



# COMMENTS ON THE DEFRA HEDGEROW SURVEY HANDBOOK (2<sup>nd</sup> Edition)

## SUMMARY

This 2<sup>nd</sup> edition of the Hedgerow Survey Handbook is an improvement on the first edition, but is still unfit for its declared purpose.

The title of the handbook does not disclose that it fails to evaluate landscape or history, factors often regarded to be at least as important as wildlife. Regrettably the evaluation for wildlife is limited to a pass/fail test and includes only some of the recorded data. There is an overall impression of seeking to gather data for data's sake.

It is cited as 'A standard procedure for local surveys in the UK', But it is neither standard nor suitable for local use. Apart from indicating whether a hedgerow is 'in favourable condition', there are no conclusions or recommendations to be derived from the survey information.

The handbook requires that professionals and specialists do the survey, but does not make appropriate use of their expertise. Much of the handbook's contents appear to be intended for volunteers, many of whom would soon find themselves out of their depth in applying other parts of the survey.

The method of approximating for threshold values is arithmetically incorrect, tending to serious over-recording.

## GENERAL

Page 6. Defra states that the survey focuses 'on the wildlife, or biodiversity of hedgerows' and infers that the survey ignores 'that hedgerows are important for farming, [and] for the contribution they make to the beauty of our countryside, and historically and culturally'.

The survey method is falsely claimed to give 'accurate and consistent information about ... what we need to do to restore them'; and that it will 'help to identify the best ways to address [challenges]'. At no point does the survey look to the future in terms of what should be done.

There is no suggested access to the database by the public even though the data are to be recorded on a central database and apparently available to semi-public conservation bodies.

p7. Hedgerows are the interface of more than woodland and open fields.

Defra says 'Suggestions are welcome for further simplification and clarification of the Handbook are always welcome.' This has not been our experience with the first edition of the Handbook.

p8. 'Hedgerows are of great importance ... in our towns and cities'. There is no way in this survey of properly recording hedgerows in built-up areas. Per metre length, the value of an urban hedgerow often exceeds that of one in the countryside.

The information of how many hedgerows there are in the countryside can already be reasonably obtained by computer from existing digital maps

The definition of a hedgerow as omitting those not over 20m long excludes many very important hedgerows in built-up areas, thus encouraging their dereliction.

p9. The content of the Handbook needs to be expanded for any 'focus on historical or cultural aspects'.

The Countryside Survey 2007 website makes no mention of this Handbook being used in the 2007 survey and, if it is to 'complement', it seems to be a duplication of effort.

Clearly another survey method will be necessary to help with the Hedgerow [sic] Regulations (1997), the 's' is missing from 'Hedgerows'.

p11. Survey Units. Difficulties are likely to arise where there are changes in hedgerow type every 20m as in semi-wooded landscapes.

p14. Defra admits that there is no national criteria for assessing what is a rich basal herbaceous

flora, leaving the definition of a species-rich hedgerow 'to be set on a local basis'.

The assessment of hedgerow condition is defined in pass-or-fail terms (see appendix 9 at page 133).

p16. This table is so general in its management advice as to be limited in its practical application.

p17. Vague reference is made to the optional collection of historical or cultural data or of landscape characteristics. Collection of data from 30m sections sits ill with the 20m minimum length of survey units.

p18. No guidance is given to the analysis of survey data.

p20. This is one of only two places where 'seasonal limitations'; are mentioned.

The statement: 'Potentially hedgerow surveys cover a wide range of interests including biodiversity, landscape history, landscape character, environmental awareness and community engagement.' highlights the shortcomings of this Handbook. These interests are catered for in the Hedge (& Wall) Importance Test, available on the Web).

p21. 'Professionals are recommended where a strict programme is required' This infers that non-professionals will be unable to follow a strict programme, because their data are likely to be incomplete or suspect. Some skill in map reading will be essential and more than just 'useful'.

p22. 'Advice is given that 'unless they are believed to be rare or specially protected, unknown specimens can be collected (but not uprooted) for identification by a specialist'. How can a surveyor know for certain if an unknown specimen is rare before collecting? In any event he should get the landowner's consent as they may be specially conserved without his knowledge. The taking of specimens is recommended without pointing out that, unless the landowner permits, this is illegal.

'The survey period extends approximately from April to October ... June and July are ideal months, particularly where surveys include assessments of the ground flora'. June and July are when most birds have fledglings from their first or eggs for their second brood. April to June are the months when the majority of birds have nests. No mention is made of the illegality of disturbing or destroying nesting birds, nests, eggs or chicks, (not only protected species), while advice is given (such as recording ground flora by placing quadrats at fixed measurements) which could lead to such birds as the whitethroat deserting or unnecessarily being exposed to predation.

That 'spring flowering species will still be reasonably apparent' during October is clearly a nonsense and throws doubt on the expertise of the authors;

'By late summer, hedgerows may have been cut' infers that Defra accepts summer hedge trimming.

p23. Table 3 omits papers relating to access, landscape details, historical and other factors which may influence the way the survey is conducted, described on page 29 as vital.

p27. One day's training of volunteers is unlikely to attain accuracy and consistency. A false impression of resource use is given.

p33. Surveyors should be warned that hedgebanks may be wholly owned, both sides, by one farmer even if the fields are in different ownerships.

p36. "In some cases, the land manager may want to accompany the surveyors and, wherever possible this should be granted." The Handbook does not explain under what circumstances this might be not possible, and in fact it cannot be refused. (An almost identical point occurs in the first edition.)

p40. Surveyors are advised only to 'aim' to be at least as precise as the recommended standards.

p44. By excluding nodes, the survey introduces bias against the more substantial wildlife usually associated with nodes eg cospes.

p45. Care should be taken not to site marker plates where they may be lifted by plants and then sucked up by a forage harvester, causing damage and possible injury.

## **FIELD SURVEY FORM**

### **Local Hedgerow Field Survey Form**

#### **PART A – ESSENTIAL ASSESSMENTS (To be completed for all local hedgerow surveys)**

p46. This page makes it clear that the Handbook is designed for enabling BAP condition assessments to be made.

The optional assessments are allowed to vary, thereby reducing their value.

#### **TITLE OF SURVEY:**

**The name(s) or initials of the surveyor(s)**

p47. 'If [the surveyor's] initials are used, ensure that they are unique'. How?  
Yet p80 requires the name of the surveyor.

## WHOLE HEDGEROW

### 1 – NAME OF LANDOWNER/CONTACT DETAILS

Name: Address: Tel:

1a – Permission granted to enter details onto database YES/NO

1b – Permission granted to publish ownership information (if relevant) YES/NO

p48 In some cases, both landlord's and tenant's consent should be obtained.

### – HEDGEROW TYPE

3a – Shrubby hedgerow      3b – Line of trees      3c – Shrubby with line of trees

p50. The concept of 'lollipops;' with a clean trunk disappearing in to the canopy is misleading as many trees are branched below the canopy.

p51. To abandon the remains of a hedgerow is wrong, especially if funds are available for its restoration, or if it is important historically.

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

The make-up of the data from a whole hedgerow is likely to differ widely from that of a 30m section as defined to exclude nodes, eg more copses will be found in whole hedgerows because they tend to be planted in field corners. Data from each category are likely to be incompatible.

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

### 7 – ADJACENT LAND USE

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

p53. This list omits important adjacent land uses eg heathland (although the definition of unimproved grassland appears to include some but not all heathland), industrial sites or other built features. The requirement that 'Some specialist knowledge is required to correctly identify improved, semi-improved or unimproved grassland' put this survey beyond the reach of the non-specialist. No guidance is given as to how close 'adjacent' is, although on p54 it has to be 'immediately adjacent'. The Hedge (& Wall) Importance Test recommends 50m as being the distance at which there usually still a significant interaction. The distinction between adjacent land use and associated features is not clear,

### 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)**

This list of associated features should be included in Q7.

### **9 – UNDISTURBED GROUND (measured from the centreline of the hedgerow)** **Side A Side B**

**9a – Average width of undisturbed ground (m) to nearest 50cm\***

**9b – Average width of perennial herbaceous vegetation (m) to nearest 50cm\***

**NB \* mark N/A or road etc if a road or built feature or hedge is adjacent to grassland or woodland**

Should read 'NB answer only if 7a is ticked'. No guidance is given to the period of time since the land was disturbed, eg mine spoil heap, domestic refuse tip

### **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**

p57. An estimate to the nearest 10% is more realistic and is still half the 20% quoted.

### **11 – RECENTLY INTRODUCED, NON-NATIVE SPECIES**

#### **11a – RECENTLY INTRODUCED, NON-NATIVE GROUND FLORA SPECIES**

**Species Side A Side B**

**% cover of introduced species in the hedge-bottom (to nearest 5% or enter just the name if <5%)**

p57. For both parts of Q11, an estimate to the nearest 5% does not accord with the threshold of <10%, ie an estimate of 8% would be recorded as 10% and thereby above the <10% threshold.

#### **11b – RECENTLY INTRODUCED, NON-NATIVE WOODY SPECIES**

**Species Side A Side B**

**% cover of introduced species in the shrub layer (to nearest 5% or enter just the name if <5%)**

p57. See note above

### **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    g) Recently laid**  
**h) Other – Sketch**

p58. In practice there is such an overlap between a) and b) as to cause confusion and unreliable recording. The condition described in b) is readily identified by combining the answers to other questions.

A distinction should be made between overall coppicing (where all trunks are removed) and selective coppicing (where only selected trunks are felled). Where a hedgerow is both coppiced and laid, guidance should be given that 'recently laid' should be ringed.

### **13 – DIMENSIONS**

#### **13b – Average Width (m)**

p 61. To estimate the average width at the widest point of the canopy is a nonsense. Rewording is required. A better concept is that of typicality as in Q. 14c (page 64).

p62. The text and some measurements are illegible.

#### **13a – Average Height (m)**

p83 The request to estimate the heights of trees to 'the nearest 1-2 m' is not practicable.

## **14 – INTEGRITY – Continuity and height of canopy along hedgerow**

### **14a – % GAPS – percentage gaps, to nearest 5%**

The measuring of each gap seems excessive when all is needed is an estimate of the overall lengths being <10%. Similarly estimating gaps in the canopy of 50cm is not worth the effort. An estimate to the nearest 5% does not accord with the threshold of <10%, ie an estimate of 8% would be recorded as 10% and thereby above the <10% threshold.

### **14c – Average height of base of canopy (m) to nearest 25cm**

To estimate the 'average height of the lowest leafy growth' is clearly another nonsense, and needs rewording.

An estimate to the nearest 25cm does not accord with the threshold of 50cm ie a canopy of 40cm would be recorded as 50cm and thereby above the <0.5m threshold.

## **15 – ISOLATED HEDGEROW TREES –**

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

#### **16A – Fauna (evidence of)**

p83. To record all evidence of fauna is likely to disturb nesting birds. Such evidence that can be seen at 2m distance is more realistic.

#### **16b – Features (including evidence of recent planting)**

#### **16c – Photograph numbers (and locate on map)**

p68. The value of these unorganised notes is limited because there is no guidance as to their scope, and role in determination of 'favourable condition'. Strictly Q.16 should be in the optional section.

## **30m SURVEY SECTION ONLY**

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

The constraints on locating a 30m section for the recording of woody species are likely to yield unrepresentative data. The surveyor has to find a section which:-

Is continuous woody species, Is not at an intersection, Is less than 30m, Has 'any gaps including gates', but the width of gap is unspecified. May be different from the section used for recording Q.7-16.

The distinction between native and archaeophyte species is not clear and is irrelevant and confusing. 'Species that count towards species-richness are ... not climbers' yet 'the percentage cover of climbers and bramble provide useful information' and surveyors are advised to record the percentage cover. What is not clear at all is how the percentage cover of each of these species is to be estimated, and much inconsistency must be expected. The species list 'is not exclusive' so the data will have a variable and unreliable basis. The distinction between the shrub layer and hedgerow trees 'can be difficult to determine' and therefore the data will be variable. Surveyors are at liberty to vary the list of woody species.(p70)

## **PART B – OPTIONAL ASSESSMENTS**

**This part of the survey methodology is intended for selective use in local hedgerow surveys that require more than just the essential assessments described above ... surveyors should select the appropriate section.**

p71. No guidance is given as what the data mean after they have been gathered, neither what to do with them.

## **18 – ASSOCIATED FEATURES**

### **18a – Banks**

**Typical cross section of hedgerow-banks where present (please circle one)**

**a) Half-bank      b) Full hedge-bank      c) Other (sketch)**

**Bank type and management**

<b>Bank type</b>		<b>Bank Management</b>			
<b>Stone</b>	<b>Earth</b>	<b>None</b>	<b>Fenced off</b>	<b>Grazed</b>	<b>Mown/cut</b>

p72. No established banks are earth faced, they are either turf faced, or stone faced. The height and condition of the bank is significant and should be recorded.

p84. Banks often have a fence running along the top and it is not clear whether this counts as 'Fenced off'. The boxes for Bank Management lack explanation.

**Side A**

**Side B\***

**18b – Ditches/Streams**

**Side A Side B\***

**Ditch/stream – Width at base (m) to the nearest 25cm**

**18c – Walls and Fences**

**Fence Side A Side B\* Dry-stone Wall – Condition Side A Side B\***

**Height (m), to nearest 25cm Good**

**Type Side A Side B\* Poor**

**Post & rail Remnant**

**Post & netting Other feature – State Side A Side B\***

**Post & wire**

p84 The condition of dry-stone walls should be recorded using the Countryside Agency criteria.

p.72. There is a problem with recording high-tensile fencing and electric fencing (line wires or netting, temporary or permanent). And whether the fence is offset from the hedgerow to allow the flail to pass behind it. These data are important and should not be skimped.

**Other fence – state Side A Side B\***

**\* Where visible**

## **19 – HEDGEROW/MARGIN MANAGEMENT**

**Flailed/**

**Planting/ Pollarding**

**19a – Hedgerow Management**

**Mowing/**

There is no space given for recording alternate side trimming in different years, the preferred method today.

**19b – Hedge-bottom Management**

Signs of mowing, herbicides, cultivation grazing or none that are more than five years old are impossible to assess with any reliability, and are better unrecorded than recorded incorrectly.

**19c – Margin/Headland Management**

**Average width (m) Side A Side B\***

**Margin Management**

**Grazed Side A Side B\* Cut Side A Side B\* Unmanaged Side A Side B\***

**\* Where visible**

## **20 – GROUND FLORA SPECIES PER 30M**

p.77. All species present should be recorded but should be influenced by the hedgerow rather than the adjoining land use. This subjective judgement of where the second quadrat is placed lowers the data quality. The surveyor is required to 'record the maximum diameter [of coppice stools] in any one direction.' Confusing.

p85. The requirement to 'Only record climbers/creepers which cover the ground' is obscure.

## **21 – VETERAN TREE FEATURES**

**To be recorded on any tree of 1 metre DBH and over, or any tree smaller if in the truly ancient class for that species.**

p103. The Glossary requires that all trees, regardless of size, should be classified as ancient or veteran if having dead wood, sap runs, tears, splits scars or lightning strikes. Any of these characteristics may be found in a large sapling or in laid growth which would clearly not otherwise be regarded as ancient or veteran. To include Broom but exclude Gorse seems wrong.

**Percentage of live canopy (To nearest 5%) %**

p85. Even experienced consultants would find this accuracy of 5% impossible and the need for this accuracy is doubtful.

There is no clear guidance on what notes are required, their value and what is likely to be done with them.

## **Data Management, Storage, Analysis, and Reporting**

p86. The requirement that 'all records and associated information are computerised' does not agree with the later sentence 'A description of the survey method must accompany the survey data, so that any subsequent users will be able to interpret the results correctly'.

p87. The recommended minimum level of analysis is likely to jettison over 90% of the data gathered in the survey. Nowhere are the BAP attributes for favourable conditions mentioned. The form of the recommended short report makes it impossible for statistical computer analysis

## **GLOSSARY OF TERMS**

### **Bank – stone-faced**

p98. An earth filled bank is faced with stone to provide functional stability to the structure, and not 'to support the woody component of the hedgerow' which is often absent following long-term summer flailing.

### **Fence – wire/wire strand**

p99. electric, temporary or permanent, plain or barbed wire are missing as are the number of strands.

### **Grassland – Improved**

*Trifolium repens* is a forb and not an agricultural grass.

### **Ground flora**

The inclusion of woody species is unexplained, the list of four climbers in Q17 should be named in place of the guidance given.

**Hedgerow – species-rich.** No guidance is offered for a definition of a hedgerow species-rich in basal herbaceous flora and the setting of local criteria is recommended instead.

**Livestock.** Reared game birds, especially pheasants, should be included as they can make a tremendous difference to hedge fauna and flora.

**Margin.** What width is to be recorded where 'the margin of grassland fields are ... undistinguishable [sic] from the main field'.

**Mode.** This is usually referred to as the typical measure, a concept that is more readily recognised by the layman.

**Pollard.** Trees are pollarded out of reach of farm livestock, and the new shoots erupting from the trunk are traditionally browsed up to pollarded height.

**Tree – ancient or veteran.** Often immature, ie neither ancient nor veteran, trees show sap runs, dead wood, splits or scars. Recording of these skews the data.

**Wall.** To define a wall in terms of itself is wrong.

## **GUIDANCE ON HEALTH AND SAFETY**

p104. Surveying by using the public highway may be hazardous, especially on congested roads without verges. Cooperation with the local highways authority is essential (Department of Transport : Traffic Signs Manual 2006).

The instruction to avoid 'startling animals' [sic] as far as possible can only bring a wry smile. More seriously, a boar, a cow with calf, a mare with foal, or a group of horses, none of which is mentioned, are all more likely to be a real danger than bullocks. It is symptomatic of the poor understanding of the countryside which runs through this Handbook, that these very real potential dangers from livestock are not mentioned in a Health and Safety list which otherwise goes to almost ludicrous extremes, eg an anti-bracken mask (without indicating exactly when or where this is advisable), and covering bare skin against ticks (gloves & face-mask?). But trousers or leggings have not been recommended for blackthorn hedges.

The advice to survey only in pairs is likely to reduce the number of surveys due to fund restrictions. Climbing over a gate at the hinge end is not only good practice, but is also much safer, possibly avoiding an abrupt descent off a collapsing gate.

A need for access to toilet facilities should be considered.

The Handbook, while stating that the surveyors are responsible for their own safety, does not warn that they have a responsibility to others, and of the advisability of third party insurance even if not requested by the landowner. Advice on what to do in case of accident or injury but illness is not mentioned.

## **THE HEDGE (& WALL) IMPORTANCE TEST**

The Hedge (& Wall) Importance Test is a simple and comprehensive measure of the importance of any hedge, hedgerow, hedgebank or dry-stone wall in the UK. It deals with and distinguishes between hedgerows, stone-faced earth banks, turf-faced earth banks and drystone walls. It identifies regional, county and local distinctiveness. It does not interfere with the hedge or the wildlife in it, and can be carried out at any season of the year. The HIT is already used by the general public, is free and easy to use. It provides an A4 survey sheet and help-note to assess the hedge's value for landscape, history and wildlife. Its 24 short questions measure the size, presence or absence of 60 factors which the computer works out into marks-out-of-ten. The HIT database also automatically prints out the detailed written description of the hedge. This test contains all the Hedgerows Regulations criteria except for the rare species list (which typically requires more than one visit-in-season by an expert). It has many advantages over the Defra Hedgerow Survey Handbook in ease and accuracy of application, and in the gathering of compatible nation-wide statistics. The HIT is at [www.cornishhedges.com](http://www.cornishhedges.com) (or see 'hedge importance test' on Google).

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