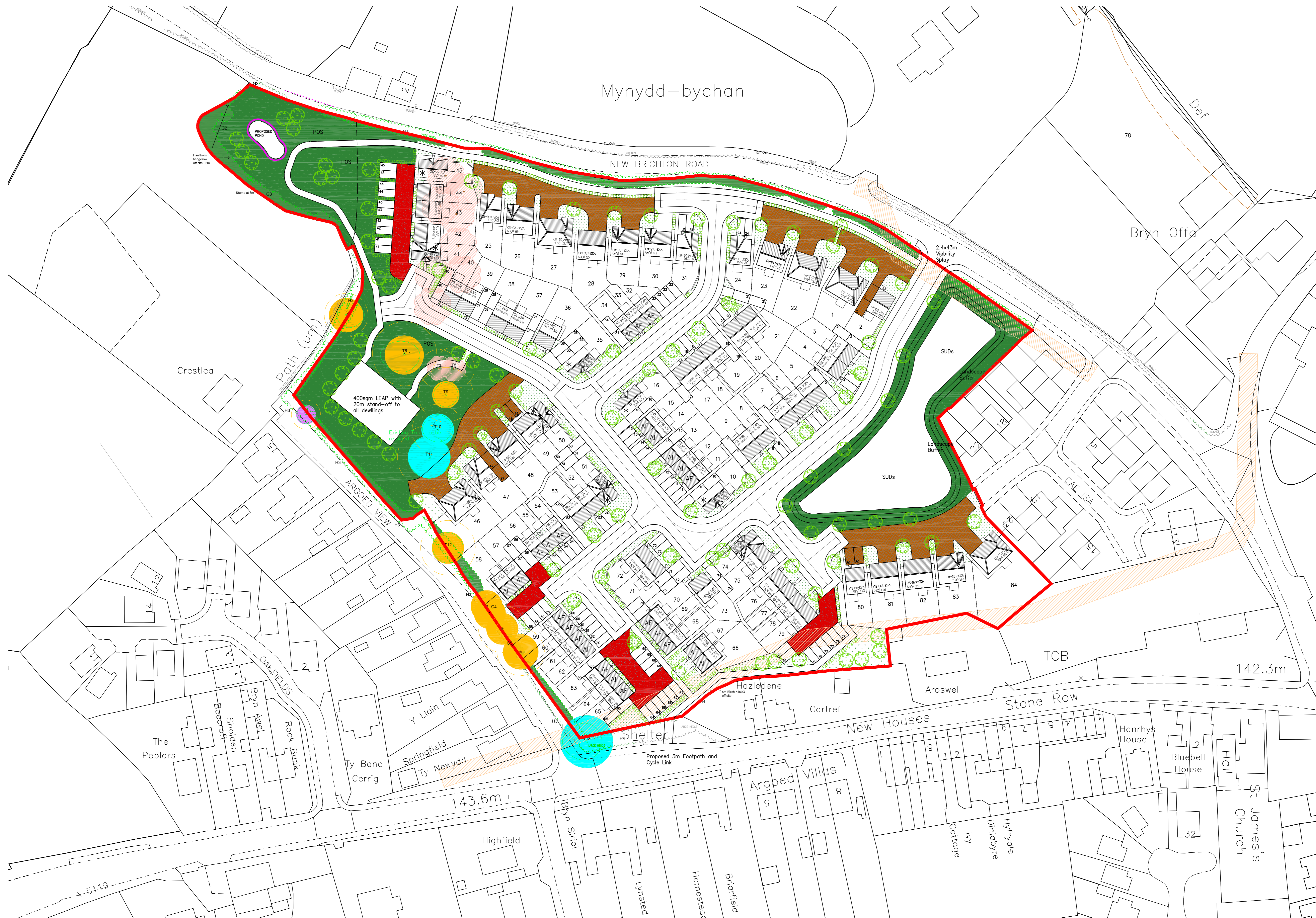
- Site boundary
- H1 Hedgerow survey reference
- Hedgerow
- Hedgerow node (survey unit end/ finish points)
- Hedgerow assessed as 'important' under Part II Wildlife and Landscape criteria of The Hedgerow Regulations 1997.

**Drawing 2:**  
Proposed Planning Layout (V23 07.04.2021)

# Argoed View, Nr Mold Proposed Sketch Layout - 1:500

Planning Layout Legend

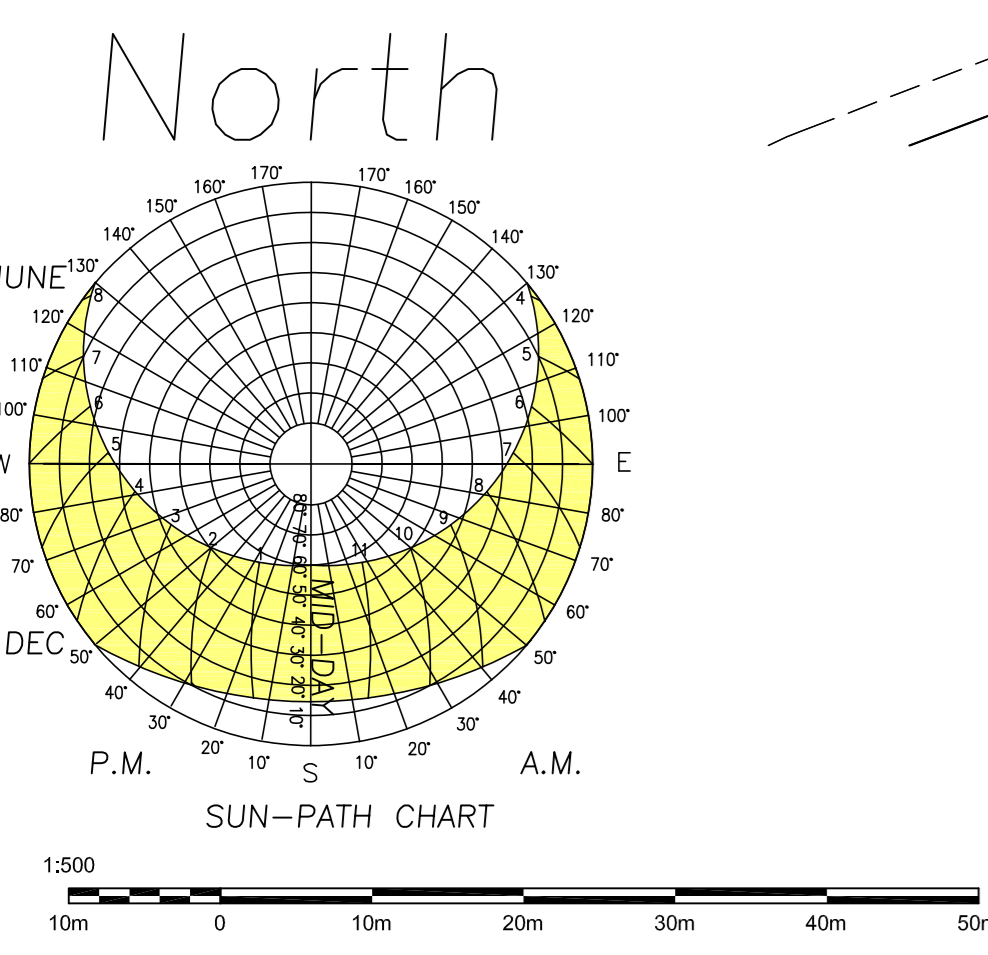
- Proposed dwelling and Dwelling type.
- Proposed dwelling handling.
- Plot numbers.
- Affordable Dwellings.
- Proposed dual aspect units.
- Proposed SUDS pond.
- Proposed indicative tree position. (refer to landscaping layout for detail)
- Existing Category A trees to be retained. (refer to tree report for detail)
- Existing Category B trees to be retained. (refer to tree report for detail)
- Existing Category C trees to be retained. (refer to tree report for detail)
- Trees to be removed. (refer to tree report for detail)
- Hard landscaping Treatment A. Alternative surface material.
- Hard landscaping Treatment B. Block Paving, Terrazzo, gravel to shared surface, road joints and private driveways (Colour 05).
- Soft Landscaping. Soft Landscaping Area to be landscaped prior to schedule and detail.
- Boundary Treatment A. 1000mm high brick screen wall.
- Boundary Treatment B. 1800mm high stone screened fence.
- Boundary Treatment C. 1200mm high 'lock proof' post and wire fence.
- Application Site boundary.
- Existing Easement.



STEWART  
**Milne**  
HOMES

Schedule of Accommodation

Mixed Dwelling Types AFFORDABLE		SOFT	No	Total Soft	
AB	5%	Aberlady Mid	654	4	2616
AB	10%	Aberlady End	657	8	5256
AE	4%	Aulemore Mid	270	3	2310
AE	12%	Aulemore End	770	10	7700
<b>Total dwellings and soft</b>				<b>25</b>	<b>17,882</b>
2/3 Bed Mixed Dwelling Types		SOFT	No	Total Soft	
AL	3%	Alrick Mid	733	2	1426
BK	5%	Berwick Mid	866	3	2598
BK	22%	Berwick End	869	13	11297
CL	19%	Cairnhill	972	11	10692
CU	7%	Colross	1033	4	4124
3 Bed Detached Dwellings		SOFT	No	Total Soft	
CD	7%	Castelford	963	4	3952
CM	5%	Corrinhom	1026	4	4104
4 Bed Semi Detached Dwellings		SOFT	No	Total Soft	
DY	7%	Dewsbury	1141	4	4564
4 Bed Detached Dwellings		SOFT	No	Total Soft	
EH	3%	Farnham	1366	2	2532
HR	7%	Harris	1382	4	5528
KD	4%	Kendal	1493	3	4479
5 Bed Detached Dwellings		SOFT	No	Total Soft	
LE	8%	Leven	1630	5	8150
<b>Total dwellings and soft - OMS</b>				<b>59</b>	<b>63,344</b>
<b>Total dwellings and soft - Including Affordable</b>				<b>84</b>	<b>81,238</b>
Gross Site Area in Acres		8.344			
POS		1.118			
SUD's		0.706			
Single Sided Road		0.268			
Undevelopable		0.507			
Net Site Area in Acres		5.75			
Density (units per acre)		15			
Density (units per hectare)		36			
Nett Square foot / Acre		14,139			



Rev	Details	Date	By	Chk
DATE	03.2021	DRAWN	DJM	
SCALE	1:500	CHK		
<b>Argoed View, Nr Mold</b>				
<b>Proposed Planning Layout</b>				
Dwg No	SK296/NBM/PL50	Rev		
STEWART <b>Milne</b> HOMES		Stewart Milne Homes Harrier House 2 Lumsdale Road Cobra Business Park Trafford Park Manchester Telephone (0161) 866 6900 fax (0161) 866 6909		