

## 1.0 GENERAL DETAILS

Site Name	Harras Moor		
Job Number	5060.Eco.HarrasMoor	Doc. Ref	5060.Eco.HarrasMoor.008
Site Location	Whitehaven, West Cumbria		
Date(s)	17 <sup>th</sup> and 18 <sup>th</sup> April 2018		
Surveyor(s)	Lynsey Crellin (FISC Level 5)		
Survey Constraints	None, the survey was initially conducted during the recommended survey period for Phase 1 habitat surveys.		
Methods	Hedgerow survey relating to the Hedgerow Regulations 1997. Woodland NVC survey according to JNCC National Vegetation Classification Field Guide to Woodland 2004		
Drawing Ref:	G5060.Eco.HarrasMoorEcoandArb.004		

	Written	Checked	Authorised
Initial	LAC	FBH	FBH

## 2.0 HEDGEROW SURVEY RESULTS


### Hedgerow 1

#### Target Note

Old, defunct hedge along site boundary with wall/bank at base and rabbit activity.

<i>Crataegus monogyna</i>	Hawthorn	D
<i>Silene dioica</i>	Red Campion	A
<i>Hedera helix</i>	Ivy	F
<i>Ranunculus repens</i>	Creeping Buttercup	F
<i>Rubus fruticosus agg.</i>	Bramble	F
<i>Digitalis purpurea</i>	Foxglove	O
<i>Dryopteris dilatata</i>	Broad buckler-fern	O
<i>Ficaria verna</i>	Lesser Celandine	O
<i>Urtica dioica</i>	Nettle	O
<i>Ilex aquifolium</i>	Holly	R
<i>Dryopteris filix-mas</i>	Male fern	R
<i>Rumex acetosa</i>	Common Sorrel	R
<i>Sambucus nigra</i>	Elder	R

## Hedgerow Assessment

Does the hedge have the appearance of being over 30 years old?	Y				
Does the hedge run alongside a bridleway, footpath or road used as a public path or a byway open to all traffic?	N				
Protected species noted? (WCA Sch 1, 5, 8: RDB birds, vascular plants/insects/other)	N				
Further assessment (30m sampling) required and undertaken?	Y				
Features and Connections		<b>Woody species present in 30m samples (listed on Schedule 3 of the Hedgerow Regulations 1997) - For hedgerows 30-100m in length, species in the central 30m have been recorded. For hedgerows 100-200m species in the central 30m stretches of each half of the hedgerow have been recorded. For hedgerows &gt;200m, species present in the central stretch of 30m within each third of the hedgerow have been recorded.</b>			
Hedge length (m)	120	<b>Sample 1</b>	<b>Sample 2</b>	<b>Sample 3</b>	<b>Schedule 2 species present</b>
Wall/bank along at least half its length?	Y	Holly	Hawthorn		Broad buckler fern
Average of at least one standard tree per 50m?	N	Hawthorn	English oak		Male Fern
3+ woodland ground flora species (listed on Sch. 2 of the Hedgerow Regulations) within 1m?	N				
Ditch along at least half of the hedgerow?	N				
Parallel hedge within 15m of the hedgerow?	N				
Gaps less than 10% of hedgerow length?	Y				
Connection (within 10m) with another hedgerow?	N				
Connection (within 10m) with a pond?	N				
Connection (within 10m) broadleaved woodland?	N				
Does this hedge meet the wildlife and countryside criteria for importance?		N	Hedge contains an average of 2 woody species and has only 2 associated features		

## Hedgerow 2

### Target Note

Defunct hawthorn hedge along residential garden boundaries. Cannot be important in accordance with the Hedgerow Regulations as it forms 'the curtilage of a dwelling house'.

*Crataegus monogyna*

Hawthorn

D

## Hedgerow 3

### Target Note


Old, heavily defunct hedgerow in field with wall/bank at base. Numerous rabbit burrows and signs.

*Crataegus monogyna*

Hawthorn

D

### Hedgerow Assessment

Does the hedge have the appearance of being over 30 years old?	Y				
Does the hedge run alongside a bridleway, footpath or road used as a public path or a byway open to all traffic?	N				
Protected species noted? (WCA Sch 1, 5, 8: RDB birds, vascular plants/insects/other)	N				
Further assessment (30m sampling) required and undertaken?	Y				
Features and Connections		<b>Woody species present in 30m samples (listed on Schedule 3 of the Hedgerow Regulations 1997) - For hedgerows 30-100m in length, species in the central 30m have been recorded. For hedgerows 100-200m species in the central 30m stretches of each half of the hedgerow have been recorded. For hedgerows &gt;200m, species present in the central stretch of 30m within each third of the hedgerow have been recorded.</b>			
Hedge length (m)	60	Sample 1	Sample 2	Sample 3	Schedule 2 species present
Wall/bank along at least half its length?	Y	Hawthorn			
Average of at least one standard tree per 50m?	N				
3+ woodland ground flora species (listed on Sch. 2 of the Hedgerow Regulations) within 1m?	N				
Ditch along at least half of the hedgerow?	N				
Parallel hedge within 15m of the hedgerow?	N				
Gaps less than 10% of hedgerow length?	N				
Connection (within 10m) with another hedgerow?	N				
Connection (within 10m) with a pond?	N				
Connection (within 10m) broadleaved woodland?	Y				
Does this hedge meet the wildlife and countryside criteria for Importance?		N	Hedge contains an average of 1 woody species and has only 2 associated features.		


## Hedgerow 4

### Target Note

Most intact hedgerow on site along edge of former playing field. Old, with wall/bank along base and rabbit signs.

<i>Crataegus monogyna</i>	Hawthorn	D
<i>Silene dioica</i>	Red Campion	A
<i>Juncus effusus</i>	Soft Rush	F
<i>Rubus fruticosus</i> agg.	Bramble	F
<i>Deschampsia cespitosa</i>	Tufted Hair-grass	O
<i>Digitalis purpurea</i>	Foxglove	O
<i>Conopodium majus</i>	Pignut	R
<i>Geum urbanum</i>	Wood Avens	R
<i>Heracleum sphondylium</i>	Hogweed	R
<i>Hypericum androsaemum</i>	Tutsan	R
<i>Malus sylvestris</i>	Crab-apple	R
<i>Polypodium vulgare</i>	Polypody	R
<i>Rosa canina</i> agg.	Dog Rose	R
<i>Sambucus nigra</i>	Elder	R

### Hedgerow Assessment

Does the hedge have the appearance of being over 30 years old?	Y				
Does the hedge run alongside a bridleway, footpath or road used as a public path or a byway open to all traffic?	N				
Protected species noted? (WCA Sch 1, 5, 8: RDB birds, vascular plants/insects/other)	N				
Further assessment (30m sampling) required and undertaken?	Y				
Features and Connections		<b>Woody species present in 30m samples (listed on Schedule 3 of the Hedgerow Regulations 1997) - For hedgerows 30-100m in length, species in the central 30m have been recorded. For hedgerows 100-200m species in the central 30m stretches of each half of the hedgerow have been recorded. For hedgerows &gt;200m, species present in the central stretch of 30m within each third of the hedgerow have been recorded.</b>			
Hedge length (m)	90	Sample 1	Sample 2	Sample 3	Schedule 2 species present
Wall/bank along at least half its length?	Y	Hawthorn			Pignut
Average of at least one standard tree per 50m?	N	Crab apple			Wood avens
3+ woodland ground flora species (listed on Sch. 2 of the Hedgerow Regulations) within 1m?	Y				Polypody
Ditch along at least half of the hedgerow?	N				
Parallel hedge within 15m of the hedgerow?	N				
Gaps less than 10% of hedgerow length?	Y				
Connection (within 10m) with	N				

another hedgerow?					
Connection (within 10m) with a pond?	N				
Connection (within 10m) broadleaved woodland?	Y				

Does this hedge meet the wildlife and countryside criteria for Importance?	N	Average of 2 woody species
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### 3.0 WOODLAND SURVEY RESULTS:

#### Introduction

A block of ancient woodland named Midgey Wood lies adjacent to the site. In order to gain a better understanding of the vegetation communities represented and the ecological value of the habitat, National Vegetation Classification (NVC) surveys were undertaken. The data generated from these surveys was analysed with Tablefit. An explanation of Tablefit and NVC analysis can be found at the end of this document.

The woodland is sycamore dominated with a dense rhododendron understorey in many places. There were few obvious old trees, most appear semi-mature.

#### Quadrat 1

<i>Dryopteris dilatata</i>	1
<i>Acer pseudoplatanus</i> , Canopy	10
Bare Ground	6
<i>Angelica sylvestris</i>	1
<i>Carex pendula</i>	2
<i>Dryopteris filix-mas</i>	8
<i>Rubus fruticosus</i> agg.	2
<i>Deschampsia cespitosa</i>	2
<i>Silene dioica</i>	3
<i>Crataegus monogyna</i> , Understorey	1
<i>Quercus robur</i> , Canopy	2
Moss sp.	4

G1.A11 W10 26 | 64 42 16 40| Que rob-Pte aqu-Rub fru

G1.A11 W10e 25 | 55 48 12 50| Que rob-Pte aqu-Rub fru Ace pse-Oxa ace

G1.A11 W10a 23 | 57 40 15 34| Que rob-Pte aqu-Rub fru Typical

G1.21 W 7c 21 | 43 58 9 53| Aln glu-Fra exc-Lys nem Descham cespit

G1.A2 W 8c 20 | 47 51 7 30| Fra exc-Ace cam-Mer per Descham cespit

#### Quadrat 2

<i>Ilex aquifolium</i> , Understorey	1
<i>Galium aparine</i>	4
<i>Hyacinthoides non-scripta</i>	1
<i>Ranunculus repens</i>	1
<i>Hypericum androsaemum</i>	1
<i>Circaea lutetiana</i>	2
<i>Taxus baccata</i> , Understorey	1
<i>Quercus robur</i> , Canopy	1
Bare Ground	2
<i>Acer pseudoplatanus</i> , Canopy	10
<i>Silene dioica</i>	4
<i>Dryopteris dilatata</i>	2
<i>Angelica sylvestris</i>	2
<i>Carex pendula</i>	1
<i>Dryopteris filix-mas</i>	4
Moss sp.	5

<i>Rubus fruticosus</i> agg.	2
<i>Deschampsia cespitosa</i>	2
<i>Chrysosplenium oppositifolium</i>	5
<i>Urtica dioica</i>	4

G1.21 W 7a 29 | 69 44 18 42| Aln glu-Fra exc-Lys nem *Urtica dioica*  
 G1.A11 W10e 22 | 66 35 15 33| Que rob-Pte aqu-Rub fru Ace pse-Oxa ace  
 G1.A11 W10 21 | 79 30 16 24| Que rob-Pte aqu-Rub fru  
 G1.41 W 6d 20 | 66 33 10 31| Aln glut-Urtic dio wood *Sambucus nigra*  
 G1.A11 W10a 19 | 71 29 15 21| Que rob-Pte aqu-Rub fru Typical

**Quadrat 3**

<i>Silene dioica</i>	2
<i>Rhododendron ponticum</i> ,	2
<i>Lonicera periclymenum</i> , Understorey	2
<i>Taxus baccata</i> , Understorey	1
<i>Ilex aquifolium</i> , Understorey	1
<i>Betula pubescens</i> , Canopy	2
<i>Sorbus aucuparia</i> , Canopy	1
<i>Acer pseudoplatanus</i> , Canopy	6
Moss sp.	5
<i>Quercus robur</i> , Canopy	8
<i>Lonicera periclymenum</i>	5
<i>Rubus fruticosus</i> agg.	1
<i>Deschampsia cespitosa</i>	1
<i>Hedera helix</i>	1
<i>Oxalis acetosella</i>	1
<i>Hyacinthoides non-scripta</i>	6
Bare Ground	6
<i>Dryopteris dilatata</i>	2
<i>Dryopteris filix-mas</i>	5

G1.A11 W10 46 | 100 48 37 60| Que rob-Pte aqu-Rub fru  
 G1.A11 W10e 39 | 86 51 25 50| Que rob-Pte aqu-Rub fru Ace pse-Oxa ace  
 G1.A11 W10a 35 | 85 41 34 42| Que rob-Pte aqu-Rub fru Typical  
 G1.A11 W10c 28 | 85 37 20 42| Que rob-Pte aqu-Rub fru *Hedera helix*  
 G1.A11 W10b 28 | 75 31 29 45| Que rob-Pte aqu-Rub fru *Anemone nemorosa*

**Quadrat 4**

<i>Sorbus aucuparia</i> , Canopy	1
<i>Hedera helix</i>	1
<i>Crataegus monogyna</i> , Understorey	1
<i>Rhododendron ponticum</i> ,	8
<i>Quercus robur</i> , Canopy	1
<i>Acer pseudoplatanus</i> , Canopy	10
<i>Lonicera periclymenum</i> , Understorey	1
Bare Ground	4
<i>Dryopteris dilatata</i>	2
<i>Dryopteris filix-mas</i>	4
Moss sp.	5
<i>Rubus fruticosus</i> agg.	2
<i>Deschampsia cespitosa</i>	5
<i>Silene dioica</i>	5
<i>Ilex aquifolium</i> , Understorey	1
<i>Oxalis acetosella</i>	5

G1.A11 W10e 38 | 75 54 25 52| Que rob-Pte aqu-Rub fru Ace pse-Oxa ace  
 G1.A11 W10 35 | 86 50 23 34| Que rob-Pte aqu-Rub fru  
 G1.21 W 7c 35 | 62 63 20 57| Aln glu-Fra exc-Lys nem *Deschampsia cespitosa*

G1.A11 W10a 26 | 71 43 15 25| Que rob-Pte aqu-Rub fru Typical  
 G1.A11 W10c 25 | 85 41 5 20| Que rob-Pte aqu-Rub fru Hedera helix

#### Quadrat 5

<i>Asplenium scolopendrium</i>	1
<i>Dryopteris dilatata</i>	2
Bare Ground	4
<i>Chrysosplenium oppositifolium</i>	3
<i>Circaea lutetiana</i>	3
<i>Angelica sylvestris</i>	2
<i>Hedera helix</i>	2
<i>Ilex aquifolium</i> , Understorey	1
<i>Oxalis acetosella</i>	3
<i>Dryopteris filix-mas</i>	3
Moss sp.	5
<i>Rubus fruticosus</i> agg.	1
<i>Rhododendron ponticum</i> ,	9
<i>Tilia</i> sp., Canopy	3
<i>Quercus robur</i> , Canopy	8
<i>Acer pseudoplatanus</i> , Canopy	7
<i>Ficaria verna</i>	3
<i>Silene dioica</i>	1

G1.A11 W10 25 | 64 33 26 34| Que rob-Pte aqu-Rub fru  
 G1.A11 W10e 24 | 66 38 15 35| Que rob-Pte aqu-Rub fru Ace pse-Oxa ace  
 G1.A11 W10a 18 | 57 30 19 23| Que rob-Pte aqu-Rub fru Typical  
 G1.A11 W10c 16 | 64 26 10 23| Que rob-Pte aqu-Rub fru Hedera helix  
 G1.632 W12a 15 | 56 29 5 22| Fagus syl-Merc per wood Mercur perennis

#### Overall Results

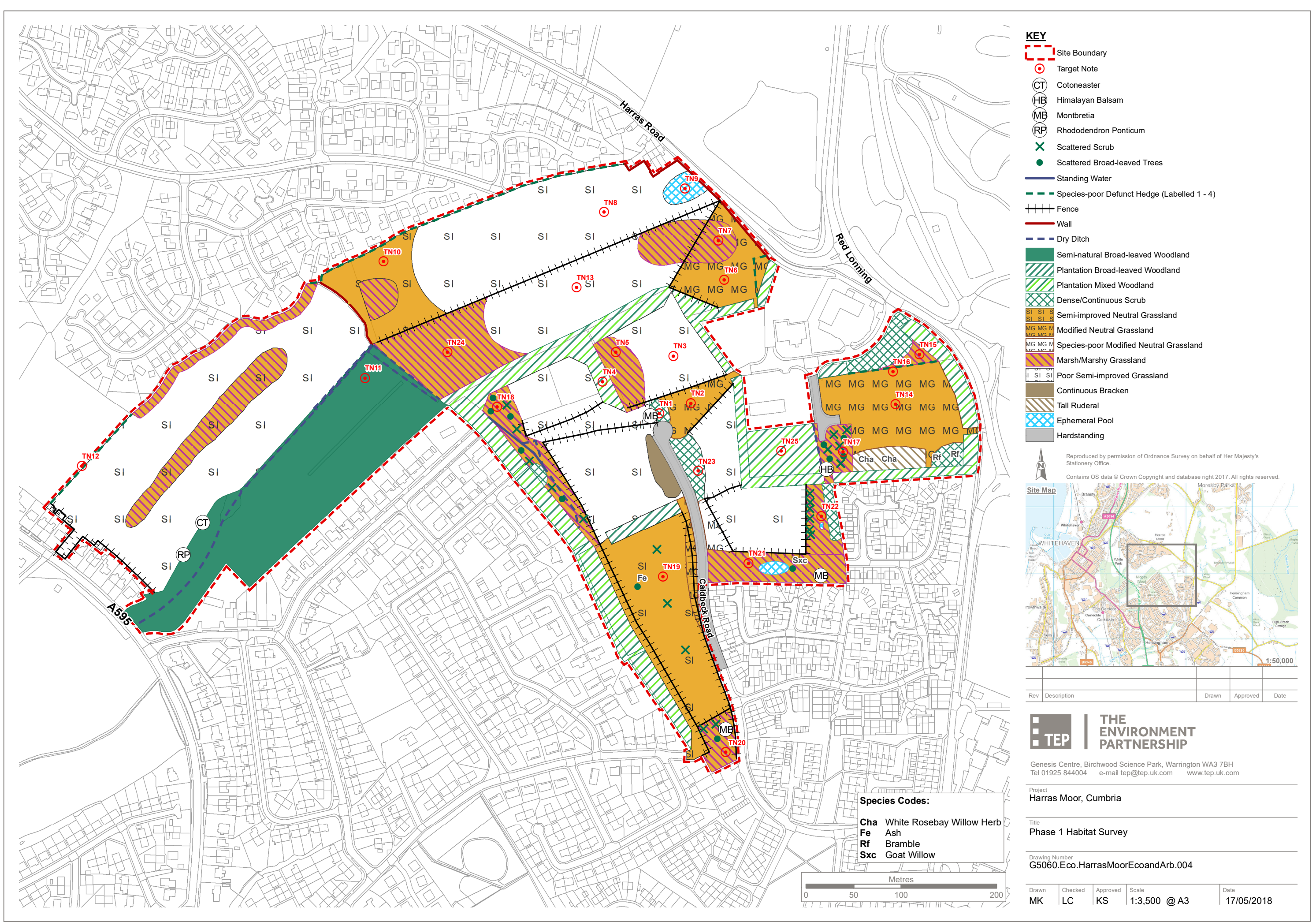
G1.A11 W10 31 | 79 43 22 39| Que rob-Pte aqu-Rub fru  
 G1.A11 W10e 30 | 72 48 16 42| Que rob-Pte aqu-Rub fru Ace pse-Oxa ace  
 G1.A11 W10a 25 | 68 38 19 29| Que rob-Pte aqu-Rub fru Typical  
 G1.21 W 7c 21 | 48 50 11 39| Aln glu-Fra exc-Lys nem Descham cespit  
 G1.A11 W10c 19 | 66 32 7 25| Que rob-Pte aqu-Rub fru Hedera helix

#### NVC Discussion

Tablefit analysis shows overall marginally stronger resemblance to W10 (*Quercus robur-Pteridium aquilinum-Rubus fruticosus* woodland, and in Quadrat 2, W7a the *Urtica dioica* sub community of *Alnus glutinosa-Fraxinus excelsior-Lysimachia nemorum* woodland. The goodness-of-fit of both communities is less than 49, and therefore classed as 'Very Poor'. This is likely to be due to the predominance of *Rhododendron ponticum* in the understorey which prevents a more natural woodland community developing. The canopy in most places is dominated by sycamore, and few old trees were noted. This suggests that the woodland is heavily modified by people and may have been replanted.

Possible management measures to increase 'naturalness' and improve the ecological value of the woodland include control of the rhododendron and gradual replacement of the sycamore with native species appropriate to the NVC community W10, e.g. *Quercus robur*, *Betula pendula*, *Fraxinus excelsior* and *Ulmus glabra*.





**KEY**

- Site Boundary
- Target Note
- Cotoneaster
- Himalayan Balsam
- Montbretia
- Rhododendron Ponticum
- Scattered Scrub
- Scattered Broad-leaved Trees
- Standing Water
- Species-poor Defunct Hedge (Labelled 1 - 4)
- Fence
- Wall
- Dry Ditch
- Semi-natural Broad-leaved Woodland
- Plantation Broad-leaved Woodland
- Plantation Mixed Woodland
- Dense/Continuous Scrub
- Semi-improved Neutral Grassland
- Modified Neutral Grassland
- Species-poor Modified Neutral Grassland
- Marsh/Marshy Grassland
- Poor Semi-improved Grassland
- Continuous Bracken
- Tall Ruderal
- Ephemeral Pool
- Hardstanding

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**Site Map**

Rev	Description	Drawn	Approved	Date

**THE ENVIRONMENT PARTNERSHIP**

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Project  
Harras Moor, Cumbria

Title  
Phase 1 Habitat Survey

Drawing Number  
G5060.Eco.HarrasMoorEcoandArb.004

Drawn	Checked	Approved	Scale	Date
MK	LC	KS	1:3,500 @ A3	17/05/2018

**Species Codes:**  
**Cha** White Rosebay Willow Herb  
**Fe** Ash  
**Rf** Bramble  
**Sxc** Goat Willow

