

Welsh Government

**M4 Corridor around Newport**

Environmental Statement Volume 3:  
Appendix 10.21

**Hedgerow Survey Report 2015**

M4CaN-DJV-EBD-ZG\_GEN-AX-EN-0008

At Issue | March 2016

# Contents

---

	Page
<b>Summary</b>	<b>i</b>
<b>1 Introduction</b>	<b>1</b>
<b>2 Previous Surveys</b>	<b>2</b>
2.1 Introduction	2
2.2 2014 Survey Method	2
2.3 Limitations	4
2.4 Requirements for Further Survey	4
<b>3 2015 Survey Methods</b>	<b>6</b>
3.1 Introduction	6
3.2 Methodology	6
3.3 Limitations	7
<b>4 Results</b>	<b>8</b>
4.2 Hedgerow Characteristics	8
4.3 Hedgerows Classified as 'Important'	8
4.4 Hedgerows Not Classified as 'Important'	9
<b>5 Discussion</b>	<b>12</b>

## Figures

Figure 1 Hedgerow Survey Results Map

## Annexes

Annex A Hedgerow Regulations Woody and Woodland Species Criteria  
 Annex B Hedgerow Regulations Survey Data  
 Annex C Photographs of Hedgerows  
 Annex D Summary of Isolated Trees within Hedgerows



## Summary

---

- S.1** RPS has undertaken a hedgerow survey on land along the route of the proposed M4 Corridor around Newport (M4CaN) between Castleton and Magor to inform the ecological baseline for the Environmental Impact Assessment (EIA) of the Scheme. The EIA is reported in the M4CaN Environmental Statement (ES) of which this document is an appendix to the chapter on Ecology and Nature Conservation.
- S.2** A hedgerow survey undertaken by Arup on behalf of Welsh Government in 2014 is reported separately Appendix 10.5 of the M4CaN ES.
- S.3** This document reports the findings of the 2015 hedgerow survey, which was undertaken from September to October 2015 using standard guidance given in the Hedgerow Survey Handbook (DEFRA, 2007).
- S.4** A total of forty eight hedgerows were surveyed between Castleton and Rogiet along the new section of motorway. Hedgerows selected were those which had not previously been surveyed in the 2014 hedgerow survey (ES Appendix 10.5) and which would be affected by the proposed new section of motorway.
- S.5** Thirty eight of the hedgerows were classified as 'Important' in accordance with the Hedgerow Regulations criteria.

# 1 Introduction

---

- 1.1.1** RPS has undertaken a hedgerow survey of land along the route of the proposed M4 Corridor around Newport (M4CaN) between Castleton and Magor to inform the ecological baseline for an Environmental Impact Assessment (EIA) of the Scheme. The survey included hedgerows within or close to the land affected by the new section of motorway following the guidance set out in the Hedgerow Survey Handbook (DEFRA, 2007) and the requirements of the Hedgerow Regulations 1997. The EIA is reported in the M4CaN Environmental Statement (ES) of which this document is an appendix to the chapter on Ecology and Nature Conservation.
- 1.1.2** A hedgerow survey previously undertaken by Arup on behalf of Welsh Government in 2014 is reported separately in Appendix 10.5 of the M4CaN ES. A review of that work was undertaken independently by Hyder (see Appendix 9.1 in the ES Scoping Report (ES Appendix 5.1)) and RPS (see ES Chapter 10). The conclusions of that review and the requirements for additional surveys in 2015 were set out in the Scope of Ecology Surveys Report (see Appendix 9.1 of the ES Scoping Report). This was discussed with Natural Resources Wales (NRW) and they were further consulted on the scope of the proposed surveys through the consultation on the ES Scoping Report.
- 1.1.3** This document reports the findings of the hedgerow survey undertaken from September to October 2015. The hedgerows selected for the 2015 survey were those which had not previously been surveyed in the 2014 hedgerow survey. This report outlines the previous survey carried out and the reasons for this additional survey (Section 2), describes the methods used in the survey (Section 3) and the findings of the survey (Section 4). A discussion of the survey findings is provided in Section 5.

## 2 Previous Surveys

---

### 2.1 Introduction

**2.1.1** The 2014 hedgerow survey is reported in Appendix 10.5 of the ES

**2.1.2** The objectives of the survey were as follows.

- To identify 'Important' hedgerows in accordance with the Hedgerow Regulations 1997.
- To identify hedgerows that are 'Important' with regard to providing habitat for protected species.

**2.1.3** The survey area was based on a 250 metre buffer around the physical extents of the alignment studied in 2007/8, including the route alignment proposed at that time, potential junctions and water treatment areas.

### 2.2 2014 Survey Method

**2.2.1** Information was recorded in the field. An individual recording sheet was used for each survey of a hedgerow.

**2.2.2** A total of 516 hedgerows were surveyed within the study area, with information being collected from the full extent of each hedgerow length. Each hedgerow was surveyed for attributes identified in the Hedgerows Regulations 1997. This data was then used to ascertain the 'importance' of the hedgerows according to the Regulations. Information recorded for each hedgerow included the following.

- Height and width of hedgerow (in metres).
- Species composition.
- 'Associated features' (according to sub-paragraph 4, section 7 of Part II of Schedule 1 of the Hedgerows Regulations 1997).
- Public Rights of Way (PRoW).

**2.2.3** Associated features are as follows.

- A bank or wall for at least half the length.
- A ditch for at least half the length.
- Gaps over no more than 10% of the length.
- At least one standard tree per 50 metres.
- At least three ground flora woodland species as defined in Schedule 2 of the Regulations within 1 metre of the hedgerow and listed in Annex A.
- Connections scoring four or more points, where connection with a hedgerow counts as one, a broadleaved woodland or pond counts as two.
- A parallel hedge within 15 metres.

**2.2.4** The hedgerows were assigned to categories which provide a description of the hedgerow, so as to standardise the recording and to inform the final assessment

of hedgerow importance. These categories were based on descriptions given in the Hedgerow Survey Handbook (DEFRA, 2007) as follows.

- Managed 'gappy' hedgerow.
- Intact managed hedgerow.
- Unmanaged Hedgerow.
- Hedgebank with occasional shrubs.
- Managed hedgerow with mature trees.
- Treeline.
- New/reinstated hedgerow.
- Fenceline.

**2.2.5** It was presumed that given the history of the Gwent Levels, the hedgerows included within the study area were over 30 years old, unless it was clear from the age of the vegetation that the hedgerow was recently planted.

**2.2.6** A record was also made of any protected species (species included on Schedule 1 (birds), Schedule 5 (animals), or Schedule 8 (plants) of the Wildlife and Countryside Act 1981 (as amended)) or field signs of such species found during the survey. These protected species records informed the assessment of hedgerow importance.

**2.2.7** Following collection of the field data, an assessment of hedgerow importance was conducted using all the available information, including information on Public Rights of Way (PRoW) obtained from Ordnance Survey (OS) data.

**2.2.8** Hedgerows are considered 'Important' under the Hedgerows Regulations if they meet the following criteria. However, the scope of this assessment was limited to ecological criteria including the following.

- Being 20 m or more in length.
- Meeting another hedgerow at each end.
- Being at least 30 years old.
- Satisfy at least one of the criteria listed below, which are taken from Part II of Schedule 1 of the Regulations.
  - The hedgerow contains species listed in Part I of Schedule 1, Schedule 5 or Schedule 8 of the Wildlife and Countryside Act 1981 or contains a Red Data Book species.
  - The hedgerow is adjacent to a Public Right of Way and contains at least four woody species and at least two associated features.
  - The hedgerow includes one or more of the following.
    1. At least seven woody species (as defined in Schedule II of the Regulations and listed in Annex A).
    2. At least six woody species, and has associated with it at least 3 of the 'associated features'.
    3. At least six woody species including one of the following:

black poplar tree (*Populus nigra* spp *betulifolia*);  
large-leaved lime (*Tilia platyphyllos*);  
small-leaved lime (*Tilia cordata*); or  
wild service-tree (*Sorbus torminalis*).

4. At least five woody species and has associated with it at least four of the 'associated features'.

**2.2.9** The Regulations do not apply to garden hedges, even if land on the other side of the hedge meets the above criteria.

**2.2.10** Climbers and bramble do not count towards the total woody species (except for roses). Hedgerows that contain fewer woody species but have a rich basal herbaceous flora may also be defined as species-rich, but the criteria to define these have to be set on a local basis as there is no national definition.

**2.2.11** The collected species composition information was cross-referenced with the Woodland Species list in Schedule 2 and the Woody Species list in Schedule 3 of the Hedgerows Regulations.

## **2.3 Limitations**

**2.3.1** Due to the scale of the survey area and limitations to access, the entire hedgerow complex was not covered and only a sample of the area was completed. In addition to this, due to the scale of the survey, some of the hedgerows were surveyed later in the year when the flora could not be as easily identified. Therefore, woodland ground flora (for example) may not have been recorded. Limitations to access (e.g. access permission and dense vegetation) also hindered the survey of the woodland ground flora.

**2.3.2** The majority of the hedgerows included in the 2014 survey were adjacent to or had an internal ditch present. Therefore, it was not always possible to accurately measure the width at the base of the hedgerow due to access difficulties.

**2.3.3** The assessment of whether or not the hedgerow is 'Important' was based on the Hedgerow Regulations 1997 criteria. However, hedgerows are also features of the Gwent Levels Sites of Special Scientific Interest (SSSIs). The report states that hedgerows that fall within the boundaries of these sites would require further assessment.

**2.3.4** A detailed record could not be made of some hedges due to these hedges having been flailed, limiting species identification. In one instance a hedgerow could not be accessed due to dense scrub. In all twelve instances where limitations were recorded, there was still sufficient information collected during the survey to inform the assessment of these hedgerows.

## **2.4 Requirements for Further Survey**

**2.4.1** As referred to earlier in this section the report states that hedgerows that fall within the boundaries of the Gwent Levels SSSIs would require further assessment. The report also states that once initial design work has been undertaken, further surveys of any hedgerows which would need to be removed,

either permanently or temporarily during construction, should be undertaken to inform the EIA.

**2.4.2** At the Hyder/NRW meeting on 30th January 2015, it was agreed that only lengths of hedgerow within the footprint of the fixed alignment would need to be surveyed against the Hedgerow Regulations.

**2.4.3** Having considered the report of the hedgerow survey in the context of the above recommendations, RPS proposed further survey of hedgerows to support the EIA where access for surveys was not previously available. In these areas those hedgerows identified as potentially 'Important' through the further Phase 1 Survey would be targeted. RPS does not consider it necessary to survey hedgerows that have already been surveyed by Arup and thus the survey covered hedgerows within the footprint of the new section of motorway to which access was not previously possible.

## 3 2015 Survey Methods

---

### 3.1 Introduction

**3.1.1** The hedgerow survey was carried out over the period September-October 2015, which falls within the suitable period for this type of survey.

**3.1.2** The survey extent comprised hedgerows within the footprint of the new section of motorway to which access was not possible at the time of the Arup 2014 survey.

### 3.2 Methodology

**3.2.1** Aerial photography overlain with the alignment of the proposed new section of motorway was used to identify hedgerows that had not been previously surveyed and which would be affected.

**3.2.2** Hedgerows were selected for further survey if they were intersected by the alignment of the proposed new section of motorway and were not included in the 2014 Hedgerow Report (Appendix 10.5 of the ES). A total of forty eight hedgerows were selected to be included in the 2015 hedgerow survey, as shown on Figure 1.

**3.2.3** Hedgerows were visited and assessed in accordance with Hedgerow Regulations 1997 criteria. Where hedgerows measured 30 m or less, the entire length of the hedgerow was surveyed. Sample sections measuring 30 m were taken along hedgerows exceeding 30 m in length. In general, one 30 m sample section was taken for hedgerows less than 100 m in length, two samples were taken for hedgerows measuring 100-200 m, and an additional sample was taken for each additional 100 m of hedgerow where hedgerows exceeded 200 m in length. Samples were taken from the central section of hedgerow where the hedgerow measured less than 100 m in length, and regularly spaced along hedgerows exceeding 100 m in length.

**3.2.4** This data was then used to ascertain the 'importance' of the hedgerows in the context of the Hedgerow Regulations. Information recorded for each hedgerow included the following.

- Height and width of hedgerow (in metres).
- Adjacent land use.
- Hedgerow type and shape.
- 'Associated features' (according to sub-paragraph 4, section 7 of Part II of Schedule 1 of the Hedgerows Regulations 1997).
- Continuity of hedgerow (estimated percentage of gaps).
- Species and diameter of isolated trees within the hedgerow.
- Notes on signs of associated fauna.
- Species composition.
- Proximity to Public Rights of Way (PRoW).

**3.2.5** Hedgerows were then assessed to determine whether they meet the Hedgerow Regulations criteria to be considered 'Important'. This was undertaken using the same methodology as that used in the 2014 survey.

### **3.3 Limitations**

**3.3.1** While all surveys were undertaken within the recommended survey season, ground flora had in places died back. Hedgerows where this was apparent were nevertheless classified as 'Important' based on the presence of other features. It is accepted that surveys conducted during September and October may have underestimated the species diversity of ground flora, however there were still sufficient species present (i.e. indicator species) to understand their importance.

**3.3.2** Ten hedgerows were not classified as 'Important'. Eight of these hedgerows would not meet the criteria to be classified as 'Important' regardless of their ground flora. The remaining two hedgerows (H20 and H34), where the presence of three woodland ground flora species would have resulted in these hedgerows being classified as Important, were adjacent to areas of species poor grassland, where the availability of excessive nutrients has resulted in the dominance of a small number of aggressive species and a significant reduction in plant diversity. Potential under estimation of ground flora species-richness has therefore not affected the classification of hedgerows as 'Important'.



## 4 Results

---

### 4.1 Introduction

**4.1.1** A total of forty eight hedgerows were surveyed between Castleton and Rogiet along the alignment of the new section of motorway. The locations of surveyed hedgerows are shown in Figure 1. The results are set out below and on Figure 1. The full survey forms are provided in Annex B and photographs of the hedgerows are provided in Annex C.

**4.1.2** Of the forty eight hedgerows surveyed, thirty eight were classified as 'Important' under the Hedgerow Regulations.

### 4.2 Hedgerow Characteristics

**4.2.1** The surveyed hedgerows were typically dense, with occasional hedgerow trees. Both trimmed and untrimmed hedgerows were commonly recorded. Two of the hedgerows were categorised as a line of trees, although clearly originated from unmanaged hedgerows.

**4.2.2** The majority of hedgerows supported several woody species. Many of the hedgerows had small banks along their base, which frequently contained woodland species as listed in Schedule 2 of the Hedgerow Regulations. This commonly included herb Robert, yellow archangel and lords-and-ladies. Less frequently recorded were wood avens, dog's mercury, common dog violet, wood medic, wood sage and barren strawberry.

### 4.3 Hedgerows Classified as 'Important'

**4.3.1** A summary of the features of the hedgerows classified as 'Important' is provided in Table 4.1 and the full survey forms are provided in Annex B.

**4.3.2** Of the thirty eight hedgerows classified as 'Important', twenty three contained at least seven woody species. The remaining fifteen hedgerows each comprised six woody species and had at least three of the associated features listed in the Regulations.

**4.3.3** The Hedgerow Regulations guidelines suggest that garden hedgerows should not be classified as 'Important'. While hedgerows H2, H3, H10, H11 and H28 adjoin residential properties, due to their similarity in structure, function and composition to surrounding 'Important' hedgerows they have been included with the 'Important' hedgerow category.

**4.3.4** The majority of the 'Important' hedgerows had either small banks or ditches at the base of the hedge. Hedgerows H13 and H14 are considerably larger than the other surveyed hedgerows at over 10 metres in width and both contain partially wet ditches. Hedgerows H18 and H19, which do not meet the criteria to be classified as 'Important', are parallel hedges along the edge of a small stream.

**4.3.5** Hedgerows were generally intact with few gaps, occasionally containing trees within the hedge. Fifteen of the 'Important' hedgerows have semi-mature or mature trees as detailed in Annex D and the full survey forms provided in Annex B. Hedgerows H35 and H40 comprised an assemblage of saplings, young trees

and shrubs. Hedgerows H6 and H21 both merge with small sections of broadleaved woodland to the north.

**4.3.6** Only hedgerows H12 and H21 scored four or more connection points. Hedgerow H12 is located along the east border of an arable field towards the western part of the new section of motorway and connects to four other hedgerows. Hedgerow H21 forms a boundary between grazing pasture fields to the north of Magor and connects to several hedgerows and a small block of woodland.

**4.3.7** Many of the hedgerows classified as 'Important' formed boundaries between fields and minor roads, often with parallel hedgerows on the opposite side of the road. At hedgerows H33, H35 and H40 motorway drainage basins lie within a small strip of land bordered by hedgerows. Hedgerow H15 extends along the northern boundary of a narrow field used as allotments, with a parallel hedgerow to the south.

## **4.4 Hedgerows Not Classified as 'Important'**

**4.4.1** Ten of the forty eight surveyed hedgerows were not classified as 'Important' under the Hedgerow Regulations guidelines.

**4.4.2** Hedgerows H20, H26, and H47 are dense hedgerows that form boundaries between grazing pasture fields in the eastern part of the new section of motorway. All are relatively large and dense comprising several woody species. Hedgerow H9 is similar in composition and borders an arable field and small lane. Annex D provides a summary of trees present in hedgerows not classified as 'Important' such as H20.

**4.4.3** Hedgerows H34 and H39 border small fields containing drainage basins. Both hedgerows are relatively tall and dense mainly comprising hawthorn, bramble, blackthorn, hazel and ash.

**4.4.4** Hedgerows H18 and H19 are located either side of a small stream to the north of Magor. The hedgerows mainly comprise sprawling hawthorn, bramble and crack willow. A summary of the trees present within both hedgerows is provided in Annex D.

**4.4.5** Hedgerow H17 forms a boundary between an arable field and the B4245 to the north of Magor. The hedgerow mainly comprises semi-mature sycamore trees and dense hawthorn and bramble scrub. Hedgerow H16 intersects H17, bordering the arable field and a small semi-improved grassland field. The hedgerow has frequent gaps though contains several semi-mature trees, as summarised in Annex D.

**Table 4.1: Summary of Features of Hedgerows Classified as 'Important' under the Hedgerow Regulations**

'Important' hedgerow	Average number of woody species	Average of three of more herbaceous woodland species	Wall/Bank or ditch along half or more of the length	Average of 1 or more standard tree per 50 m	Gaps which add up to more than 10% of the hedge	A parallel hedge within 15 m	Connections scoring four points
H1	7	Y	Bank	-	Y	Y	-
H2	6	-	Bank	-	-	Y	-
H3	6	-	Bank	-	-	Y	-
H4	8	Y	Bank	-	-	Y	-
H5	7	-	-	-	-	-	-
H6	7	-	Ditch	Y	-	-	-
H7	6	-	Ditch	Y	-	-	-
H8	8	-	Bank	Y	-	-	-
H10	6	-	-	Y	-	Y	-
H11	6	-	Ditch	Y	-	-	-
H12	9	-	-	Y	Y	-	Y
H13	7	Y	Ditch	Y	-	-	-
H14	6	Y	Ditch	Y	-	-	-
H15	6	-	-	Y	-	Y	-
H21	8	Y	Bank	Y	-	-	Y
H22	6	Y	Bank	-	-	-	-
H23	7	Y	-	-	-	Y	-
H24	7	Y	Bank	-	-	Y	-
H25	7	Y	Bank	-	-	Y	-
H27	6	-	Bank	-	-	Y	-
H28	8	-	-	-	-	Y	-
H29	6	-	Bank	Y	-	Y	-
H30	7	-	-	Y	-	Y	-
H31	8	-	Bank	Y	-	-	-
H32	8	-	Bank	-	-	-	-
H33	7	-	Bank	-	Y	Y	-
H35	8	-	Ditch	Y	-	Y	-
H36	7	Y	Bank	-	-	Y	-
H37	6	Y	-	-	-	Y	-
H38	7	Y	Bank	-	-	Y	-
H40	7	-	Ditch	Y	-	Y	-
H41	7	Y	Bank	-	Y	-	-

<b>'Important' hedgerow</b>	<b>Average number of woody species</b>	<b>Average of three of more herbaceous woodland species</b>	<b>Wall/Bank or ditch along half or more of the length</b>	<b>Average of 1 or more standard tree per 50 m</b>	<b>Gaps which add up to more than 10% of the hedge</b>	<b>A parallel hedge within 15 m</b>	<b>Connections scoring four points</b>
H42	6	Y	Bank	-	-	-	-
H43	6	-	Bank	-	-	Y	-
H44	8	Y	Bank	-	-	Y	-
H45	6	-	Bank	-	-	Y	-
H46	8	Y	Bank	-	-	Y	-
H48	6	Y	Bank	-	-	Y	-

## 5 Discussion

---

- 5.1.1** Hedgerows provide wildlife corridors for a variety of species and can be a significant landscape feature.
- 5.1.2** Thirty eight of the forty eight surveyed hedgerows were classified as 'Important' under the Hedgerow Regulations. These are located mainly to the north of Magor and Undy in the eastern part of the proposed new section of motorway, and to the west and south east of Coedkernew in the western part. These data supplement the 2014 hedgerow survey.
- 5.1.3** Several signs of protected species were recorded during the hedgerow surveys. These have been included in ES Appendix 10.23 (bats) and Confidential Appendices 10.37 and 10.38 (badgers).
- 5.1.4** All hedgerows are listed as a Priority Habitat on the UK Biodiversity Action Plan and Section 42 (Wales) of the Natural Environment and Rural Communities Act 2006. The Local Biodiversity Action Plans of Monmouthshire and Newport also list hedgerows as a Priority Habitat and the Newport Biodiversity Action Plan states that the current condition of hedgerows is highly variable and aims to maintain, restore and extend hedgerows within the county.

## References

---

DEFRA (2007) Hedgerow Survey Handbook – A standard procedure for local surveys in the UK. Prepared on behalf of the Steering Group for the UK Biodiversity Action Plan for Hedgerows. 2nd Edition

Monmouthshire County Council (2011) Monmouthshire Public Rights of Way Biodiversity Action Plan

Newport City Council (2002) The Newport Local Biodiversity Action Plan

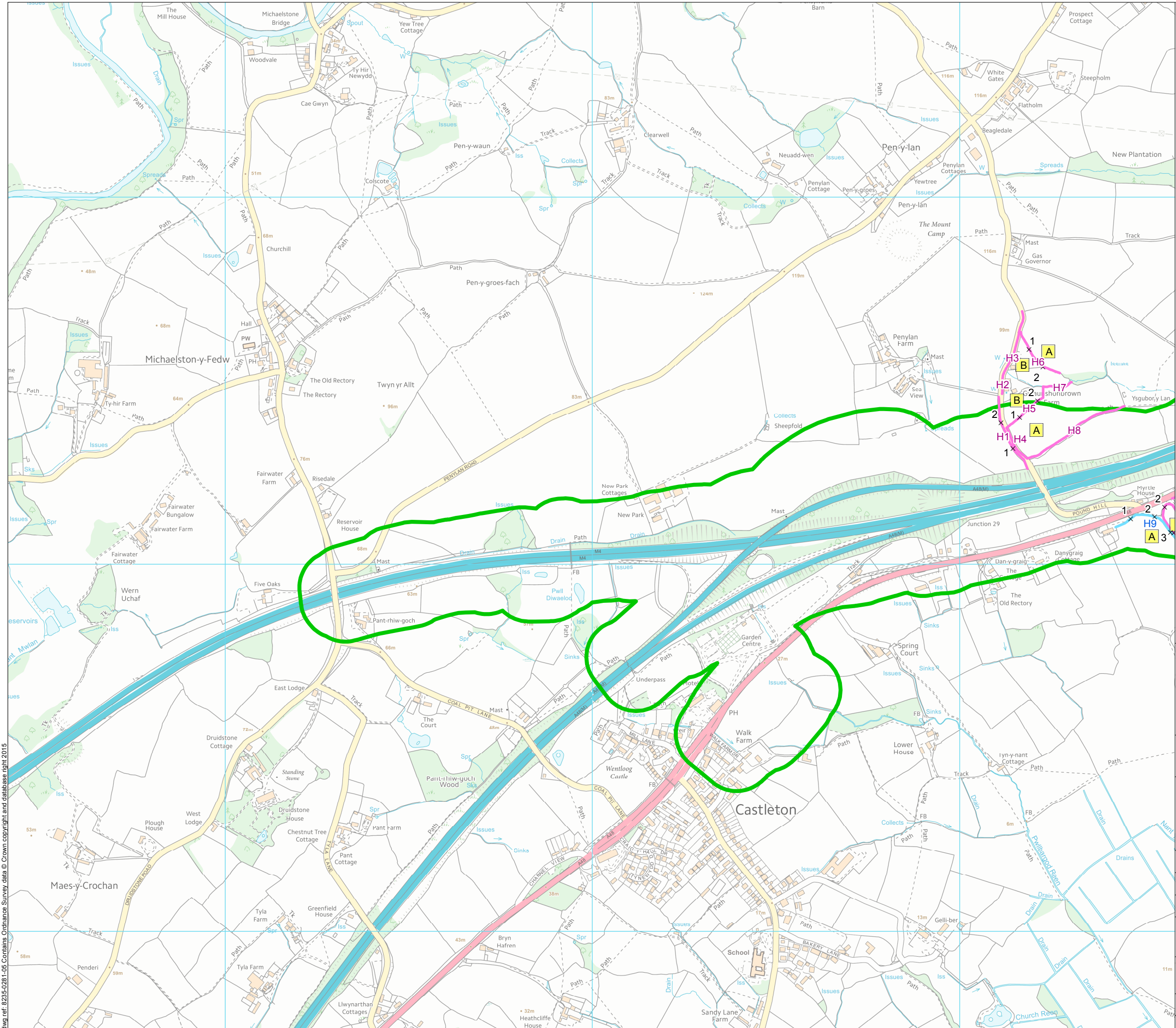
Statutory Instruments No. 1160 (1997) The Hedgerow Regulations 1997

UK Biodiversity Action Plan (1994-2012)

# Figures

---






Legend

100m Study Area

Hedgerow classified as "Important" under the Hedgerow Regulations

Hedgerow not classified as "Important" under the Hedgerow Regulations

Study area shown reflects the scheme design at the time of the survey



Llywodraeth Cymru  
Welsh Government

Appendix 10.21 Hedgerow Survey Report 2015

Hedgerow Survey Results Map

Figure: 1a

Revision: -

Date: March 2016

Status: AT ISSUE

Drawn: MS

Checked: KJ

Scale: A3 @ 1:10,000

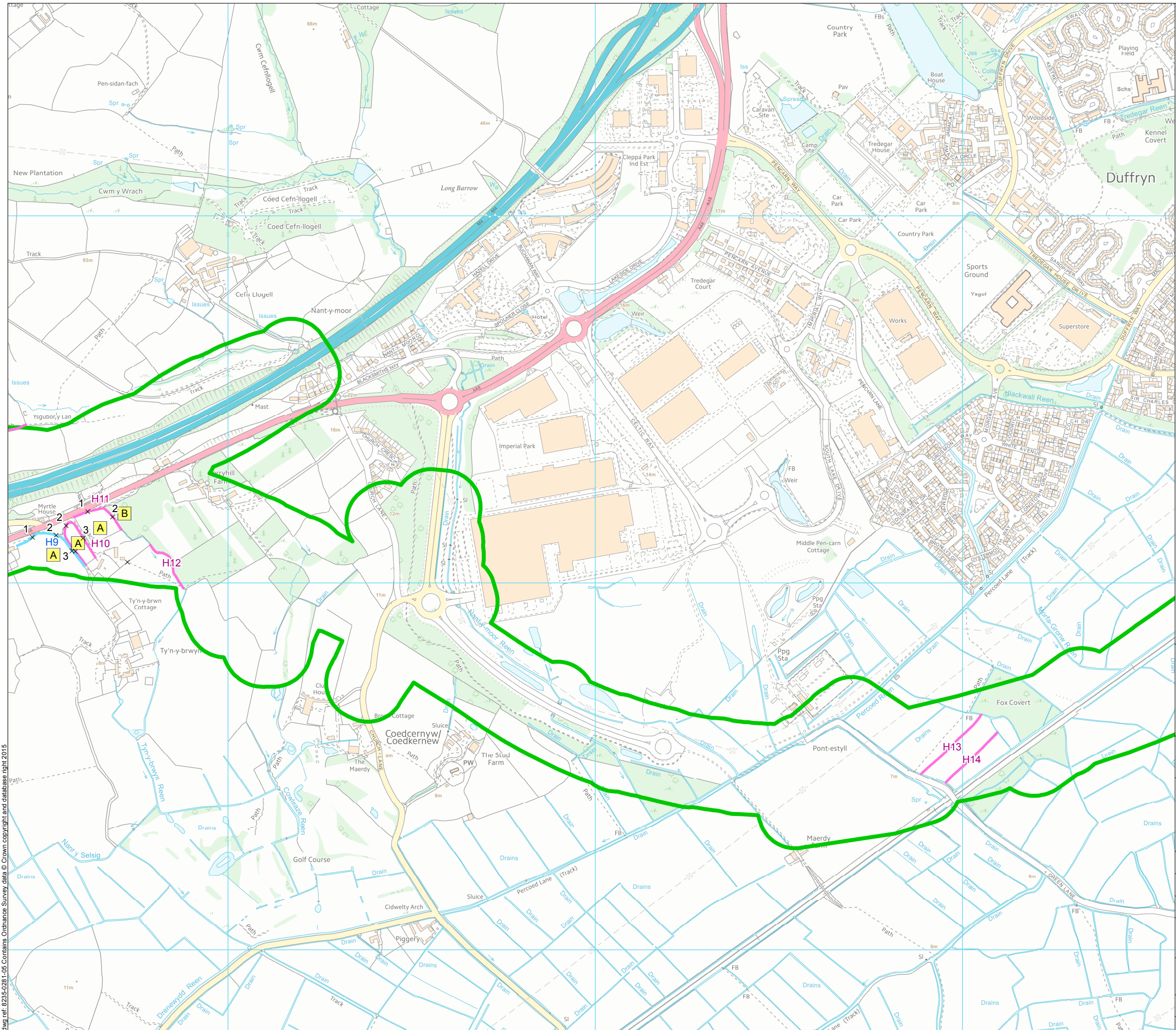
0250500m

N

© Crown copyright and database right 2016. Ordnance Survey 100021874. Welsh Government.  
© Hawlfraint a hawliau cronfa ddata'r Goron 2016. Rhif Trwydded yr Arolwg Ordnans 100021874.

dwg ref: 8235-0281-05





**Legend**


100m Study Area

Hedgerow classified as "Important" under the Hedgerow Regulations

Hedgerow not classified as "Important" under the Hedgerow Regulations

dwg ref: 8235-0281-05 Contains Ordnance Survey data © Crown copyright and database right 2015

Study area shown reflects the scheme design at the time of the survey



Llywodraeth Cymru  
Welsh Government

Appendix 10.21 Hedgerow Survey Report 2015

Hedgerow Survey Results Map

Figure: 1b

Revision: -

Date: March 2016

Status: AT ISSUE

Drawn: MS

Checked: KJ

Scale: A3 @ 1:10,000

0

250

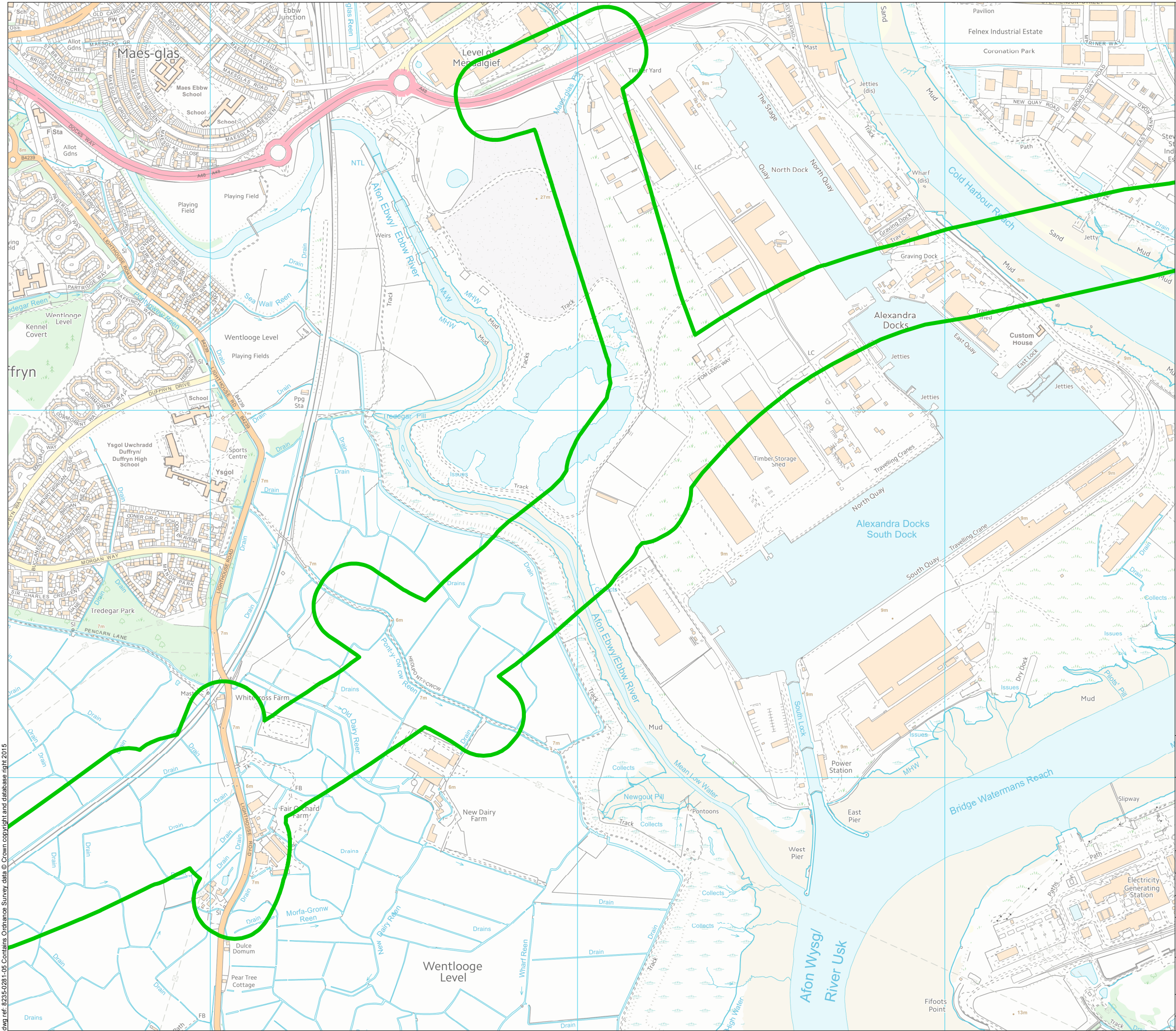
500m

N

© Crown copyright and database right 2016. Ordnance Survey 100021874. Welsh Government.  
© Hawlfraint a hawliau cronfa ddata'r Goron 2016. Rhif Trwydded yr Arolwg Ordnans 100021874.

dwg ref: 8235-0281-05





**Legend**

- 100m Study Area
- Hedgerow classified as "Important" under the Hedgerow Regulations
- Hedgerow not classified as "Important" under the Hedgerow Regulations

Study area shown reflects the scheme design at the time of the survey



Llywodraeth Cymru  
Welsh Government

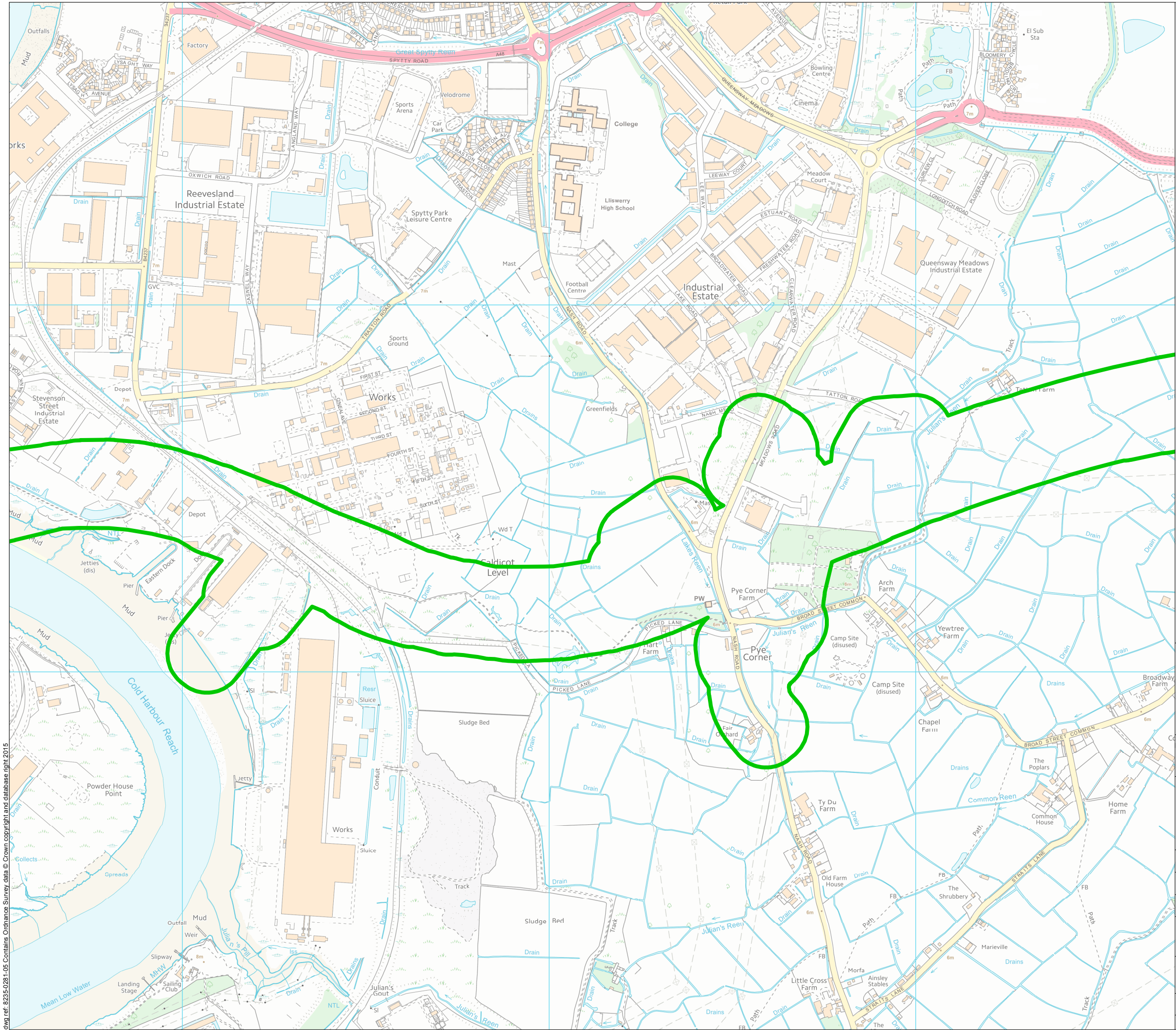
Appendix 10.21 Hedgerow Survey Report 2015

**Hedgerow Survey Results Map**


Figure: 1C	Revision: -
Date: March 2016	Status: AT ISSUE
Drawn: MS	Checked: KJ









**Legend**

 100m Study Area

Hedgerow classified as

 "Important" under the Hedgerow Regulations

Hedgerow not classified as

 "Important" under the Hedgerow Regulations

Study area shown reflects the scheme design at the time of the survey



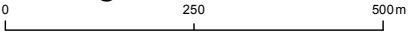
Llywodraeth Cymru  
Welsh Government

Appendix 10.21 Hedgerow Survey Report 2015

Hedgerow Survey Results Map

Figure: 1d	Revision: -
Date: March 2016	Status: AT ISSUE
Drawn: MS	Checked: KJ

Scale: A3 @ 1:10,000

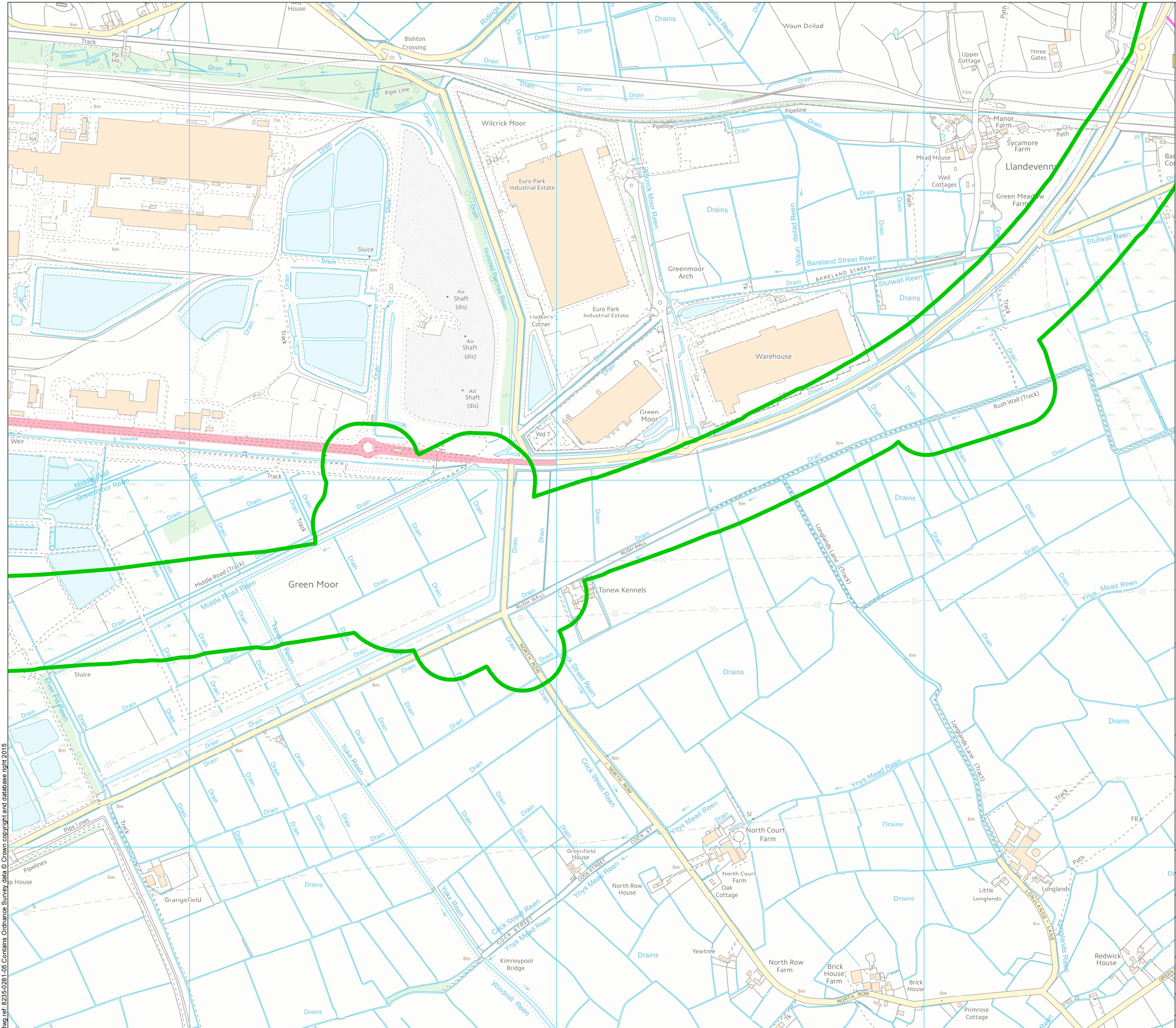













**Legend**

- 100m Study Area
- Hedgerow classified as "Important" under the Hedgerow Regulations
- Hedgerow not classified as "Important" under the Hedgerow Regulations

Study area shown reflects the scheme design at the time of the survey



Llywodraeth Cymru  
Welsh Government


Appendix 10.21 Hedgerow Survey Report 2015

**Hedgerow Survey Results Map**

Figure: 1f	Revision: -
Date: March 2016	Status: AT ISSUE
Drawn: MS	Checked: KJ

Scale: A3 @ 1:10,000

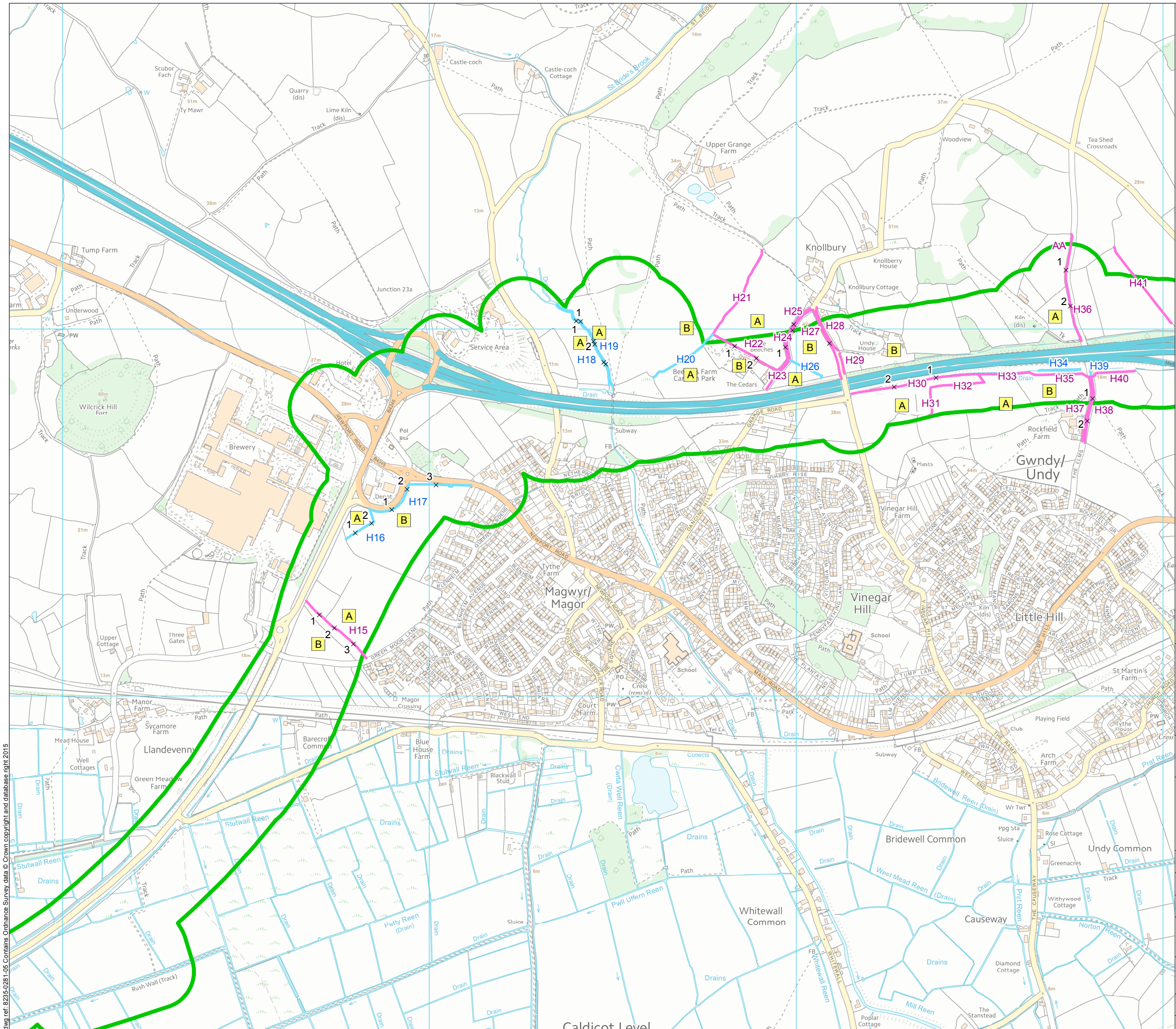
0 250 500m



© Crown copyright and database right 2016. Ordnance Survey 100021874. Welsh Government.  
© Hawlfraint a hawliau cronfa ddata'r Goron 2016. Rhif Trwydded yr Arolwg Ordnans 100021874.  
dwg ref: 8235-0281-05



dwg ref: 8235-0281-05 Contains Ordnance Survey data © Crown copyright and database right 2015



### Legend

- 100m Study Area
- Hedgerow classified as "Important" under the Hedgerow Regulations
- Hedgerow not classified as "Important" under the Hedgerow Regulations

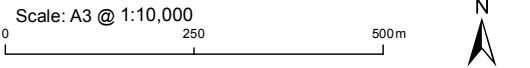
Study area shown reflects the scheme design at the time of the survey



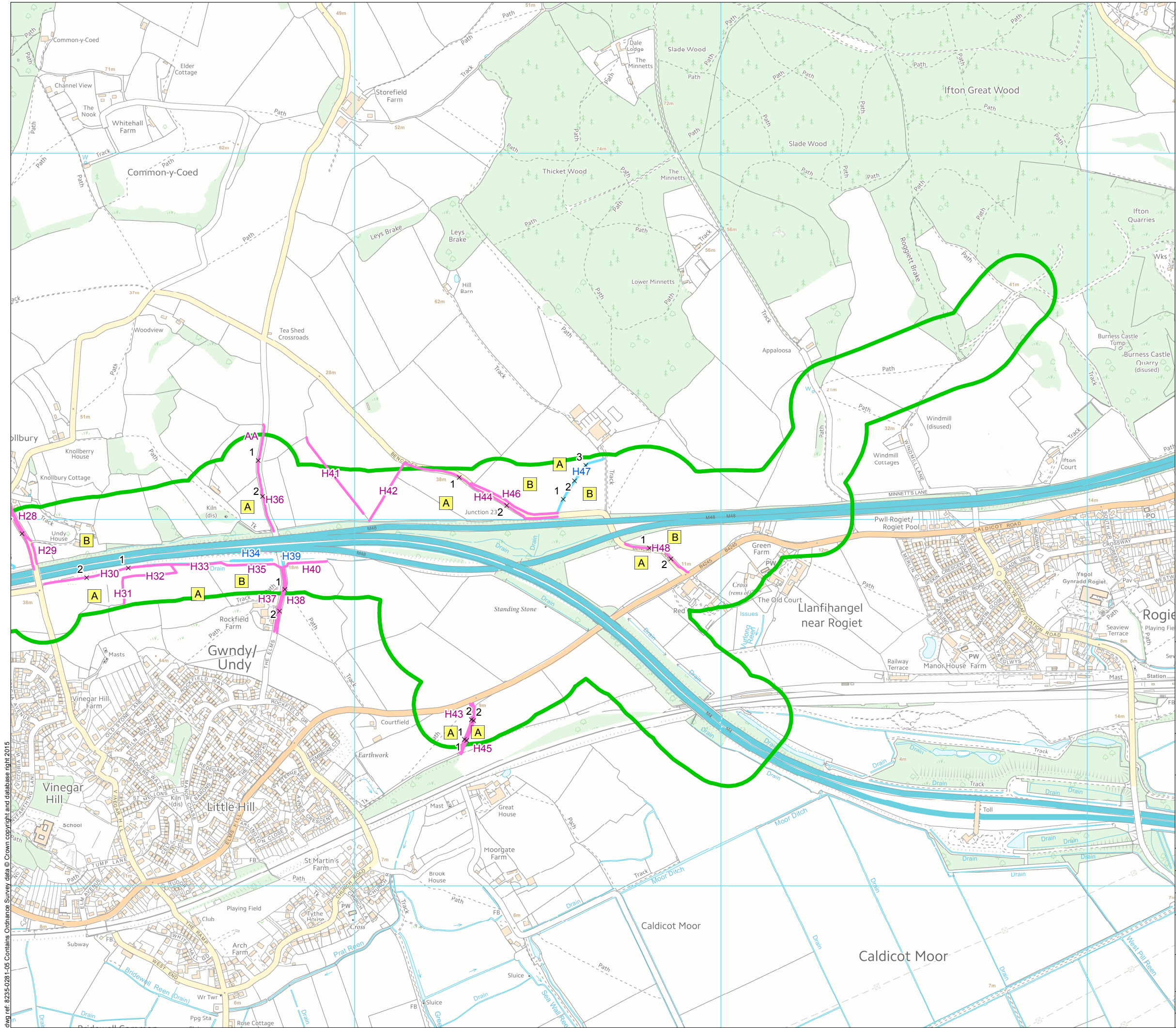
Appendix 10.21 Hedgerow Survey Report 2015

### Hedgerow Survey Results Map

Figure: 1g	Revision: -
Date: March 2016	Status: AT ISSUE
Drawn: MS	Checked: KJ







- Legend**
- 100m Study Area
  - Hedgerow classified as "Important" under the Hedgerow Regulations
  - Hedgerow not classified as "Important" under the Hedgerow Regulations

Study area shown reflects the scheme design at the time of the survey



Llywodraeth Cymru  
Welsh Government

Appendix 10.21 Hedgerow Survey Report 2015

### Hedgerow Survey Results Map

Figure: 1h	Revision: -
Date: March 2016	Status: AT ISSUE
Drawn: MS	Checked: KJ



# Annex A: Hedgerow Regulations Woody and Woodland Species Criteria

---

## Woody Species

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



Spurge-laurel (*Daphne laureola*)  
Walnut (*Juglans regia*)  
Wayfaring-tree (*Viburnum lantana*)  
Whitebeam (*Sorbus* species)  
Willow (*Salix* species)  
Yew (*Taxus baccata*)

## Woodland Species

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

Wood millet (*Millium effusum*)  
Wood sage (*Teucrium scorodonia*)  
Wood sedge (*Carex sylvatica*)  
Wood sorrel (*Oxalis acetosella*)  
Wood speedwell (*Veronica montana*)  
Wood spurge (*Euphorbia amygdaloides*)  
Woodruff (*Galium odoratum*)  
Yellow archangel (*Lamium galeobdolon*)  
Yellow pimpernel (*Lysimachia nemorum*)

## **Annex B: Hedgerow Regulations Survey Data**

---

## Field Survey Form – H1(1)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	2	3	0	9	2	0	1	5	Hedgerow No	C1
Surveyor(s): Sean Flynn										Side Surveyed - Both Y/ <b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		<b>X</b>
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved	<b>X</b>			Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm	0.5m		8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a				
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.				
				
a) <b>Trimmed &amp; dense</b>	b) Intensively managed	c) Untrimmed	d) Tall & leggy	
				
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch	

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	2.5m	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)

16 – NOTES – Whole hedgerow or 30m survey section
16a - Fauna (evidence of)
BADGER – push throughs
16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )			Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)	30	
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	5		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )					
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	70				
Hazel ( <i>Corylus avellana</i> )	10				
Holly ( <i>Ilex aquifolium</i> )	10				
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )			White Bryony	5	
Maple, field ( <i>Acer campestre</i> )			Bramble ( <i>Rubus fruticosus</i> agg.)	10	
Oak, pedunculate ( <i>Quercus robur</i> )	5		Honeysuckle ( <i>Lonicera periclymenum</i> )	20	
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	50	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Polypody sp.					
Herb Robert					
Dog's mercury					

## Field Survey Form – H1(2)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	2	3	0	9	2	0	1	5	Hedgerow No	C2
Surveyor(s): Sean Flynn										Side Surveyed - Both Y/ <b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		<b>X</b>
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved	<b>X</b>			Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm	1m		8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a			
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.			
			
a) Trimmmed & dense	b) Intensively managed	c) Untrimmed	d) Tall & leggy
			
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	3m	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	2m

14 - INTEGRITY - Continuity and height of canopy along hedgerow			
14a – Estimated % GAPS - percentage gaps			
14b – Any gaps >5m? (Y/N)	Y (to south)	14c – Average height of base canopy (m) to nearest 25cm	

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)



16 – NOTES – Whole hedgerow or 30m survey section			
16a - Fauna (evidence of)			
<b>BADGER – push through</b>			
16b - Features (including evidence of recent planting)			

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )	2		Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)	1	
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	3		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )					
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	40				
Hazel ( <i>Corylus avellana</i> )	40				
Holly ( <i>Ilex aquifolium</i> )					
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )			White Bryony	10	
Maple, field ( <i>Acer campestre</i> )	10		Bramble ( <i>Rubus fruticosus</i> agg.)	20	
Oak, pedunculate ( <i>Quercus robur</i> )	1		Honeysuckle ( <i>Lonicera periclymenum</i> )	5	
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )		
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Herb Robert					
Dog's mercury					
Wood sage					
Lords-and-ladies					

## Field Survey Form – H4

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	2	3	0	9	2	0	1	5	Hedgerow No	D
Surveyor(s): Sean Flynn										Side Surveyed - Both Y/ <b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop		<b>X</b>	7e - Road/Route	Major Road		
	Uncropped margin				Minor Road	<b>X</b>	
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved				Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm	20		8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a				
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.				
				
a) <b>Trimmed &amp; dense</b>	b) Intensively managed	c) Untrimmed	d) Tall & leggy	
				
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch	

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	3.5m	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	2m

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)

16 – NOTES – Whole hedgerow or 30m survey section
16a - Fauna (evidence of)
<b>BADGER – push throughs</b>
16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )	5		Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)	10	
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	40		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )	10		Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )					
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	10				
Hazel ( <i>Corylus avellana</i> )	10				
Holly ( <i>Ilex aquifolium</i> )					
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )				5	
Maple, field ( <i>Acer campestre</i> )	40		Bramble ( <i>Rubus fruticosus</i> agg.)		
Oak, pedunculate ( <i>Quercus robur</i> )	10		Honeysuckle ( <i>Lonicera periclymenum</i> )	5	
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	30	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Polypody sp.					
Dog's mercury					
Herb Robert					
Broad buckler fern					
Hart's tongue fern					

## Field Survey Form – H8

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	2	3	0	9	2	0	1	5	Hedgerow No	E
Surveyor(s): Sean Flynn										Side Surveyed - Both Y/N

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow		3b - Line of trees	
3c - Shrubby with line of trees		<b>X</b>	

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop	<b>X</b>		7e - Road/Route	Major Road		<b>X</b>
	Uncropped margin				Minor Road		
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved				Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm	0.5m		8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B
	30%	30%						

12 - HEDGEROW SHAPE – See also Part B section 19a				
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.				
				
a) Trimmed & dense	b) Intensively managed	<b>c) Untrimmed</b>	d) Tall & leggy	
				
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch	

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	2m	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)
Quercus robur	1.25m		
Fraxinus excelsior	0.3m		

16 – NOTES – Whole hedgerow or 30m survey section

16a - Fauna (evidence of)

Knopper Gall on oaks
----------------------

Mature ivy on oak – Bats?

## 16b - Features (including evidence of recent planting)

## 30m SURVEY SECTION ONLY

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.

[illegible]

## Field Survey Form – H12

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	2	4	0	9	2	0	1	5	Hedgerow No	H
Surveyor(s): Sean Flynn										Side Surveyed - Both Y/ <b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow		3b - Line of trees	<b>X</b>
		3c - Shrubby with line of trees	

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--

5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total








6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop		<b>X</b>	7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		
7b - Grass	Improved	<b>X</b>			Track (unsurfaced)		
	Semi-improved				Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		



8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm	<b>Cut</b>	<b>Cut</b>	8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a			
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.			
			
a) <b><u>Trimmed &amp; dense</u></b> <b>(with threes)</b>	b) Intensively managed	c) Untrimmed	d) Tall & leggy
			
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	<b>&gt;15m</b>	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	<b>4m</b>

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)
<b>Lombardy Pop</b>	<b>50</b>	<b>Oak</b>	<b>100</b>

<b>Lombardy Pop</b>	<b>40</b>		
<b>Lombardy Pop</b>	<b>40</b>		
16 – NOTES – Whole hedgerow or 30m survey section			
16a - Fauna (evidence of)			
16b - Features (including evidence of recent planting)			

### 30m SURVEY SECTION ONLY

#### 17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.

Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )	<b>10</b>		Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)	<b>x</b>	
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	<b>20</b>		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )			Oseir	<b>x</b>	
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	<b>50</b>		Lombardy Poplar	<b>x</b>	
Hazel ( <i>Corylus avellana</i> )	<b>30</b>				
Holly ( <i>Ilex aquifolium</i> )	<b>15</b>				
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )					
Maple, field ( <i>Acer campestre</i> )	<b>1</b>		Bramble ( <i>Rubus fruticosus</i> agg.)	<b>x</b>	
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )	<b>5</b>		Ivy ( <i>Hedera helix</i> )	<b>x</b>	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Horsetail sp					
Herb Robert					

## Field Survey Form – H14

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	7	0	9	2	0	1	5	Hedgerow No	I	
Surveyor(s): Georgia Kelly and Sean Flynn										Side Surveyed - Both Y/N	
										Side A	<b>W</b>
										Side B	<b>E</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	NO
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow		3b - Line of trees	
		3c - Shrubby with line of trees	<b>X</b>

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved		<b>X</b>		Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	<b>X</b>
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a			
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.			
			
a) Trimmed & dense	b) Intensively managed	c) Untrimmed	d) Tall & leggy
			
<b>e) Untrimmed, with outgrowth</b>	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	<b>10m</b>	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	<b>12m</b>

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)
<b>Oak</b>	<b>150</b>		
<b>Oak</b>	<b>50</b>		

16 – NOTES – Whole hedgerow or 30m survey section

16a - Fauna (evidence of)

Potential for bats in tree hollow – check with endoscope pre-construction

16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.

Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )			Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)	10	
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	20		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )	10	
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )	10				
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	20				
Hazel ( <i>Corylus avellana</i> )					
Holly ( <i>Ilex aquifolium</i> )					
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )					
Maple, field ( <i>Acer campestre</i> )			Bramble ( <i>Rubus fruticosus</i> agg.)	10	
Oak, pedunculate ( <i>Quercus robur</i> )	20		Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	20	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Herb Robert					
Hart's tongue fern					
Broad buckler fern					
Mosses					

## Field Survey Form – H20

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	5	0	9	2	0	1	5	Hedgerow No	J
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved	<b>X</b>	<b>X</b>		Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm	<b>30</b>	<b>30</b>	8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B
	<b>~80</b>	<b>~80</b>						

12 - HEDGEROW SHAPE – See also Part B section 19a				
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.				
				
<b>a) Trimmed &amp; dense</b>	b) Intensively managed	c) Untrimmed	d) Tall & leggy	
				
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch	

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	<b>2.5m</b>	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	<b>2m</b>

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)
<b>Hawthorn</b>	<b>20</b>		

# 16 – NOTES – Whole hedgerow or 30m survey section

16a - Fauna (evidence of)

16b - Features (including evidence of recent planting)

## 30m SURVEY SECTION ONLY

### 17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.

Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )			Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)	10	
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	40		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )	5				
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	30				
Hazel ( <i>Corylus avellana</i> )	10				
Holly ( <i>Ilex aquifolium</i> )	5				
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )			W Bryony	5	
Maple, field ( <i>Acer campestre</i> )			Bramble ( <i>Rubus fruticosus</i> agg.)	5	
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	5	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
White bryony					
Herb Robert					
Wood avens					

No hedgebank/ditch. Not av. 1 std tree. Does have gaps which <10%. No parallel hedge. Check connections



## NOT SURVEYED

**Lots of gaps. Intro species. Dist by caravan site.**

### Field Survey Form – H22(1)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	5	0	9	2	0	1	5	Hedgerow No		
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/N	

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	NO
Difficulty(ies):		
<b>Lots of gaps. Intro species. Dist by caravan site.</b>		

3 - HEDGEROW TYPE					
3a - Shrubby hedgerow		3b - Line of trees		3c - Shrubby with line of trees	

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	
----------------------	---------------------	--	---------------------	--

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved				Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a				
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.				
				
a) Trimmed & dense	b) Intensively managed	c) Untrimmed	d) Tall & leggy	
				
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch	

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm		13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)

16 – NOTES – Whole hedgerow or 30m survey section

16a - Fauna (evidence of)

16b - Features (including evidence of recent planting)
--

## 30m SURVEY SECTION ONLY

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.

[illegible]

## Field Survey Form – H22(2)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	5	0	9	2	0	1	5	Hedgerow No	K2
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		<b>X</b>
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved	<b>X</b>			Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm	0	20	8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm	30	20	8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)		X		
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B
	50	5						

12 - HEDGEROW SHAPE – See also Part B section 19a				
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.				
				
a) <b><u>Trimmed &amp; dense</u></b>	b) Intensively managed	c) Untrimmed	d) Tall & leggy	
				
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch	

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	1m	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	2m

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)

16 – NOTES – Whole hedgerow or 30m survey section

16a - Fauna (evidence of)

16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.

Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )			Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)	5	
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	5		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )	5				
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	20				
Hazel ( <i>Corylus avellana</i> )	2				
Holly ( <i>Ilex aquifolium</i> )	3				
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )					
Maple, field ( <i>Acer campestre</i> )			Bramble ( <i>Rubus fruticosus</i> agg.)	70	
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	5	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )	5	
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species - 6</b>					
Wood avens					
Herb Robert					
Yellow archangel					

## Field Survey Form – H24

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	5	0	9	2	0	1	5	Hedgerow No	L
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	NO
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		<b>X</b>
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved	<b>X</b>			Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm		20	8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm		20	8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B
		5						

12 - HEDGEROW SHAPE – See also Part B section 19a				
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.				
				
a) <b>Trimmed &amp; dense</b>	b) Intensively managed	c) Untrimmed	d) Tall & leggy	
				
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch	

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	1.5m	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	1.5m

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)



16 – NOTES – Whole hedgerow or 30m survey section
16a - Fauna (evidence of)
16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )			Privet, wild ( <i>Ligustrum vulgare</i> )	5	
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)	10	
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )			Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )	20		Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )					
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	40				
Hazel ( <i>Corylus avellana</i> )	10				
Holly ( <i>Ilex aquifolium</i> )	10				
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )					
Maple, field ( <i>Acer campestre</i> )	10		Bramble ( <i>Rubus fruticosus</i> agg.)	10	
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	5	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Herb Robert			Hairy Brome		
Bracken					
Crane's bill					
Wood avens					
Creeping cinquefoil					
Vetch (Bush)					

## Field Survey Form – H24(2)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	5	0	9	2	0	1	5	Hedgerow No	L2
Surveyor(s): Sean Flynn										Side Surveyed - Both Y/ <b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		<b>X</b>
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved	<b>X</b>			Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm	25	25	8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm	30	30	8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B
	10	10						

12 - HEDGEROW SHAPE – See also Part B section 19a				
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.				
				
a) <b>Trimmed &amp; dense</b>	b) Intensively managed	c) Untrimmed	d) Tall & leggy	
				
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch	

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	1.5m	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	2m

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)

16 – NOTES – Whole hedgerow or 30m survey section
16a - Fauna (evidence of)
16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )	5		Privet, wild ( <i>Ligustrum vulgare</i> )	10	
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )	20	
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)		
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	5		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )	20		Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )					
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)					
Hazel ( <i>Corylus avellana</i> )	40				
Holly ( <i>Ilex aquifolium</i> )	10				
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )					
Maple, field ( <i>Acer campestre</i> )			Bramble ( <i>Rubus fruticosus</i> agg.)	10	
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	40	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Herb Robert					
Greater stitchwort					
Wood avens					
Ground ivy					
Hairy brome					

7 Woody Species. Hedgebank. Parallel Hedge

## Field Survey Form – H25

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	5	0	9	2	0	1	5	Hedgerow No	M1
Surveyor(s): Sean Flynn										Side Surveyed - Both Y/ <b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	
----------------------	---------------------	--	---------------------	--

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road	<b>X</b>	
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved		<b>X</b>		Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm	<b>0.5m</b>	<b>0.5m</b>	8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm	<b>20cm</b>	<b>20cm</b>	8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B
	<b>&lt;5%</b>							

12 - HEDGEROW SHAPE – See also Part B section 19a			
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.			
			
<b>a) Trimmed &amp; dense</b>	b) Intensively managed	c) Untrimmed	d) Tall & leggy
			
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	<b>1m</b>	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	<b>2.5m</b>

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)

16 – NOTES – Whole hedgerow or 30m survey section			
16a - Fauna (evidence of)			
16b - Features (including evidence of recent planting)			

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )	10		Privet, wild ( <i>Ligustrum vulgare</i> )	40	
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)	10	
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	10		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )	10		Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )					
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	30				
Hazel ( <i>Corylus avellana</i> )	50				
Holly ( <i>Ilex aquifolium</i> )					
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )					
Maple, field ( <i>Acer campestre</i> )			Bramble ( <i>Rubus fruticosus</i> agg.)	10	
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )	5	
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	20	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )	5	
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Hairy brome					
Herb Robert					
Wood avens					
Dog's mercury					

7 Woody Species. Hedgebank. Hedge Parallel

## Field Survey Form – H23

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	5	0	9	2	0	1	5	Hedgerow No	P
Surveyor(s): Sean Flynn										Side Surveyed - Both Y/ <b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--

5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total








6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		<b>X</b>
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved	<b>X</b>			Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		



8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a				
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.				
				
a) <b>Trimmed &amp; dense</b>	b) Intensively managed	c) Untrimmed	d) Tall & leggy	
				
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch	

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	<b>3m</b>	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	<b>1.5m</b>

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	<b>0</b>

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)

16 – NOTES – Whole hedgerow or 30m survey section
16a - Fauna (evidence of)
<b>Small mustelid (possibly weasel)</b>
16b - Features (including evidence of recent planting)

### 30m SURVEY SECTION ONLY

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )	10		Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)	10	
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	30		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )	20		Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )	5				
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	20				
Hazel ( <i>Corylus avellana</i> )	20				
Holly ( <i>Ilex aquifolium</i> )					
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )					
Maple, field ( <i>Acer campestre</i> )			Bramble ( <i>Rubus fruticosus</i> agg.)	10	
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	20	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )	10	
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Herb Robert					
Wood avens					
Hairy brome					

7 Woody species. Hedge bank. Hedge Parallel.

## Field Survey Form – H26

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	5	0	9	2	0	1	5	Hedgerow No	Q
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	NO
Difficulty(ies):		

3 - HEDGEROW TYPE				
3a - Shrubby hedgerow		3b - Line of trees		3c - Shrubby with line of trees
				<b>X</b>

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		
7b - Grass	Improved	<b>X</b>	<b>X</b>		Track (unsurfaced)		
	Semi-improved				Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm	20	20	8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B
	50	50						

12 - HEDGEROW SHAPE – See also Part B section 19a				
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.				
				
a) <b>Trimmed &amp; dense</b>	b) Intensively managed	c) Untrimmed	d) Tall & leggy	
				
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch	

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	2.5m	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	1.5m

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)

16 – NOTES – Whole hedgerow or 30m survey section

16a - Fauna (evidence of)

#### 16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.

[illegible]

## Field Survey Form – H30(3)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	6	0	9	2	0	1	5	Hedgerow No	T3
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	NO
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		<b>X</b>
	Uncropped margin				Minor Road		
7b - Grass	Improved	<b>X</b>			Track (unsurfaced)		
	Semi-improved				Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm	20	20	8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)	X			
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a			
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.			
			
a) Trimmed & dense	b) Intensively managed	<b>c) Untrimmed</b>	d) Tall & leggy
			
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	4m	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	5m

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)
Ash	50		

16 – NOTES – Whole hedgerow or 30m survey section

16a - Fauna (evidence of)

#### 16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.

[illegible]



## Field Survey Form – H30(4)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	6	0	9	2	0	1	5	Hedgerow No	T4	
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <b>N</b>	<b>A</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	NO
Difficulty(ies):		

3 - HEDGEROW TYPE				
3a - Shrubby hedgerow		3b - Line of trees		3c - Shrubby with line of trees
				<b>X</b>

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		<b>X</b>
	Uncropped margin				Minor Road		
7b - Grass	Improved	<b>X</b>			Track (unsurfaced)		
	Semi-improved				Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm	<b>20</b>	<b>20</b>	8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)	<b>X</b>			
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a			
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.			
			
a) Trimmed & dense	b) Intensively managed	<b>c) Untrimmed</b>	d) Tall & leggy
			
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	<b>4m</b>	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	<b>5m</b>

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)
<b>P. Oak</b>	<b>30</b>		
<b>P. Oak</b>	<b>30</b>		
<b>P. Oak</b>	<b>30</b>		

16 – NOTES – Whole hedgerow or 30m survey section

16a - Fauna (evidence of)

#### 16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.

[illegible]

## Field Survey Form – H32(1)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	6	0	9	2	0	1	5	Hedgerow No	U1
Surveyor(s): Sean Flynn										Side Surveyed - Both Y/ <b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE				
3a - Shrubby hedgerow		3b - Line of trees		3c - Shrubby with line of trees
				<b>X</b>

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		
7b - Grass	Improved	<b>X</b>			Track (unsurfaced)		
	Semi-improved		<b>X</b>		Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm	1.5m		8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)		X		
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B
	60	60		20	20			

12 - HEDGEROW SHAPE – See also Part B section 19a				
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.				
				
a) <b>Trimmed &amp; dense</b>	b) Intensively managed	c) Untrimmed	d) Tall & leggy	
				
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch	

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm		13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	5%

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)
Oak	50		

16 – NOTES – Whole hedgerow or 30m survey section
16a - Fauna (evidence of)
<b>Grey squirrel</b>
16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )			Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)	10	
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	5		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )	5		Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )	20				
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	60				
Hazel ( <i>Corylus avellana</i> )	20				
Holly ( <i>Ilex aquifolium</i> )					
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )			Wh Boyous	10	
Maple, field ( <i>Acer campestre</i> )	5		Bramble ( <i>Rubus fruticosus</i> agg.)	40	
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )	1		Ivy ( <i>Hedera helix</i> )	60	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )	5	
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Herb Robert					
Lords-and-ladies					

## Field Survey Form – H31

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	6	0	9	2	0	1	5	Hedgerow No	VA	
Surveyor(s): Sean Flynn										Side Surveyed - Both Y/N	

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow		3b - Line of trees	
		3c - Shrubby with line of trees	<b>X</b>

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	<b>60m</b>
---	------------








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		
7b - Grass	Improved		<b>X</b>		Track (unsurfaced)		
	Semi-improved	<b>X</b>			Footpath		
7c - Woodland	Unimproved			7f - Water	Rail		
	Young				Canal		
	Semi-mature				River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm	50	50	8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)	X	X		
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B
	80	80		60	60			

12 - HEDGEROW SHAPE – See also Part B section 19a			
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.			
			
a) Trimmed & dense	b) Intensively managed	c) Untrimmed	d) Tall & leggy
			
e) <u>Untrimmed, with outgrowth</u>	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	15m	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	10m

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)
Oak	50	Oak	50
Oak	50		
Oak	70		



16 – NOTES – Whole hedgerow or 30m survey section
16a - Fauna (evidence of)
<b>Grey Squirrel</b>
16b - Features (including evidence of recent planting)
<b>Fence internal. Increased nutrient enrichment from adjacent improved grass</b>

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )			Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )	20	
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)		
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	10		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )	5		Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )	1				
Elm, English ( <i>Ulmus procera</i> )			Spindle	1	
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	40				
Hazel ( <i>Corylus avellana</i> )					
Holly ( <i>Ilex aquifolium</i> )					
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )					
Maple, field ( <i>Acer campestre</i> )	5		Bramble ( <i>Rubus fruticosus</i> agg.)		
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )	20		Ivy ( <i>Hedera helix</i> )		
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Burreed					
Lords-and-ladies					
Herb Robert					

## Field Survey Form – H33(1)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	2	2	0	9	2	0	1	5	Hedgerow No	V1	
Surveyor(s):										Side Surveyed - Both Y/N	<b>NO</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow	<b>X</b>	6b - 30m Section(s)	
----------------------	---------------------	----------	---------------------	--

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		<b>X</b>
	Uncropped margin				Minor Road		
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved	<b>X</b>			Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm	-	-	8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a			
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.			
			
a) Trimmed & dense	b) Intensively managed	<b>c) Untrimmed</b>	d) Tall & leggy
			
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	<b>12m</b>	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	<b>~4m</b>

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)

16 – NOTES – Whole hedgerow or 30m survey section
16a - Fauna (evidence of)
<b>BADGER – push through</b>
16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )	X		Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)	X	
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	X		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )	X		Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )	X				
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )			Lords and Ladies		
Elm, ( <i>Ulmus</i> sp.)			White head nettle		
Gorse ( <i>Ulex europaeus</i> )			Hedge bed		
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	X				
Hazel ( <i>Corylus avellana</i> )	X				
Holly ( <i>Ilex aquifolium</i> )					
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )					
Maple, field ( <i>Acer campestre</i> )	X		Bramble ( <i>Rubus fruticosus</i> agg.)	X	
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	X	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Lords-and-ladies					
White dead nettle					
Hedge bedstraw					

## Field Survey Form – H35(1)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	6	0	9	2	0	1	5	Hedgerow No	W1	
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <b>N</b>	<b>B</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	NO
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow		3b - Line of trees	
		3c - Shrubby with line of trees	<b>X</b>

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		
7b - Grass	Improved	<b>X</b>			Track (unsurfaced)		
	Semi-improved		<b>X</b>		Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm	<b>10cm</b>	<b>10cm</b>	8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)	<b>X</b>			
8d - Ditch - external - Dry (tick) <b>3m to North</b>		<b>X</b>		
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a			
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.			
			
a) Trimmed & dense	b) Intensively managed	<b>c) Untrimmed</b>	d) Tall & leggy
			
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	<b>4m</b>	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	<b>1m</b>

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)
<b>Immature and saplings along entire length, see 17 for species</b>	<b>5-15cm</b>		

16 – NOTES – Whole hedgerow or 30m survey section			
16a - Fauna (evidence of)			
<b>Badger – Diggings covered by fence</b>			
16b - Features (including evidence of recent planting)			

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )	5		Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)	5	
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	10		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )	10	
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )					
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	20				
Hazel ( <i>Corylus avellana</i> )	20				
Holly ( <i>Ilex aquifolium</i> )					
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )					
Maple, field ( <i>Acer campestre</i> )	10		Bramble ( <i>Rubus fruticosus</i> agg.)	10	
Oak, pedunculate ( <i>Quercus robur</i> )	10		Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	50	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species - 8</b>					

## Field Survey Form – H34

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	6	0	9	2	0	1	5	Hedgerow No	X
Surveyor(s): Sean Flynn										Side Surveyed - Both Y/ <b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--

5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total








6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road	<b>X</b>	
	Uncropped margin				Minor Road		
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved				Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other	Motorway balancing pond		<b>X</b>		Lake/pond		



8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm	<b>30cm</b>	<b>30cm</b>	8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a			
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.			
			
a) Trimmed & dense	b) Intensively managed	<b>c) Untrimmed</b>	d) Tall & leggy
			
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	<b>10m</b>	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	<b>&gt;5m</b> Connected to motorway verge

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)

16 – NOTES – Whole hedgerow or 30m survey section			
16a - Fauna (evidence of)			
<b>Badger</b>			
16b - Features (including evidence of recent planting)			
<b>Part of motorway verge. Recently planted. High proportion non-native</b>			

### 30m SURVEY SECTION ONLY

#### 17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.

Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )	10		Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)	5	
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	20		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )	5	
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )					
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	30				
Hazel ( <i>Corylus avellana</i> )					
Holly ( <i>Ilex aquifolium</i> )					
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )					
Maple, field ( <i>Acer campestre</i> )	5		Bramble ( <i>Rubus fruticosus</i> agg.)	30	
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )		
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )	10	
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					

Most part of plantation w/l on motorway verge than hedgerow. NOT protected under hab regs

## Field Survey Form – H37

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	6	0	9	2	0	1	5	Hedgerow No	Y	
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/N	<b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	NO
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road	<b>X</b>	
7b - Grass	Improved		<b>X</b>		Track (unsurfaced)		
	Semi-improved				Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm	<b>20</b>		8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)		<b>X</b>		
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a				
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.				
				
<b>a) Trimmed &amp; dense</b>	b) Intensively managed	c) Untrimmed	d) Tall & leggy	
				
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch	

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	<b>2m</b>	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	<b>1.5m</b>

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)

16 – NOTES – Whole hedgerow or 30m survey section

16a - Fauna (evidence of)

16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.

Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )			Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)	10	
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	20		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )	10		Prunus sp.	10	
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	20				
Hazel ( <i>Corylus avellana</i> )	10				
Holly ( <i>Ilex aquifolium</i> )					
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )					
Maple, field ( <i>Acer campestre</i> )			Bramble ( <i>Rubus fruticosus</i> agg.)	20	
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	10	
Pear ( <i>Pyrus communis sensu lato</i> )			Traveller's-joy ( <i>Clematis vitalba</i> )	10	
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Creeping cinquefoil					
Lords-and-ladies					
Garlic mustard					
Dog's mercury					
Pale toadflax					
Wood false brome					

## Field Survey Form – H40

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	6	0	9	2	0	1	5	Hedgerow No	Z	
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <b>N</b>	<b>A</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	NO
Difficulty(ies):		

3 - HEDGEROW TYPE				
3a - Shrubby hedgerow		3b - Line of trees		3c - Shrubby with line of trees
				<b>X</b>

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		
7b - Grass	Improved		<b>X</b>		Track (unsurfaced)		
	Semi-improved	<b>X</b>			Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm	<b>20</b>	<b>20</b>	8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)		<b>X</b>		
8d - Ditch - external - Dry (tick) <b>3m to North</b>	<b>X</b>			
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a			
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.			
			
a) Trimmed & dense	b) Intensively managed	<b>c) Untrimmed</b>	d) Tall & leggy
			
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	<b>4m</b>	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	<b>1m</b>

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)
<b>Sapling and immature trees, as at 17</b>	<b>5-10</b>		

16 – NOTES – Whole hedgerow or 30m survey section
16a - Fauna (evidence of)
<b>Badger latrine to west</b>
16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )			Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)	5	
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	30		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )	10		Prunus Sp.	10	
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	20				
Hazel ( <i>Corylus avellana</i> )	20				
Holly ( <i>Ilex aquifolium</i> )					
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )					
Maple, field ( <i>Acer campestre</i> )	5		Bramble ( <i>Rubus fruticosus</i> agg.)	10	
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	10	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Lords-and-ladies					
Wood avens					



## Field Survey Form – H36(1)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	1	0	9	2	0	1	5	Hedgerow No	AA1
Surveyor(s): Sean Flynn, Georgia Kelly										Side Surveyed - Both Y/ <b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road	<b>X</b>	
7b - Grass	Improved		<b>X</b>		Track (unsurfaced)		
	Semi-improved				Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm	0.5		8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B
	5							

12 - HEDGEROW SHAPE – See also Part B section 19a				
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.				
				
a) <b>Trimmed &amp; dense</b>	b) Intensively managed	c) Untrimmed	d) Tall & leggy	
				
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch	

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	2m	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	2m

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)

16 – NOTES – Whole hedgerow or 30m survey section

16a - Fauna (evidence of)

16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.

Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )			Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)	10	
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	10		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )	20		Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )					
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	10				
Hazel ( <i>Corylus avellana</i> )	25				
Holly ( <i>Ilex aquifolium</i> )	20				
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )					
Maple, field ( <i>Acer campestre</i> )	40		Bramble ( <i>Rubus fruticosus</i> agg.)	10	
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	20	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )	10	
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Hedge bedstraw			Creeping cinquefoil		
Lords-and-ladies			Wood sage		
Bracken			Wood avens		
Wood medic			Herb Robert		
Red fescue			Barren strawberry		
Dog violet					

## Field Survey Form – H36(2)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	1	0	9	2	0	1	5	Hedgerow No	AA2
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow	6b - 30m Section(s)	
			<b>X</b>

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		<b>X</b>
7b - Grass	Improved	<b>X</b>			Track (unsurfaced)		
	Semi-improved				Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm	<b>0.75m</b>		8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm	<b>20cm</b>		8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a			
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.			
			
<b>a) Trimmed &amp; dense</b>	b) Intensively managed	c) Untrimmed	d) Tall & leggy
			
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	<b>1.5m</b>	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	<b>1m</b>

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)

16 – NOTES – Whole hedgerow or 30m survey section			
16a - Fauna (evidence of)			
16b - Features (including evidence of recent planting)			

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.
--

Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )			Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)	10	
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	5		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )	20		Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )					
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	5				
Hazel ( <i>Corylus avellana</i> )	40				
Holly ( <i>Ilex aquifolium</i> )	10				
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )				5	
Maple, field ( <i>Acer campestre</i> )	10		Bramble ( <i>Rubus fruticosus</i> agg.)	10	
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	10	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )	5	
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Herb Robert					
Hart's tongue					
Wood avens					
Lords-and-ladies					

## Field Survey Form – H41

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	2	4	0	9	2	0	1	5	Hedgerow No	<b>AB</b>
Surveyor(s): Sean Flynn										Side Surveyed - Both Y/ <b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow	6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved	<b>X</b>	<b>X</b>		Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm	50	-	8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm	30	30	8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B
	50	50						

12 - HEDGEROW SHAPE – See also Part B section 19a				
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.				
				
a) <b>Trimmed &amp; dense</b>	b) Intensively managed	c) Untrimmed	d) Tall & leggy	
				
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch	

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	2m	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	2m

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)



16 – NOTES – Whole hedgerow or 30m survey section
16a - Fauna (evidence of)
<b>Sheep under grazing. Rabbits</b>
16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )			Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)	10	
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	50		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )	10		Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )	1				
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	60				
Hazel ( <i>Corylus avellana</i> )	20				
Holly ( <i>Ilex aquifolium</i> )					
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )					
Maple, field ( <i>Acer campestre</i> )	5		Bramble ( <i>Rubus fruticosus</i> agg.)	60	
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	20	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings	5	
<b>Woodland species</b>					
Lords-and-ladies					
Herb Robert					
Wood false brome					
Hedge bedstraw					
Jack by the hedge					

## Field Survey Form – H42

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	2	4	0	9	2	0	1	5	Hedgerow No	AC
Surveyor(s): Sean Flynn										Side Surveyed - Both Y/ <b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	NO
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m
---








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow	6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved	<b>X</b>	<b>X</b>		Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm	25	25	8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm	30	30	8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B
	20	20						

12 - HEDGEROW SHAPE – See also Part B section 19a				
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.				
				
a) <b>Trimmed &amp; dense</b>	b) Intensively managed	c) Untrimmed	d) Tall & leggy	
				
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch	

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	2.5m	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	3m

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)

16 – NOTES – Whole hedgerow or 30m survey section
16a - Fauna (evidence of)
Rabbits
16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )			Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)	5	
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	50		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )	20		Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )	5				
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	60				
Hazel ( <i>Corylus avellana</i> )					
Holly ( <i>Ilex aquifolium</i> )	1				
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )			White Bryony	1	
Maple, field ( <i>Acer campestre</i> )			Bramble ( <i>Rubus fruticosus</i> agg.)	40	
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	30	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Herb Robert					
Hedge woundwort					
Wood avens					
Common dog violet					
Lords-and-ladies					

## Field Survey Form – H44(1)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	0	0	9	2	0	1	5	Hedgerow No	AD1
Surveyor(s): Sean Flynn										Side Surveyed - Both Y/ <b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	<b>250</b>
---	------------








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>2</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		<b>X</b>
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved	<b>X</b>	<b>X</b>		Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm		<b>0.25</b>	8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm		<b>Cut</b>	8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B
	<b>X</b>	<b>X</b>		<b>X</b>	<b>X</b>			

12 - HEDGEROW SHAPE – See also Part B section 19a				
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.				
				
<b>a) Trimmed &amp; dense</b>	b) Intensively managed	c) Untrimmed	d) Tall & leggy	
				
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch	

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	<b>1.5m</b>	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	<b>2m</b>

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)

16 – NOTES – Whole hedgerow or 30m survey section

16a - Fauna (evidence of)

16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.

Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )			Privet, wild ( <i>Ligustrum vulgare</i> )	10	
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)		
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	10		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )	10		Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )	10				
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	20				
Hazel ( <i>Corylus avellana</i> )	10				
Holly ( <i>Ilex aquifolium</i> )	5				
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )					
Maple, field ( <i>Acer campestre</i> )	30		Bramble ( <i>Rubus fruticosus</i> agg.)		
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	40	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )	10	
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Dogs mercury			Barren strawberry		
Herb Robert					
Lords-and-ladies					
Jack by the hedge					
Red fescue					
Wood avens					

## Field Survey Form – H44(2)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	0	0	9	2	0	1	5	Hedgerow No	AD2
Surveyor(s): Sean Flynn										Side Surveyed - Both Y/ <b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	<b>250</b>
---	------------

5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total








6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road	<b>X</b>	
	Uncropped margin				Minor Road		
7b - Grass	Improved		<b>X</b>		Track (unsurfaced)		
	Semi-improved				Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		



8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm	<b>Cut</b>		8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B
	<b>X</b>	<b>X</b>						<b>X</b>

12 - HEDGEROW SHAPE – See also Part B section 19a				
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.				
				
a) Trimmed & dense	b) Intensively managed	c) Untrimmed	d) Tall & leggy	
				
<b>e) Untrimmed, with outgrowth</b>	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch	

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	<b>2m</b>	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)

16 – NOTES – Whole hedgerow or 30m survey section
16a - Fauna (evidence of)
<b>Rabbits</b>
16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )			Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)	20	
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	20		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )	10	
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )	10				
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)	5				
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	30				
Hazel ( <i>Corylus avellana</i> )					
Holly ( <i>Ilex aquifolium</i> )					
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )					
Maple, field ( <i>Acer campestre</i> )			Bramble ( <i>Rubus fruticosus</i> agg.)	60	
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )		
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Hedge bedstraw					
Herb Robert					
Hogweed					
Silverweed					
False oat-grass					

## Field Survey Form H46(1)

### Local Hedgerow Field Survey Form

PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)

TITLE OF SURVEY: M4 Hedgerow regulation assessment

Grid Ref

Date 1 0 0 9 2 0 1 5 Hedgerow No AE1

Surveyor(s): Sean Flynn

Side Surveyed - Both Y/**N**

### 2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY

2d - Were there any difficulties in surveying the hedgerows? If so please describe.

YES

**NO**

Difficulty(ies):

### 3 - HEDGEROW TYPE

3a - Shrubby hedgerow

**X**

3b - Line of trees

3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m

**250**

5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow

End 1

End 2

Total

### 6 - EXTENT OF SURVEY

6a - Whole hedgerow

6b - 30m Section(s)








### WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)

#### 7 - ADJACENT LAND USE

		Side A	Side B			Side A	Side B
7a - Arable	Arable crop	<b>X (1/2)</b>	<b>X</b>	7e - Road/Route	Major Road		
	Uncropped margin				Minor Road	<b>X</b>	
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved				Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm	0.5		8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a				
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.				
				
a) <b>Trimmed &amp; dense</b>	b) Intensively managed	c) Untrimmed	d) Tall & leggy	
				
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch	

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	1.5	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	2

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)

16 – NOTES – Whole hedgerow or 30m survey section

16a - Fauna (evidence of)

**Rabbits**

16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.

Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )			Privet, wild ( <i>Ligustrum vulgare</i> )	20	
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)		
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	10		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )	25		Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )	5				
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	10				
Hazel ( <i>Corylus avellana</i> )	10				
Holly ( <i>Ilex aquifolium</i> )	30				
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )					
Maple, field ( <i>Acer campestre</i> )			Bramble ( <i>Rubus fruticosus</i> agg.)	20	
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	40	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )	20	
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Herb Robert					
Dog's mercury					
Lords-and-ladies					
Red fescue					
Creeping bent					
Yarrow					

## Field Survey Form – H46(2)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	0	0	9	2	0	1	5	Hedgerow No	AE2
Surveyor(s):										Side Surveyed - Both Y/ <b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	<b>250m</b>
---	-------------








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow	6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road	<b>X</b>	
7b - Grass	Improved		<b>X</b>		Track (unsurfaced)		
	Semi-improved				Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm	0.5	0.5	8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm	Cut	Cut	8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)	X	X		
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B
	X	X					X	

12 - HEDGEROW SHAPE – See also Part B section 19a				
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.				
				
a) <b>Trimmed &amp; dense</b>	b) Intensively managed	c) Untrimmed	d) Tall & leggy	
				
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch	

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	2m	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	2m

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)

16 – NOTES – Whole hedgerow or 30m survey section
16a - Fauna (evidence of)
<b>Rabbit. Possible badger push throughs. Ant Hills.</b>
16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )			Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )	X	
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)		
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	40		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )					
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	30				
Hazel ( <i>Corylus avellana</i> )	X				
Holly ( <i>Ilex aquifolium</i> )					
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )					
Maple, field ( <i>Acer campestre</i> )	X		Bramble ( <i>Rubus fruticosus</i> agg.)		
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )		
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Herb Robert					
False oat-grass					
White dead nettle					
Yarrow					
Creeping cinquefoil					
Slender St. John's wort					



## Field Survey Form – H48(1)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	1	0	9	2	0	1	5	Hedgerow No	AG1
Surveyor(s): Sean Flynn										Side Surveyed - Both Y/ <b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	<b>200</b>
---	------------








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		<b>X</b>
7b - Grass	Improved	<b>X</b>			Track (unsurfaced)		
	Semi-improved				Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm	1m		8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B
	60	60		X	X			

12 - HEDGEROW SHAPE – See also Part B section 19a				
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.				
				
a) <b>Trimmed &amp; dense</b>	b) Intensively managed	c) Untrimmed	d) Tall & leggy	
				
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch	

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	2m	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	1.5m

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)

16 – NOTES – Whole hedgerow or 30m survey section
16a - Fauna (evidence of)
16b - Features (including evidence of recent planting)
No

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )			Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)		
Birch, silver ( <i>Betula pendula</i> )	X		Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	X		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )	X		Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )	X				
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )	X		H Bindweed		
Elm, ( <i>Ulmus</i> sp.)			Cpars		
Gorse ( <i>Ulex europaeus</i> )			FOG		
Gorse, western ( <i>Ulex gallii</i> )			Nettle		
Guelder rose ( <i>Viburnum opulus</i> )			H Wound		
Hawthorn ( <i>Crataegus</i> sp.)			Wood Avens		
Hazel ( <i>Corylus avellana</i> )	X				
Holly ( <i>Ilex aquifolium</i> )	X				
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )					
Maple, field ( <i>Acer campestre</i> )			Bramble ( <i>Rubus fruticosus</i> agg.)		
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )	X	
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )		
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species - 3</b>					
Herb Robert			False oat-grass		
Lords-and-ladies			Common nettle		
Wood sage			Hedge woundwort		
Wood avens					
Hedge bindweed					
Cow parsley					

Hedgebank. No gaps. Parallel hedge w/in 15m

## Field Survey Form – H13

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	7	0	9	2	0	1	5	Hedgerow No	IA	
Surveyor(s): Georgia Kelly and Sean Flynn										Side Surveyed - Both Y/N	
										Side A	<b>E</b>
										Side B	<b>W</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	NO
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow		3b - Line of trees	
		3c - Shrubby with line of trees	<b>X</b>

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		
7b - Grass	Improved	<b>X</b>	<b>X</b>		Track (unsurfaced)		
	Semi-improved				Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	<b>X</b>
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	<b>X</b>
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a			
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.			
			
a) Trimmed & dense	b) Intensively managed	c) Untrimmed	d) Tall & leggy
			
<b>e) Untrimmed, with outgrowth</b>	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	<b>15</b>	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	<b>12</b>

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)
<b>Oak</b>	<b>50</b>		

16 – NOTES – Whole hedgerow or 30m survey section

16a - Fauna (evidence of)

16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.

Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )	10		Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )			Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)	20	
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	20		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )	20	
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )	10				
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	10				
Hazel ( <i>Corylus avellana</i> )					
Holly ( <i>Ilex aquifolium</i> )					
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )					
Maple, field ( <i>Acer campestre</i> )			Bramble ( <i>Rubus fruticosus</i> agg.)	20	
Oak, pedunculate ( <i>Quercus robur</i> )	20		Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	20	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Broad buckler fern					
Hart's tongue					
Herb Robert					
Wood dock					

## Field Survey Form – H21

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	5	0	9	2	0	1	5	Hedgerow No	JA
Surveyor(s): Sean Flynn										Side Surveyed - Both Y/ <b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow		3b - Line of trees	<b>X</b>
		3c - Shrubby with line of trees	

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved	<b>X</b>	<b>X</b>		Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm	<b>30</b>	<b>30</b>	8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B
	<b>60</b>	<b>60</b>						

12 - HEDGEROW SHAPE – See also Part B section 19a				
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.				
				
a) Trimmed & dense	b) Intensively managed	<b>c) Untrimmed</b>	d) Tall & leggy	
				
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch	

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	<b>10m</b>	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	<b>4m</b>

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)
<b>Ash</b>	<b>50</b>		



16 – NOTES – Whole hedgerow or 30m survey section

16a - Fauna (evidence of)

16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.

Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )	10		Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)	20	
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	5		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )	10		Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )	10				
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	60				
Hazel ( <i>Corylus avellana</i> )					
Holly ( <i>Ilex aquifolium</i> )	20				
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )			White Bryony	5	
Maple, field ( <i>Acer campestre</i> )	10		Bramble ( <i>Rubus fruticosus</i> agg.)	20	
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	30	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Herb Robert					
Wood melick					
Wood avens					

## Field Survey Form – H31

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	6	0	9	2	0	1	5	Hedgerow No	VA
Surveyor(s): Sean Flynn										Side Surveyed - Both Y/N

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE				
3a - Shrubby hedgerow		3b - Line of trees		3c - Shrubby with line of trees
				<b>X</b>

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	<b>60m</b>
---	------------








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		
7b - Grass	Improved		<b>X</b>		Track (unsurfaced)		
	Semi-improved	<b>X</b>			Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm	50	50	8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)	X	X		
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B
	80	80		60	60			

12 - HEDGEROW SHAPE – See also Part B section 19a			
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.			
			
a) Trimmed & dense	b) Intensively managed	c) Untrimmed	d) Tall & leggy
			
e) <u>Untrimmed, with outgrowth</u>	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	15m	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	10m

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)
Oak	50	Oak	50
Oak	50		
Oak	70		

16 – NOTES – Whole hedgerow or 30m survey section
16a - Fauna (evidence of)
<b>Grey Squirrel</b>
16b - Features (including evidence of recent planting)
<b>Fence internal. Increased nutrient enrichment from adjacent improved grass</b>

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )			Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )	20	
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)		
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	10		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )	5		Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )	1				
Elm, English ( <i>Ulmus procera</i> )			Spindle	1	
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	40				
Hazel ( <i>Corylus avellana</i> )					
Holly ( <i>Ilex aquifolium</i> )					
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )					
Maple, field ( <i>Acer campestre</i> )	5		Bramble ( <i>Rubus fruticosus</i> agg.)		
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )	20		Ivy ( <i>Hedera helix</i> )		
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Burdock					
Lords-and-ladies					
Herb Robert					

## Field Survey Form – H38(1)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	6	0	9	2	0	1	5	Hedgerow No	YA1	
Surveyor(s): Sean Flynn										Side Surveyed - Both Y/N	<b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow	6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road	<b>X</b>	
7b - Grass	Improved		<b>X</b>		Track (unsurfaced)		
	Semi-improved				Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm	25cm	25cm	8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B
	<5%	<5%						

12 - HEDGEROW SHAPE – See also Part B section 19a				
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.				
				
a) <b>Trimmed &amp; dense</b>	b) Intensively managed	c) Untrimmed	d) Tall & leggy	
				
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch	

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	2.5m	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	2.5m

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)

16 – NOTES – Whole hedgerow or 30m survey section

16a - Fauna (evidence of)

**Badger Road Crossing Points**

16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.

Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )	5	
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )			Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)	5	
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	20		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )			Spindle	1	
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )			False Brome		
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	30				
Hazel ( <i>Corylus avellana</i> )	30				
Holly ( <i>Ilex aquifolium</i> )					
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )			Wh Bryony	5	
Maple, field ( <i>Acer campestre</i> )			Bramble ( <i>Rubus fruticosus</i> agg.)	20	
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	30	
Pear ( <i>Pyrus communis</i> sensu lato)	1		Traveller's-joy ( <i>Clematis vitalba</i> )	30	
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Dog's mercury					
Hedge bedstraw					
Lords-and-ladies					
Herb Robert					
Wood false brome					

## Field Survey Form – H38(2)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	6	0	9	2	0	1	5	Hedgerow No	YA2
Surveyor(s): Sean Flynn										Side Surveyed - Both Y/ <b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	NO
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--

5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total








6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road	<b>X</b>	
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved				Footpath		
	Unimproved		<b>X</b>		Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		



8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm	0.5m	0.5m	8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B
	5%	5%						

12 - HEDGEROW SHAPE – See also Part B section 19a				
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.				
				
a) <b>Trimmed &amp; dense</b>	b) Intensively managed	c) Untrimmed	d) Tall & leggy	
				
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch	

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	2.5m	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	2.5m

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)

16 – NOTES – Whole hedgerow or 30m survey section
16a - Fauna (evidence of)
<b>Badger / Fox push through to the south</b>
16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )			Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)	10	
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	20		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )	10		Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )					
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	30				
Hazel ( <i>Corylus avellana</i> )	10				
Holly ( <i>Ilex aquifolium</i> )					
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )					
Maple, field ( <i>Acer campestre</i> )	5		Bramble ( <i>Rubus fruticosus</i> agg.)		
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	20	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )	20	
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Ground ivy			Creeping cinquefoil		
Herb Robert					
Hedge bedstraw					
Dog's mercury					
Wood false brome					

Parallel hedge – Check connectivity

## Field Survey Form – H43(1)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	9	1	0	2	0	1	5	Hedgerow No				
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <u>N</u> <b>N</b>			

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		<b>X</b>
7b - Grass	Improved	<b>X</b>			Track (unsurfaced)		
	Semi-improved				Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm		25m	8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a				
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.				
				
a) <b>Trimmed &amp; dense</b>	b) Intensively managed	c) Untrimmed	d) Tall & leggy	
				
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch	

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	1.5m	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	2

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	N

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)
Hazel	20		
Holly bush	15		

16 – NOTES – Whole hedgerow or 30m survey section

16a - Fauna (evidence of)

#### 16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.

[illegible]

## Field Survey Form – H43(2)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	9	1	0	2	0	1	5	Hedgerow No			
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <b>N</b>		<b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		<b>X</b>
7b - Grass	Improved	<b>X</b>			Track (unsurfaced)		
	Semi-improved				Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm		25m	8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a			
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.			
			
<b>a) Trimmed &amp; dense</b>	b) Intensively managed	c) Untrimmed	d) Tall & leggy
			
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	<b>1.5m</b>	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	2

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	N

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)

16 – NOTES – Whole hedgerow or 30m survey section

16a - Fauna (evidence of)

#### 16b - Features (including evidence of recent planting)

### 30m SURVEY SECTION ONLY

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.

[illegible]



## Field Survey Form – H45(2)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	9	1	0	2	0	1	5	Hedgerow No			
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <b>N</b>		<b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow		3b - Line of trees	
		3c - Shrubby with line of trees	

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		<b>X</b>
7b - Grass	Improved	<b>X</b>			Track (unsurfaced)		
	Semi-improved				Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm		75	8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a				
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.				
				
a) <b>Trimmed &amp; dense</b>	b) Intensively managed	c) Untrimmed	d) Tall & leggy	
				
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch	

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	2	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	4

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	N

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)

16 – NOTES – Whole hedgerow or 30m survey section
16a - Fauna (evidence of)
16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )			Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)		
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )			Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )	5				
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	10				
Hazel ( <i>Corylus avellana</i> )	70				
Holly ( <i>Ilex aquifolium</i> )	10				
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )			White Bryony		
Maple, field ( <i>Acer campestre</i> )	5		Bramble ( <i>Rubus fruticosus</i> agg.)		
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	X	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Herb Robert					
Bracken					
Yellow archangel					
Red campion					

## Field Survey Form - H45(1)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	9	1	0	2	0	1	5	Hedgerow No			
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <b>N</b>		<b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		<b>X</b>
7b - Grass	Improved	<b>X</b>			Track (unsurfaced)		
	Semi-improved				Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm		75m	8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a				
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.				
				
a) <b>Trimmed &amp; dense</b>	b) Intensively managed	c) Untrimmed	d) Tall & leggy	
				
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch	

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	2	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	2

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	N

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)

16 – NOTES – Whole hedgerow or 30m survey section

16a - Fauna (evidence of)

16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.

Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )			Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)	5	
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	10		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )	5				
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	5				
Hazel ( <i>Corylus avellana</i> )	70				
Holly ( <i>Ilex aquifolium</i> )	5				
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )			White Bryony		
Maple, field ( <i>Acer campestre</i> )			Bramble ( <i>Rubus fruticosus</i> agg.)		
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )		
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Herb Robert					
Yellow archangel					

## Field Survey Form – H47(1)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	9	1	0	2	0	1	5	Hedgerow No			
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <b>N</b>		<b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		
7b - Grass	Improved	<b>X</b>	<b>X</b>		Track (unsurfaced)		
	Semi-improved				Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a				
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.				
				
a) <b>Trimmed &amp; dense</b>	b) Intensively managed	c) Untrimmed	d) Tall & leggy	
				
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch	

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	2	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	2

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	N

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)



16 – NOTES – Whole hedgerow or 30m survey section

16a - Fauna (evidence of)

16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.

Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )			Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)		
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	10		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )					
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)	10				
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	80				
Hazel ( <i>Corylus avellana</i> )					
Holly ( <i>Ilex aquifolium</i> )					
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )			White Bryony		
Maple, field ( <i>Acer campestre</i> )			Bramble ( <i>Rubus fruticosus</i> agg.)	X	
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	X	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Herb Robert					
Yarrow					

## Field Survey Form – H47(2)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	9	1	0	2	0	1	5	Hedgerow No			
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <b>N</b>		<b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		
7b - Grass	Improved	<b>X</b>	<b>X</b>		Track (unsurfaced)		
	Semi-improved				Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a				
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.				
				
a) <b>Trimmed &amp; dense</b>	b) Intensively managed	c) Untrimmed	d) Tall & leggy	
				
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch	

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	2	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	2

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	N

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)

16 – NOTES – Whole hedgerow or 30m survey section

16a - Fauna (evidence of)

#### 16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.

[illegible]

## Field Survey Form – H47(3)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	9	1	0	2	0	1	5	Hedgerow No			
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <b>N</b>		<b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		
7b - Grass	Improved	<b>X</b>	<b>X</b>		Track (unsurfaced)		
	Semi-improved				Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a				
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.				
				
a) <b>Trimmed &amp; dense</b>	b) Intensively managed	c) Untrimmed	d) Tall & leggy	
				
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch	

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	1.5	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	2

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	N

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)

16 – NOTES – Whole hedgerow or 30m survey section

16a - Fauna (evidence of)

#### 16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.

[illegible]

## Field Survey Form – H16(1)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	9	1	0	2	0	1	5	Hedgerow No			
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <b>N</b>		<b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow		3b - Line of trees	
		3c - Shrubby with line of trees	<b>X</b>

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--

5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total








6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop		<b>X</b>	7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved	<b>X</b>			Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		



8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)		X		
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a			
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.			
			
a) Trimmed & dense	b) Intensively managed	<b>c) Untrimmed</b>	d) Tall & leggy
			
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	5	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	1.5

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	N

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)
E Oak	40		
Hawthorn x2	40		

16 – NOTES – Whole hedgerow or 30m survey section
16a - Fauna (evidence of)
16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )			Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)		
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	20		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )	10				
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	30				
Hazel ( <i>Corylus avellana</i> )	20				
Holly ( <i>Ilex aquifolium</i> )	10				
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )			White Bryony		
Maple, field ( <i>Acer campestre</i> )			Bramble ( <i>Rubus fruticosus</i> agg.)	X	
Oak, pedunculate ( <i>Quercus robur</i> )	10		Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	X	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Herb Robert					

Nettle, hogweed, FO grass, 6 Ivy

## Field Survey Form – H16(2)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	9	1	0	2	0	1	5	Hedgerow No			
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <b>N</b>		<b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow		3b - Line of trees	
		3c - Shrubby with line of trees	<b>X</b>

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop		<b>X</b>	7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved	<b>X</b>			Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)		X		
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a			
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.			
			
a) Trimmed & dense	b) Intensively managed	<b>c) Untrimmed</b>	d) Tall & leggy
			
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	5	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	2

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	10

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)
Ash (coppiced)	40		
“ “	“		
Ash	52		

16 – NOTES – Whole hedgerow or 30m survey section
16a - Fauna (evidence of)
16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )	30		Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)	10	
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )			Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )					
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	30				
Hazel ( <i>Corylus avellana</i> )					
Holly ( <i>Ilex aquifolium</i> )	20				
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )			White Bryony		
Maple, field ( <i>Acer campestre</i> )			Bramble ( <i>Rubus fruticosus</i> agg.)	10	
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )		
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Herb Robert					

C. Root, nettle, FO grass

## Field Survey Form – H17(1)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	9	1	0	2	0	1	5	Hedgerow No			
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <b>N</b>		<b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE					
3a - Shrubby hedgerow		3b - Line of trees		3c - Shrubby with line of trees	<b>X</b>

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop		<b>X</b>	7e - Road/Route	Major Road		
	Uncropped margin				Minor Road	<b>X</b>	
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved				Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a			
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.			
			
a) Trimmed & dense	b) Intensively managed	<b>c) Untrimmed</b>	d) Tall & leggy
			
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	5	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	3

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	N

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)
N20 Ash Trees	20-30		

16 – NOTES – Whole hedgerow or 30m survey section
16a - Fauna (evidence of)
16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )	20		Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)		
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )			Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )					
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	40				
Hazel ( <i>Corylus avellana</i> )					
Holly ( <i>Ilex aquifolium</i> )					
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )			White Bryony		
Maple, field ( <i>Acer campestre</i> )	20		Bramble ( <i>Rubus fruticosus</i> agg.)	X	
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )	20		Ivy ( <i>Hedera helix</i> )	X	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Herb Robert					

W.Fryony, Cleavers, Ivy



## Field Survey Form – H17(2)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	9	1	0	2	0	1	5	Hedgerow No			
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <b>N</b>		<b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow		3b - Line of trees	
3c - Shrubby with line of trees		<b>X</b>	

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop		<b>X</b>	7e - Road/Route	Major Road		
	Uncropped margin				Minor Road	<b>X</b>	
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved				Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a			
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.			
			
a) Trimmed & dense	b) Intensively managed	<b>c) Untrimmed</b>	d) Tall & leggy
			
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	5	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	3

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	<b>N</b>

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)
Ash	30		
Sycamore	30		

16 – NOTES – Whole hedgerow or 30m survey section

16a - Fauna (evidence of)

#### 16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.

[illegible]

## Field Survey Form – H17(3)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	9	1	0	2	0	1	5	Hedgerow No				
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <b>N</b> <b>N</b>			

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE					
3a - Shrubby hedgerow		3b - Line of trees		3c - Shrubby with line of trees	<b>X</b>

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop		<b>X</b>	7e - Road/Route	Major Road		
	Uncropped margin				Minor Road	<b>X</b>	
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved				Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a			
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.			
			
a) Trimmed & dense	b) Intensively managed	<b>c) Untrimmed</b>	d) Tall & leggy
			
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	5	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	4

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	N

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)
Sycamore N10	20-30		
Ash N5	10-20		

16 – NOTES – Whole hedgerow or 30m survey section

16a - Fauna (evidence of)

#### 16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.

[illegible]

## Field Survey Form - H15(1)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	9	1	0	2	0	1	5	Hedgerow No				
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <u>N</u> <b>N</b>			

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE					
3a - Shrubby hedgerow		3b - Line of trees		3c - Shrubby with line of trees	<b>X</b>

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--

5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total








6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road	<b>X</b>	
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved	<b>X</b>			Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other			<b>X</b>		Lake/pond		

Allotments

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)		X		
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a			
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.			
			
a) Trimmed & dense	b) Intensively managed	<b>c) Untrimmed</b>	d) Tall & leggy
			
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	5	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	2

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)
Ash	50	Oak	50
Oak	20		
Ash x2	30		



16 – NOTES – Whole hedgerow or 30m survey section
16a - Fauna (evidence of)
16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )	30		Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)	10	
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )			Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )					
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	10				
Hazel ( <i>Corylus avellana</i> )					
Holly ( <i>Ilex aquifolium</i> )					
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )			White Bryony		
Maple, field ( <i>Acer campestre</i> )			Bramble ( <i>Rubus fruticosus</i> agg.)	10	
Oak, pedunculate ( <i>Quercus robur</i> )	30		Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	X	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Herb Robert					

Bracken, nettle, hogweed

## Field Survey Form – H15(2)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	9	1	0	2	0	1	5	Hedgerow No				
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <u>N</u> <b>N</b>			

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE					
3a - Shrubby hedgerow		3b - Line of trees		3c - Shrubby with line of trees	<b>X</b>

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--

5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total








6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road	<b>X</b>	
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved	<b>X</b>			Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other			<b>X</b>		Lake/pond		

Allotments

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a			
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.			
			
a) Trimmed & dense	b) Intensively managed	<b>c) Untrimmed</b>	d) Tall & leggy
			
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm		13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	N

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)
Ash 3x coppiced	30		

16 – NOTES – Whole hedgerow or 30m survey section
16a - Fauna (evidence of)
16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )	20		Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)	10	
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	10		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )					
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	20				
Hazel ( <i>Corylus avellana</i> )	20				
Holly ( <i>Ilex aquifolium</i> )	10				
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )			White Bryony		
Maple, field ( <i>Acer campestre</i> )			Bramble ( <i>Rubus fruticosus</i> agg.)		
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )		
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					

## Field Survey Form – H15(3)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	9	1	0	2	0	1	5	Hedgerow No			
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <b>N</b>		<b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE					
3a - Shrubby hedgerow		3b - Line of trees		3c - Shrubby with line of trees	<b>X</b>

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road	<b>X</b>	
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved	<b>X</b>			Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other			<b>X</b>		Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a			
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.			
			
a) Trimmed & dense	b) Intensively managed	<b>c) Untrimmed</b>	d) Tall & leggy
			
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm		13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	N

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)
Elm x2	20		

16 – NOTES – Whole hedgerow or 30m survey section

16a - Fauna (evidence of)

16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.

Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )	10		Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)		
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	10		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )	10				
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)	20				
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	10				
Hazel ( <i>Corylus avellana</i> )	20				
Holly ( <i>Ilex aquifolium</i> )	10				
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )			White Bryony		
Maple, field ( <i>Acer campestre</i> )	10		Bramble ( <i>Rubus fruticosus</i> agg.)		
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )		
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					

## Field Survey Form – H18(3)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	9	1	0	2	0	1	5	Hedgerow No				
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <b>N</b> <b>N</b>			

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE				
3a - Shrubby hedgerow		3b - Line of trees		3c - Shrubby with line of trees
				<b>X</b>

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--

5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------








WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved	<b>X</b>			Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other			<b>X</b>		Lake/pond		

Stream



8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)	X			
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)		1m		

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a			
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.			
			
a) Trimmed & dense	b) Intensively managed	c) Untrimmed	d) Tall & leggy
			
e) <u>Untrimmed, with outgrowth</u>	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	3	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	2

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	N

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)
Hawthorn	30	Oak	
Hazel	20		
Alder	30		

16 – NOTES – Whole hedgerow or 30m survey section
16a - Fauna (evidence of)
16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )	10		Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )			Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)		
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )			Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )	10				
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	30				
Hazel ( <i>Corylus avellana</i> )	20				
Holly ( <i>Ilex aquifolium</i> )					
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )			White Bryony	30	
Maple, field ( <i>Acer campestre</i> )			Bramble ( <i>Rubus fruticosus</i> agg.)		
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	X	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Herb Robert					

## Field Survey Form – H18(2)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	9	1	0	2	0	1	5	Hedgerow No			
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <b>N</b>		<b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--

5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total








6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved	<b>X</b>			Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other			<b>X</b>		Lake/pond		

Stream

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)		X		
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)		75		

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a			
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.			
			
a) Trimmed & dense	b) Intensively managed	c) Untrimmed	d) Tall & leggy
			
e) <u>Untrimmed, with outgrowth</u>	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	3	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	2

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	30

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)
Willow x3	10-20		

16 – NOTES – Whole hedgerow or 30m survey section

16a - Fauna (evidence of)

16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.

Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )	10		Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )	10		Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)		
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )			Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )	10		Willow crack	20	
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	10				
Hazel ( <i>Corylus avellana</i> )					
Holly ( <i>Ilex aquifolium</i> )					
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )			White Bryony		
Maple, field ( <i>Acer campestre</i> )			Bramble ( <i>Rubus fruticosus</i> agg.)	30	
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )		
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings	30	
<b>Woodland species</b>					

## Field Survey Form – H18(1)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	9	1	0	2	0	1	5	Hedgerow No			
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <b>N</b>		<b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--

5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total








6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved	<b>X</b>			Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other			<b>X</b>		Lake/pond		

Stream

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)		75		

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a			
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.			
			
a) Trimmed & dense	b) Intensively managed	c) Untrimmed	d) Tall & leggy
			
e) <u>Untrimmed, with outgrowth</u>	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	3	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	2

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	50

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)
Willow x2	20		

16 – NOTES – Whole hedgerow or 30m survey section
16a - Fauna (evidence of)
16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )			Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)	10	
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )			Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )			Willow crack	10	
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)					
Hazel ( <i>Corylus avellana</i> )					
Holly ( <i>Ilex aquifolium</i> )					
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )			White Bryony		
Maple, field ( <i>Acer campestre</i> )			Bramble ( <i>Rubus fruticosus</i> agg.)	30	
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )		
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings	50	
Woodland species					

Bracken



## Field Survey Form – H19(3)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	9	1	0	2	0	1	5	Hedgerow No				
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <u>N</u> <b>N</b>			

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE					
3a - Shrubby hedgerow		3b - Line of trees		3c - Shrubby with line of trees	<b>X</b>

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--

5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total








6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved	<b>X</b>			Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other			<b>X</b>		Lake/pond		

Stream

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)		75		

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a			
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.			
			
a) Trimmed & dense	b) Intensively managed	c) Untrimmed	d) Tall & leggy
			
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	3	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	2

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	N

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)
Small Hazel x3	10		

16 – NOTES – Whole hedgerow or 30m survey section

16a - Fauna (evidence of)

16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.

Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )			Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)		
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )			Spindle ( <i>Euonymus europaeus</i> )	10	
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )	10				
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	40				
Hazel ( <i>Corylus avellana</i> )	40				
Holly ( <i>Ilex aquifolium</i> )					
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )			White Bryony		
Maple, field ( <i>Acer campestre</i> )			Bramble ( <i>Rubus fruticosus</i> agg.)		
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )		
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					

## Field Survey Form - XX

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	9	1	0	2	0	1	5	Hedgerow No			
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <b>N</b>		<b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE					
3a - Shrubby hedgerow		3b - Line of trees		3c - Shrubby with line of trees	<b>X</b>

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved	<b>X</b>			Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other			<b>X</b>		Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)		75		

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a			
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.			
			
a) Trimmed & dense	b) Intensively managed	c) Untrimmed	d) Tall & leggy
			
e) <u>Untrimmed, with outgrowth</u>	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm		13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	10

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)
Willow	20		

16 – NOTES – Whole hedgerow or 30m survey section
16a - Fauna (evidence of)
16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )	20		Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )			Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)	10	
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )			Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )			Willow Crack	20	
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	30				
Hazel ( <i>Corylus avellana</i> )	20				
Holly ( <i>Ilex aquifolium</i> )					
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )			White Bryony		
Maple, field ( <i>Acer campestre</i> )			Bramble ( <i>Rubus fruticosus</i> agg.)		
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )		
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings	10	
<b>Woodland species</b>					
Yellow archangel					

Bush Vetch, W. Bryony

## Field Survey Form – H19(1)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	1	9	1	0	2	0	1	5	Hedgerow No			
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <b>N</b>		<b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow		3b - Line of trees	
3c - Shrubby with line of trees		<b>X</b>	

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved	<b>X</b>			Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other			<b>X</b>		Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)		75		

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a			
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.			
			
a) Trimmed & dense	b) Intensively managed	c) Untrimmed	d) Tall & leggy
			
e) <u>Untrimmed, with outgrowth</u>	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	3	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	2

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	20

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)
Willow x3	10		



16 – NOTES – Whole hedgerow or 30m survey section
16a - Fauna (evidence of)
16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )	10		Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )			Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)		
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	30		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )			Willow Crack		20
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	40				
Hazel ( <i>Corylus avellana</i> )					
Holly ( <i>Ilex aquifolium</i> )					
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )			White Bryony		
Maple, field ( <i>Acer campestre</i> )			Bramble ( <i>Rubus fruticosus</i> agg.)		
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )		
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings	20	
<b>Woodland species</b>					

Hops, Hedge Woundwort

## Field Survey Form – H5(1)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	2	0	1	0	2	0	1	5	Hedgerow No		
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <b>N</b>	<b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop	<b>X</b>		7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved		<b>X</b>		Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)	X			
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a				
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.				
				
a) <b>Trimmed &amp; dense</b>	b) Intensively managed	c) Untrimmed	d) Tall & leggy	
				
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch	

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	3	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	3

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	N

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)

16 – NOTES – Whole hedgerow or 30m survey section
16a - Fauna (evidence of)
16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )	15		Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)	5	
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	20		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )			Willow Crack		
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	20				
Hazel ( <i>Corylus avellana</i> )	20				
Holly ( <i>Ilex aquifolium</i> )	10				
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )			White Bryony		
Maple, field ( <i>Acer campestre</i> )	20		Bramble ( <i>Rubus fruticosus</i> agg.)	X	
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	X	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					

W. Bryony, Hogweed, Nettle, Bracken

## Field Survey Form – H5(2)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	2	0	1	0	2	0	1	5	Hedgerow No			
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <b>N</b>		<b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop	<b>X</b>		7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved				Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)	X			
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a				
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.				
				
a) <b>Trimmed &amp; dense</b>	b) Intensively managed	c) Untrimmed	d) Tall & leggy	
				
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch	

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	3	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	3

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	N

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)

16 – NOTES – Whole hedgerow or 30m survey section
16a - Fauna (evidence of)
Badger latrines
16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )	10		Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)	10	
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	10		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )			Willow Crack		
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	20				
Hazel ( <i>Corylus avellana</i> )	20				
Holly ( <i>Ilex aquifolium</i> )	20				
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )			White Bryony		
Maple, field ( <i>Acer campestre</i> )	10		Bramble ( <i>Rubus fruticosus</i> agg.)	X	
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	X	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					

W. Bryony, Bracken, Nettle

## Field Survey Form – H3(2)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	2	0	1	0	2	0	1	5	Hedgerow No			
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <b>N</b>		<b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE					
3a - Shrubby hedgerow		3b - Line of trees		3c - Shrubby with line of trees	<b>X</b>

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--

5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total








6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop	<b>X</b>		7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved				Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		



8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a				
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.				
				
<b>a) Trimmed &amp; dense</b>	b) Intensively managed	c) Untrimmed	d) Tall & leggy	
				
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch	

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	5	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	3

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	<b>N</b>

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)
Ash	20		

16 – NOTES – Whole hedgerow or 30m survey section
16a - Fauna (evidence of)
16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )	10		Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)		
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	10		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )			Willow Crack	10	
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	10				
Hazel ( <i>Corylus avellana</i> )	20				
Holly ( <i>Ilex aquifolium</i> )	10				
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )			White Bryony		
Maple, field ( <i>Acer campestre</i> )			Bramble ( <i>Rubus fruticosus</i> agg.)	20	
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	X	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Herb Robert					

Nettle, C. Cinquefoil, C. Foot, FO Grass

## Field Survey Form – H6(2)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	2	0	1	0	2	0	1	5	Hedgerow No				
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <u>N</u> <b>N</b>			

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE					
3a - Shrubby hedgerow		3b - Line of trees		3c - Shrubby with line of trees	<b>X</b>

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop	<b>X</b>		7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved		<b>X</b>		Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)		X		

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a			
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.			
			
a) Trimmed & dense	b) Intensively managed	c) Untrimmed	d) Tall & leggy
			
e) <u>Untrimmed, with outgrowth</u>	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	7	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	3

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	5

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)
Coppiced Willows x2	30		

16 – NOTES – Whole hedgerow or 30m survey section
16a - Fauna (evidence of)
16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )	10		Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)		
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	10		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )	10	
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )			Willow Crack		
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	10				
Hazel ( <i>Corylus avellana</i> )	10				
Holly ( <i>Ilex aquifolium</i> )	10				
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )			White Bryony		
Maple, field ( <i>Acer campestre</i> )			Bramble ( <i>Rubus fruticosus</i> agg.)	40	
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )		
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					

Hogweed, R. Champion, Nettle, Bramble

## Field Survey Form – H6(1)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	2	0	1	0	2	0	1	5	Hedgerow No			
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <b>N</b>		<b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow		3b - Line of trees	
		3c - Shrubby with line of trees	<b>X</b>

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop	<b>X</b>		7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved		<b>X</b>		Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)	X			
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a			
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.			
			
a) Trimmed & dense	b) Intensively managed	c) Untrimmed	d) Tall & leggy
			
e) <u>Untrimmed, with outgrowth</u>	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	7	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	3

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	N

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)
E. Oak	40		
Hazel N10	20		

16 – NOTES – Whole hedgerow or 30m survey section
16a - Fauna (evidence of)
16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )			Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)	10	
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	10		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )			Willow Crack		
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	20				
Hazel ( <i>Corylus avellana</i> )	20				
Holly ( <i>Ilex aquifolium</i> )	10				
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )			White Bryony		
Maple, field ( <i>Acer campestre</i> )			Bramble ( <i>Rubus fruticosus</i> agg.)	10	
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	X	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
Woodland species					

Foxglove, R.B Willowherb, W. Bryony



## Field Survey Form – H2

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	2	0	1	0	2	0	1	5	Hedgerow No			
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <b>N</b>		<b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--

5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total








6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road	<b>X</b>	
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved				Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other			<b>X</b>		Lake/pond		

Residential

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm	50		8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a				
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.				
				
a) <b>Trimmed &amp; dense</b>	b) Intensively managed	c) Untrimmed	d) Tall & leggy	
				
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch	

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	3	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	2

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	<b>N</b>

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)

16 – NOTES – Whole hedgerow or 30m survey section

16a - Fauna (evidence of)

Mammal path – likely badger

16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.

Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )			Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)	10	
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	10		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )			Willow Crack		
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	20				
Hazel ( <i>Corylus avellana</i> )	20				
Holly ( <i>Ilex aquifolium</i> )	20				
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )			White Bryony		
Maple, field ( <i>Acer campestre</i> )	20		Bramble ( <i>Rubus fruticosus</i> agg.)		
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )		
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					

## Field Survey Form – XX A1

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	2	0	1	0	2	0	1	5	Hedgerow No				
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <b>N</b> <b>N</b>			

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--

5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total








6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road	<b>X</b>	
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved				Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other			<b>X</b>		Lake/pond		

Residential

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm	50		8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a				
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.				
				
a) <b>Trimmed &amp; dense</b>	b) Intensively managed	c) Untrimmed	d) Tall & leggy	
				
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch	

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	3	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	2

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	N

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)
Ash	20		

16 – NOTES – Whole hedgerow or 30m survey section
16a - Fauna (evidence of)
Mammal path – likely badger
16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )	10		Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)	10	
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	20		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )			Willow Crack		
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	20				
Hazel ( <i>Corylus avellana</i> )	20				
Holly ( <i>Ilex aquifolium</i> )					
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )			White Bryony		
Maple, field ( <i>Acer campestre</i> )	20		Bramble ( <i>Rubus fruticosus</i> agg.)		
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )		
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Herb Robert					
Wood avens					

## Field Survey Form – H11(2)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	2	0	1	0	2	0	1	5	Hedgerow No			
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <b>N</b>		<b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE					
3a - Shrubby hedgerow		3b - Line of trees		3c - Shrubby with line of trees	<b>X</b>

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		<b>X</b>
	Uncropped margin				Minor Road		
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved	<b>X</b>			Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a			
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.			
			
a) Trimmed & dense	b) Intensively managed	c) Untrimmed	d) Tall & leggy
			
e) <u>Untrimmed, with outgrowth</u>	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	5	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	3

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	N

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)
Ash	40		



16 – NOTES – Whole hedgerow or 30m survey section
16a - Fauna (evidence of)
16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )	10		Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)	10	
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )			Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )			Willow Crack		
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	70				
Hazel ( <i>Corylus avellana</i> )					
Holly ( <i>Ilex aquifolium</i> )					
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )			Conifer	5	
Maple, field ( <i>Acer campestre</i> )			Bramble ( <i>Rubus fruticosus</i> agg.)	5	
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	X	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )	X	
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Herb Robert					

FO Grass, R. Plantain, Foxglove

## Field Survey Form – H11(1)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	2	0	1	0	2	0	1	5	Hedgerow No		
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <b>N</b>	<b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow		3b - Line of trees	
		3c - Shrubby with line of trees	<b>X</b>

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--

5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total








6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved	<b>X</b>			Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other			<b>X</b>		Lake/pond		

Orchard

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)		X		
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a			
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.			
			
a) Trimmed & dense	b) Intensively managed	c) Untrimmed	d) Tall & leggy
			
e) <u>Untrimmed, with outgrowth</u>	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	5	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	3

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	N

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)
Ash	50		
Oak E	40		
Alder	50		

16 – NOTES – Whole hedgerow or 30m survey section
16a - Fauna (evidence of)
16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )	10		Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )	20		Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)		
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )			Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )	10	
Elder ( <i>Sambucus nigra</i> )			Willow Crack		
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	20				
Hazel ( <i>Corylus avellana</i> )	10				
Holly ( <i>Ilex aquifolium</i> )	10				
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )					
Maple, field ( <i>Acer campestre</i> )	10		Bramble ( <i>Rubus fruticosus</i> agg.)	X	
Oak, pedunculate ( <i>Quercus robur</i> )	10		Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	X	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )	X	
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Lords-and-ladies					
Wood avens					

## Field Survey Form – H10(3)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	2	0	1	0	2	0	1	5	Hedgerow No			
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <b>N</b>		<b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		<b>X</b>
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved	<b>X</b>			Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)		X		
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a				
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.				
				
a) <b>Trimmed &amp; dense</b>	b) Intensively managed	c) Untrimmed	d) Tall & leggy	
				
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch	

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	1.2	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	2

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	N

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)

16 – NOTES – Whole hedgerow or 30m survey section
16a - Fauna (evidence of)
16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )	10		Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)	10	
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	10		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )			Willow Crack		
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	30				
Hazel ( <i>Corylus avellana</i> )	20				
Holly ( <i>Ilex aquifolium</i> )					
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )					
Maple, field ( <i>Acer campestre</i> )	10		Bramble ( <i>Rubus fruticosus</i> agg.)	X	
Oak, pedunculate ( <i>Quercus robur</i> )	10		Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	X	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Herb Robert					

## Field Survey Form – H10(2)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	2	0	1	0	2	0	1	5	Hedgerow No		
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <u>N</u>	<b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow		3b - Line of trees	3c - Shrubby with line of trees
			<b>X</b>

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--

5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total








6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		<b>X</b>
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved	<b>X</b>			Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		



8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a			
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.			
			
a) Trimmed & dense	b) Intensively managed	<b>c) Untrimmed</b>	d) Tall & leggy
			
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	4	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	4

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	<b>N</b>

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)

16 – NOTES – Whole hedgerow or 30m survey section
16a - Fauna (evidence of)
16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )	20		Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)		
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )			Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )			Willow Crack		
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	30				
Hazel ( <i>Corylus avellana</i> )	30				
Holly ( <i>Ilex aquifolium</i> )					
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )					
Maple, field ( <i>Acer campestre</i> )			Bramble ( <i>Rubus fruticosus</i> agg.)	20	
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	X	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )	X	
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					

## Field Survey – H10(1)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	2	0	1	0	2	0	1	5	Hedgerow No		
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <u>N</u>	<b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow		3b - Line of trees	
		3c - Shrubby with line of trees	<b>X</b>

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		<b>X</b>
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved	<b>X</b>			Footpath		
	Unimproved				Rail		
7c - Woodland	Young			7f - Water	Canal		
	Semi-mature				River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a			
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.			
			
a) Trimmed & dense	b) Intensively managed	<b>c) Untrimmed</b>	d) Tall & leggy
			
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	4	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	2

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	<b>N</b>

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)
E Oak	50		

16 – NOTES – Whole hedgerow or 30m survey section

16a - Fauna (evidence of)

16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.

Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )	10		Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)	10	
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	10		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )			Willow Crack		
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	20				
Hazel ( <i>Corylus avellana</i> )	20				
Holly ( <i>Ilex aquifolium</i> )					
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )					
Maple, field ( <i>Acer campestre</i> )	10		Bramble ( <i>Rubus fruticosus</i> agg.)	10	
Oak, pedunculate ( <i>Quercus robur</i> )	10		Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	X	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )	X	
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Herb Robert					
Lords-and-ladies					

## Field Survey Form – H9(3)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	2	0	1	0	2	0	1	5	Hedgerow No			
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <b>N</b>		<b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop	<b>X</b>		7e - Road/Route	Major Road		
	Uncropped margin				Minor Road	<b>X</b>	
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved				Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)		X		
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a			
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.			
			
a) Trimmed & dense	<b><u>b) Intensively managed</u></b>	c) Untrimmed	d) Tall & leggy
			
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	1.5	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	2

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	N

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)

16 – NOTES – Whole hedgerow or 30m survey section			
16a - Fauna (evidence of)			
16b - Features (including evidence of recent planting)			

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )			Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)	5	
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	10		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )	5	
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )			Willow Crack		
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	10				
Hazel ( <i>Corylus avellana</i> )	60				
Holly ( <i>Ilex aquifolium</i> )					
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )					
Maple, field ( <i>Acer campestre</i> )	10		Bramble ( <i>Rubus fruticosus</i> agg.)		
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )		
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Herb Robert					
Dog's mercury					
Lords-and-ladies					

Bracken



## Field Survey Form – H9(2)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	2	0	1	0	2	0	1	5	Hedgerow No			
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <b>N</b>		<b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop	<b>X</b>		7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		<b>X</b>
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved				Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a			
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.			
			
a) Trimmed & dense	<b><u>b) Intensively managed</u></b>	c) Untrimmed	d) Tall & leggy
			
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	1.5	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	2

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	<b>N</b>

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)

16 – NOTES – Whole hedgerow or 30m survey section			
16a - Fauna (evidence of)			
16b - Features (including evidence of recent planting)			

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )	10		Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)	10	
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	10		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )			Willow Crack		
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)					
Hazel ( <i>Corylus avellana</i> )	60				
Holly ( <i>Ilex aquifolium</i> )					
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )					
Maple, field ( <i>Acer campestre</i> )	10		Bramble ( <i>Rubus fruticosus</i> agg.)		
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )		
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Herb Robert					
Lords-and-ladies					
Dog's mercury					

## Field Survey Form – H9(1)

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	2	0	1	0	2	0	1	5	Hedgerow No			
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <b>N</b>		<b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop	<b>X</b>		7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		<b>X</b>
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved				Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a				
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.				
				
<b>a) Trimmed &amp; dense</b>	b) Intensively managed	c) Untrimmed	d) Tall & leggy	
				
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch	

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	2	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	3

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	<b>N</b>

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)
E Oak	10		

16 – NOTES – Whole hedgerow or 30m survey section

16a - Fauna (evidence of)

16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.

Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )	10		Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)	10	
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )			Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )			Willow Crack		
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	50				
Hazel ( <i>Corylus avellana</i> )					
Holly ( <i>Ilex aquifolium</i> )	10				
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )					
Maple, field ( <i>Acer campestre</i> )			Bramble ( <i>Rubus fruticosus</i> agg.)	15	
Oak, pedunculate ( <i>Quercus robur</i> )	5		Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	X	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Herb Robert					
Lords-and-ladies					

## Field Survey Form – H7

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	2	0	1	0	2	0	1	5	Hedgerow No				
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <b>N</b> <b>N</b>			

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE					
3a - Shrubby hedgerow		3b - Line of trees		3c - Shrubby with line of trees	<b>X</b>

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop	<b>X</b>		7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved		<b>X</b>		Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a				
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.				
				
<b>a) Trimmed &amp; dense</b>	b) Intensively managed	c) Untrimmed	d) Tall & leggy	
				
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch	

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	5	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	3

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	<b>N</b>

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)
Ash	20		



16 – NOTES – Whole hedgerow or 30m survey section
16a - Fauna (evidence of)
16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )	10		Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)		
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	10		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )			Willow, crack	10	
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	20				
Hazel ( <i>Corylus avellana</i> )	20				
Holly ( <i>Ilex aquifolium</i> )	10				
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )					
Maple, field ( <i>Acer campestre</i> )			Bramble ( <i>Rubus fruticosus</i> agg.)	20	
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	X	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Herb Robert					

Nettle, creeping cinquefoil, cocksfoot, false oat-grass

## Field Survey Form – H27

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	2	3	1	0	2	0	1	5	Hedgerow No			
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <b>N</b>		<b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road		<b>X</b>
7b - Grass	Improved	<b>X</b>			Track (unsurfaced)		
	Semi-improved				Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm		50	8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a				
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.				
				
a) <b>Trimmed &amp; dense</b>	b) Intensively managed	c) Untrimmed	d) Tall & leggy	
				
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch	

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	1.5	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	2

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	<b>N</b>

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)

16 – NOTES – Whole hedgerow or 30m survey section

16a - Fauna (evidence of)

Bird nest in hedge

16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.

Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )			Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)		
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	10		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )	10		Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )			Willow Crack		
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	20				
Hazel ( <i>Corylus avellana</i> )	30				
Holly ( <i>Ilex aquifolium</i> )	20				
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )					
Maple, field ( <i>Acer campestre</i> )	10		Bramble ( <i>Rubus fruticosus</i> agg.)	X	
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	X	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Herb Robert					
Dog's mercury					

## Field Survey Form – H28

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	2	3	1	0	2	0	1	5	Hedgerow No			
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <b>N</b>		<b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road	<b>X</b>	
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved				Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other	Garden		<b>X</b>		Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a				
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.				
				
a) <b>Trimmed &amp; dense</b>	b) Intensively managed	c) Untrimmed	d) Tall & leggy	
				
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch	

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	3	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	2.5

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	N

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)

16 – NOTES – Whole hedgerow or 30m survey section
16a - Fauna (evidence of)
16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )	10		Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)		
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	20		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )	10		Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )	10		Willow Crack		
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	10				
Hazel ( <i>Corylus avellana</i> )	20				
Holly ( <i>Ilex aquifolium</i> )	10				
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )					
Maple, field ( <i>Acer campestre</i> )	10		Bramble ( <i>Rubus fruticosus</i> agg.)	X	
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	X	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Herb Robert					
Dog's mercury					

## Field Survey Form – H29

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	2	3	1	0	2	0	1	5	Hedgerow No			
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <b>N</b>		<b>N</b>

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--

5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total








6 - EXTENT OF SURVEY	6a - Whole hedgerow		6b - 30m Section(s)	<b>X</b>
----------------------	---------------------	--	---------------------	----------

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road	<b>X</b>	
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved		<b>X</b>		Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other					Lake/pond		



8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm	100		8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a			
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.			
			
a) <b>Trimmed &amp; dense</b>	b) Intensively managed	c) Untrimmed	d) Tall & leggy
			
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	4	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	3

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	N

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)
Field maple x 2	20		

# 16 – NOTES – Whole hedgerow or 30m survey section

16a - Fauna (evidence of)

16b - Features (including evidence of recent planting)

## 30m SURVEY SECTION ONLY

### 17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.

Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )			Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)		
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	20		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )	10		Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )			Willow Crack		
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	20				
Hazel ( <i>Corylus avellana</i> )	20				
Holly ( <i>Ilex aquifolium</i> )	20				
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )					
Maple, field ( <i>Acer campestre</i> )	10		Bramble ( <i>Rubus fruticosus</i> agg.)		
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	X	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Herb Robert					

## Field Survey Form – H39

Local Hedgerow Field Survey Form	
PART A - ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)	
TITLE OF SURVEY: M4 Hedgerow regulation assessment	
Grid Ref	

Date	2	0	1	0	2	0	1	5	Hedgerow No				
Surveyor(s): Georgia Kelly										Side Surveyed - Both Y/ <u>N</u> <b>N</b>			

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2d - Were there any difficulties in surveying the hedgerows? If so please describe.	YES	<b>NO</b>
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	<b>X</b>	3b - Line of trees	3c - Shrubby with line of trees

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	
---	--








5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total

6 - EXTENT OF SURVEY	6a - Whole hedgerow	<b>X</b>	6b - 30m Section(s)	
----------------------	---------------------	----------	---------------------	--

WHOLE HEDGEROW OR 30m SURVEY SECTION (Sections 7-16)							
7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road	<b>X</b>	
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved				Footpath		
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other	Motorway drainage basin	<b>X</b>			Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm	50	50	8f - Ditch - internal - Dry (tick)	
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)				
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

10 – NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a – Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B

12 - HEDGEROW SHAPE – See also Part B section 19a				
What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.				
				
a) <b>Trimmed &amp; dense</b>	b) Intensively managed	c) Untrimmed	d) Tall & leggy	
				
e) Untrimmed, with outgrowth	f) Recently coppiced (facing view)	g) Recently laid (facing view)	h) Other - Sketch	

13 - DIMENSIONS			
13a - Average Height (m) Excluding bank, to nearest 25cm	15	13b - Average Width (m) At the widest point of canopy; excluding bank, to nearest 25cm	4

14 - INTEGRITY - Continuity and height of canopy along hedgerow	
14a – Estimated % GAPS - percentage gaps	Y - gate

15 - ISOLATED HEDGEROW TREES – See also Part B section 21			
Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.			
Species	DBH (cm)	Species	DBH (cm)

16 – NOTES – Whole hedgerow or 30m survey section
16a - Fauna (evidence of)
Badger push-through and latrine
16b - Features (including evidence of recent planting)

30m SURVEY SECTION ONLY
-------------------------

17 - WOODY SPECIES IN 30m SURVEY SECTION ONLY – Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common ( <i>Alnus glutinosa</i> )			Plum, wild ( <i>Prunus domestica</i> )		
Apple, crab ( <i>Malus sylvestris</i> )			Poplar, black ( <i>Populus nigra betulifolia</i> )		
Ash ( <i>Fraxinus excelsior</i> )			Privet, wild ( <i>Ligustrum vulgare</i> )		
Aspen ( <i>Populus tremula</i> )			Rose, dog- ( <i>Rosa canina</i> )		
Beech ( <i>Fagus sylvatica</i> )			Rose, field- ( <i>Rosa arvensis</i> )		
Birch, downy ( <i>Betula pubescens</i> )			Rose ( <i>Rosa</i> sp.)		
Birch, silver ( <i>Betula pendula</i> )			Rowan ( <i>Sorbus aucuparia</i> )		
Blackthorn ( <i>Prunus spinosa</i> )	10		Spindle ( <i>Euonymus europaeus</i> )		
Broom ( <i>Cytisus scoparius</i> )			Sycamore ( <i>Acer pseudoplatanus</i> )		
Buckthorn ( <i>Rhamnus cathartica</i> )			Wayfaring-tree ( <i>Viburnum lantana</i> )		
Cherry, wild ( <i>Prunus avium</i> )			Willow, grey ( <i>Salix cinerea</i> )		
Dogwood ( <i>Cornus sanguinea</i> )			Willow, goat ( <i>Salix caprea</i> )		
Elder ( <i>Sambucus nigra</i> )			Willow Crack		
Elm, English ( <i>Ulmus procera</i> )					
Elm, wych ( <i>Ulmus glabra</i> )					
Elm, ( <i>Ulmus</i> sp.)					
Gorse ( <i>Ulex europaeus</i> )					
Gorse, western ( <i>Ulex gallii</i> )					
Guelder rose ( <i>Viburnum opulus</i> )					
Hawthorn ( <i>Crataegus</i> sp.)	40				
Hazel ( <i>Corylus avellana</i> )	50				
Holly ( <i>Ilex aquifolium</i> )					
Hornbeam ( <i>Carpinus betulus</i> )					
Lime, large-leaved ( <i>Tilia platyphyllos</i> )					
Lime, small-leaved ( <i>Tilia cordata</i> )					
Maple, field ( <i>Acer campestre</i> )	5		Bramble ( <i>Rubus fruticosus</i> agg.)	30	
Oak, pedunculate ( <i>Quercus robur</i> )			Honeysuckle ( <i>Lonicera periclymenum</i> )		
Oak, sessile ( <i>Quercus petraea</i> )			Ivy ( <i>Hedera helix</i> )	20	
Pear ( <i>Pyrus communis</i> sensu lato)			Traveller's-joy ( <i>Clematis vitalba</i> )		
Pine, Scots ( <i>Pinus sylvestris</i> )			% Gaps/access openings		
<b>Woodland species</b>					
Herb Robert					
Lords-and-ladies					
Hairy brome					

Pale toadflax, ladys bedstraw, bracken, sedge

## Annex C: Photographs of Hedgerows

---



H1 (1)



H1 (2)

Client: Welsh Government

Project: M4CaN

Job Ref: JER6591 Checked By:

Date: 10/2015





H2



H3

Client: Welsh Government

Project: M4CaN

Job Ref: JER6591 Checked By:

Date: 10/2015





H4



H5 (1)

Client: Welsh Government

Project: M4CaN

Job Ref: JER6591 Checked By:

Date: 10/2015





H5 (2)



H6 (1)

Client: Welsh Government

Project: M4CaN

Job Ref: JER6591 Checked By:

Date: 10/2015





H6 (2)



H7

Client: Welsh Government

Project: M4CaN

Job Ref: JER6591 Checked By:

Date: 10/2015





H8



H9 (1)

Client: Welsh Government

Project: M4CaN

Job Ref: JER6591 Checked By:

Date: 10/2015





H9 (2)



H9 (3)

Client: Welsh Government

Project: M4CaN

Job Ref: JER6591 Checked By:

Date: 10/2015





**H10 (1)**



**H10 (2)**

Client: Welsh Government

Project: M4CaN

Job Ref: JER6591 Checked By:

Date: 10/2015





H10 (3)



H11 (1)

Client: Welsh Government

Project: M4CaN

Job Ref: JER6591 Checked By:

Date: 10/2015





H11 (2)



H11 (3)

Client: Welsh Government

Project: M4CaN

Job Ref: JER6591 Checked By:

Date: 10/2015





H12



H13

Client: Welsh Government

Project: M4CaN

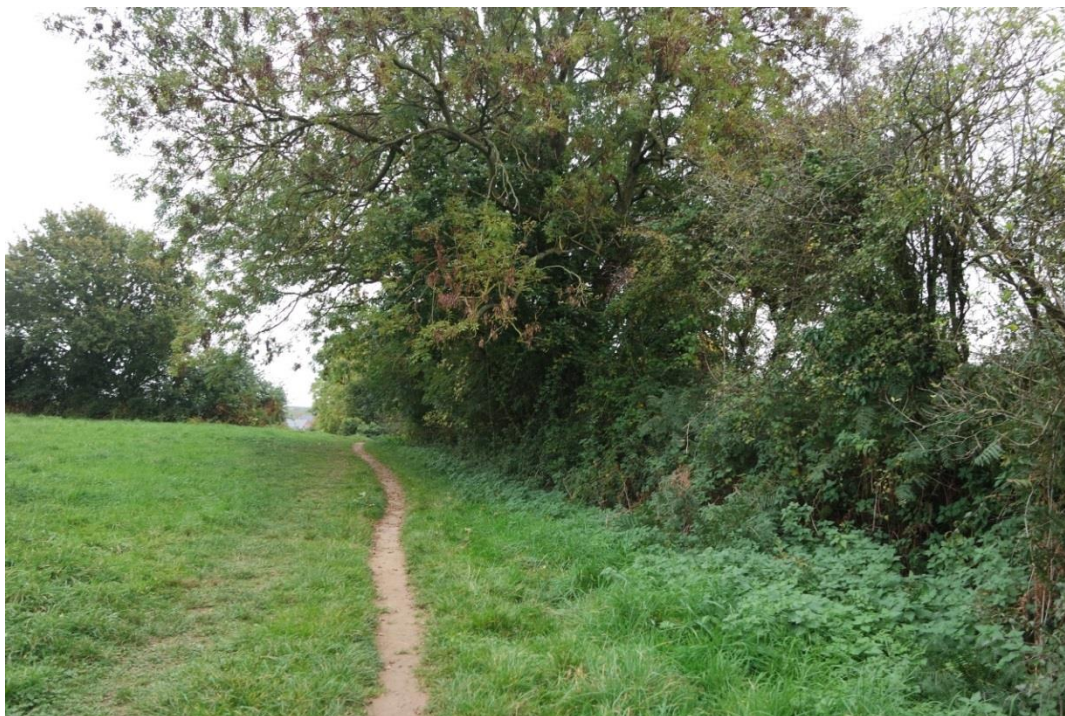
Job Ref: JER6591 Checked By:

Date: 10/2015





H14



H15 (1)

Client: Welsh Government

Project: M4CaN

Job Ref: JER6591 Checked By:

Date: 10/2015





H15 (2)



H15 (3)

Client: Welsh Government

Project: M4CaN

Job Ref: JER6591 Checked By:

Date: 10/2015





H16 (1)



H16 (2)

Client: Welsh Government

Project: M4CaN

Job Ref: JER6591 Checked By:

Date: 10/2015





**H17 (1)**



**H17 (2)**

Client: Welsh Government

Project: M4CaN

Job Ref: JER6591 Checked By:

Date: 10/2015





H17 (3)



H18 (1)

Client: Welsh Government

Project: M4CaN

Job Ref: JER6591 Checked By:

Date: 10/2015





H18 (2)



H18 (3)

Client: Welsh Government

Project: M4CaN

Job Ref: JER6591 Checked By:

Date: 10/2015





**H19 (1)**



**H19 (2)**

Client: Welsh Government

Project: M4CaN

Job Ref: JER6591 Checked By:

Date: 10/2015





H19 (3)



H20

Client: Welsh Government

Project: M4CaN

Job Ref: JER6591 Checked By:

Date: 10/2015





H21



H22 (1)

Client: Welsh Government

Project: M4CaN

Job Ref: JER6591 Checked By:

Date: 10/2015





H22 (2)



H23

Client: Welsh Government

Project: M4CaN

Job Ref: JER6591 Checked By:

Date: 10/2015



H24



H25

Client: Welsh Government

Project: M4CaN

Job Ref: JER6591 Checked By:

Date: 10/2015





H26



H27

Client: Welsh Government

Project: M4CaN

Job Ref: JER6591 Checked By:

Date: 10/2015





H28



H29

Client: Welsh Government

Project: M4CaN

Job Ref: JER6591 Checked By:

Date: 10/2015





H30 (1)



H30 (2)

Client: Welsh Government

Project: M4CaN

Job Ref: JER6591 Checked By:

Date: 10/2015





H31



H33 (1)

Client: Welsh Government

Project: M4CaN

Job Ref: JER6591 Checked By:

Date: 10/2015





H33 (2)



H34

Client: Welsh Government

Project: M4CaN

Job Ref: JER6591 Checked By:

Date: 10/2015





H35



H36 (1)

Client: Welsh Government

Project: M4CaN

Job Ref: JER6591 Checked By:

Date: 10/2015



H36 (2)



H37

Client: Welsh Government

Project: M4CaN

Job Ref: JER6591 Checked By:

Date: 10/2015





H38 (1)



H38 (2)

Client: Welsh Government

Project: M4CaN

Job Ref: JER6591 Checked By:

Date: 10/2015





H39



H40

Client: Welsh Government

Project: M4CaN

Job Ref: JER6591 Checked By:

Date: 10/2015





H41



H42 (1)

Client: Welsh Government

Project: M4CaN

Job Ref: JER6591 Checked By:

Date: 10/2015



H42 (2)



H43 (1)

Client: Welsh Government

Project: M4CaN

Job Ref: JER6591 Checked By:

Date: 10/2015





H43 (2)



H44 (1)

Client: Welsh Government

Project: M4CaN

Job Ref: JER6591 Checked By:

Date: 10/2015





H44 (2)



H45 (1)

Client: Welsh Government

Project: M4CaN

Job Ref: JER6591 Checked By:

Date: 10/2015





**H45 (2)**



**H46 (1)**

Client: Welsh Government

Project: M4CaN

Job Ref: JER6591 Checked By:

Date: 10/2015





H46 (2)



H47 (1)

Client: Welsh Government

Project: M4CaN

Job Ref: JER6591 Checked By:

Date: 10/2015





H47 (2)



H47 (3)

Client: Welsh Government

Project: M4CaN

Job Ref: JER6591 Checked By:

Date: 10/2015



H48

Client: Welsh Government

Project: M4CaN

Job Ref: JER6591    Checked By:

Date: 10/2015



## Annex D: Summary of Isolated Trees in Hedgerows

### Summary of isolated trees within hedgerows classified as 'Important' under the Hedgerow Regulations

'Important' hedgerow	Species present	Diameter (m)
H6	Coppiced grey willow <i>Salix cinerea</i> x 2	0.30
	Pedunculate oak <i>Quercus robur</i>	0.40
	Hazel <i>Corylus avellana</i> x 10	0.20
H7	Ash <i>Fraxinus excelsior</i>	0.20
H8	Pedunculate oak	1.25
	Ash	0.30
H10	Pedunculate oak	0.50
H11	Ash	0.40
	Ash	0.50
	Pedunculate oak	0.40
	Alder <i>Alnus glutinosa</i>	0.50
H12	Lombardy poplar <i>Populus nigra</i>	0.50
	Lombardy poplar	0.40
	Lombardy poplar	0.40
	Pedunculate oak	1.00
H13	Pedunculate oak <i>Quercus</i>	0.50
H14	Pedunculate oak	1.50
	Pedunculate oak	0.50
H15	Ash	0.50
	Pedunculate oak	0.20
	Ash x 2	0.30
	Pedunculate oak	0.50
	Ash x 3	0.30
	Elm <i>Ulmus</i> sp. x 2	0.20
H21	Ash	0.50
H27	Field maple <i>Acer campestre</i> x 2	0.20
H30	Ash	0.50
	Pedunculate oak	0.30
	Pedunculate oak	0.30
	Pedunculate oak	0.30
H31	Pedunculate oak	0.50
	Pedunculate oak	0.50
	Pedunculate oak	0.70
	Pedunculate oak	0.50
H32	Sessile oak	0.30
H35	Assemblage of saplings and young hazel, field maple, pedunculate oak, ash and grey willow trees	0.05-0.15
H40	Assemblage of saplings and young hazel, field maple and plum <i>Prunus</i> sp. trees	0.05-0.10

'Important' hedgerow	Species present	Diameter (m)
H43	Coppiced hazel Dense holly <i>Ilex aquifolium</i> bush covered in ivy	0.20 0.15

**Summary of isolated trees within hedgerows not classified as 'Important' under the Hedgerow Regulations**

Hedgerow not classified as 'Important'	Species present	Diameter (m)
H20	Hawthorn <i>Crataegus monogyna</i>	0.20
H18	Hawthorn Hazel Alder Crack willow <i>Salix fragilis</i> x 5	0.30 0.30 0.30 0.10-0.20
H19	Hazel x 3 Crack willow x 4	0.10 0.10-0.20
H17	Ash ~20 Sycamore	0.20-0.30 0.30
H16	Pedunculate oak Hawthorn x 2	0.40 0.40
H9	Pedunculate oak	0.10