

Dorset Biodiversity Appraisal Protocol

Natural Environment Team

Guidance for Consultants

Section B – Mitigation

Errors, corrections, and revisions

We aim to minimise errors within the text of the DBAP guidance. Where text contains a substantive error, a correction will be made as soon as practicable, and the relevant section of the guidance reissued. Reissues will be sent out via email and appear on the DBAP website pages. Where an error does not change the meaning of the guidance but ought to be corrected to avoid misleading readers, for example an incorrect reference, a correction via email list will be issued as soon as practicable. If errors are minor and do not change the meaning of the guidance, they will not be corrected until the next scheduled annual revision.

Scope

This guidance is not exhaustive. Some guidelines are referenced in the text but are not reproduced in full. Information submitted under the DBAP is expected to comply with all relevant guidelines in terms of both content and presentation.

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Appendix A: Losses and gains table template

NB. PLEASE NOTE THAT WORST CASE SCENARIO MITIGATION FOR BATS IS NO LONGER APPLICABLE UNDER THE DBAP AND HAS BEEN REMOVED FROM THE GUIDANCE.

1. Introduction

- 1.1. This section sets out more information on how mitigation must be achieved relating to particular ecological features. The mitigation hierarchy set out in the National Planning Policy Framework (NPPF) (2021) states:
- 1.2. 'If significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused.' (Paragraph 180 (a)).
- 1.3. The NPPF also identifies how the planning system should contribute to and enhance the natural and local environment (Paragraph 174), including:
 - protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils;
 - recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
 - minimising impacts on biodiversity and providing net gains in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures (see Section A).
- 1.4. For the purposes of the Dorset Biodiversity Appraisal Protocol (DBAP) and Dorset Biodiversity Compensation Framework (Section C), the term 'mitigation' typically refers to measures that reduce and / or minimise impacts within the red line planning application boundary or blue line wider boundary. The term 'compensation' is used where a residual loss on-site is either addressed by habitat creation outside of the red line planning boundary or blue line ownership boundary, or where this is not possible, through financial compensation.
- 1.5. Financial compensation is only considered as a last resort when the planning authority is minded to grant permission and a residual loss in biodiversity still remains after the mitigation hierarchy has been applied; avoid, mitigate and 'habitat' compensation.
- 1.6. Development is expected to avoid sites of high ecological value such as important hedgerows, nationally important Sites of Special Scientific Interest, and Sites of Nature Conservation Interest (Dorset County Wildlife sites).
- 1.7. Development is also expected to ensure the 'continued ecological functionality' of a site for protected species through appropriate mitigation. If impacts on priority habitats or protected species cannot be avoided or mitigated then development will be required to provide compensation, as set out in the Dorset Biodiversity Compensation Framework (DBCF).
- 1.8. Ecological losses and gains must be clearly identified with appropriate mitigation and off-site compensation (first) or financial compensation where there is still a residual loss. This can be included for any size of development but **must** be presented in a table for developments of more than five residential or industrial units.
- 1.9. Presentation of losses and gains is not limited to residential and industrial development and must also be presented for other projects, including habitat restoration or other projects which are intended to benefit biodiversity, whether this is using the template in Appendix A, or the DEFRA Biodiversity Metric.
- 1.10. Include loss and gain tables and discussion in ecology reports not within Biodiversity Plan (BP) forms or a Landscape and Ecological Management Plan (LEMP). An example Habitat Losses and Gains table is provided in Appendix A.

- 1.11. Mitigation must minimise impacts by changes to design, timing or working practices, to the point where at a minimum, there is a neutral effect on biodiversity. For smaller development sites this may not always be possible in which case off-site compensation must be considered.
- 1.12. Mitigation should also consider including alternative habitats of biodiversity value. Enhancement of other areas such community gardens, playing fields, allotments, Sustainable Drainage Systems (SUDS), swales, SANGS or other green infrastructure may contribute to mitigation provided they have clearly defined wildlife benefits and contribute to Dorset's ecological network in addition to their primary purpose (in line with the Government's 25-year Environment Plan; Nature Recovery Network and securing net gain). Long-term management of these features will need to be secured. For habitats of low biodiversity value, creation of amenity grassland, gardens, SUDS, and green infrastructure count towards mitigation for loss of these habitats but not for semi-improved grassland types.
- 1.13. Adequate surveys must be undertaken to inform the mitigation and net gain required. (BS 42020, chapter 6).
- 1.14. Developments involving grassland must have a botanical assessment at an optimal time of year and reports must be accompanied by a full plant list with DAFOR categorisation. Any deviation from this must be agreed with NET prior to submission and must be fully justified and supported by an appropriate desk top study.
- 1.15. The retention of ecological features and links must be a priority on all projects submitted under the DBAP.
- 1.16. Mitigation and precautionary measures must be designed into schemes at the earliest opportunity. Applicants must commit to all necessary mitigation measures via an approved BP or LEMP prior to the submission of a planning application.
- 1.17. Where guidance is published that prescribes mitigation it must be adopted. Where necessary and appropriate bespoke mitigation can be put forward for consideration by the NET.
- 1.18. The planning authority must be provided with the degree of surety about the likelihood of the efficacy and practicality of the mitigation. Where monitoring of mitigation is appropriate, the mechanism for this must be clearly given in the BP or LEMP. For example, the nature and duration of compliance visits and bat roost monitoring and who will undertake the monitoring must be written into the BP or LEMP. Applicants must be made aware by consultants that all measures within the BP or LEMP form a condition of their planning permission.
- 1.19. Where degradation of habitat(s) is to be undertaken as an avoidance measure for protected species, care must be taken to ensure the method statement accounts for all likely species which could be using the habitat. This may mean additional checks of the habitat prior to clearance where species have conflicting seasonality for habitat degradation works.
- 1.20. An appropriate and proportionate level of ecological supervision / Ecological Clerk of Works must be included in BP or LEMP.
- 1.21. The BP or LEMP must include detail of when the works / measures will be completed.

2. Hedgerows

- 2.1. A hedgerow is defined as any boundary line of trees or shrubs over 20m long and less than 5m wide, and where any gaps between the trees or shrub species are less than 20m wide. Any bank, wall, ditch, or tree within 2m of the centre of the hedgerow is part of the hedgerow habitat, as is the herbaceous vegetation within 2m of the centre of the hedgerow. All hedgerows consisting predominantly (i.e., 80% or more cover) of at least one woody UK native species are defined as priority habitat.
- 2.2. As linear features hedges make a unique contribution to biodiversity. Assessment must consider the number of woody species and the type of ground flora present, length, distinctiveness, condition, and spatial relationship as well as their protected species, landscape, or historic value. An assessment of age must refer to a range of data including old maps and documents where available.
- 2.3. A review of hedgerow designations and different assessments was undertaken for the NET by Dorset Environment Records Centre to ensure all significant hedges are fully identified. Identifying and Assessing Significant Dorset Hedgerows, Bryan Edwards, Dorset Environmental Records Centre (January 2022).
- 2.4. The new hedgerow assessment for the DBAP combines criteria from the UK Priority Habitat
- 2.5. definition, Hedgerow Regulations (1997 and amendments) and Species-rich Hedgerows, DEFRA Hedgerow Survey and includes local features that make hedges in Dorset special.
- 2.6. A hedgerow qualifies as a Significant Dorset Hedgerow if it meets one of the following criteria:

Significant Dorset Hedgerows

1. Having **5 or more woody species** native to Dorset per **30m** section (chosen in accordance with the methodology set out in the Hedgerow Regulations (1997)¹.
2. Having **8 or more woody species** native to Dorset along the **entire length** of the hedge¹.
3. Having 5 or fewer native woody species per 30m section or 8 or in the whole hedge, BUT **7 or more ground layer 'woodland' indicator species**^{1,2}.
4. Supporting **1 or more Red Listed species** within the IUCN categories CR, EN, VU, NT³.
5. Supporting **1 or more Section 41 species** of Principal Conservation Importance under the NERC Act 2006³.
6. **Features of local distinctiveness** such as double-hedged green lanes, droves and Holloways, and the presence of veteran and ancient trees including coppiced stools and layered boles².

Refer to: [Identifying and Assessing Significant Dorset Hedgerows](#).

- 2.7. An example template for the above hedgerow assessment is included as Appendices II-IV of the guidance.
- 2.8. Other species such as bramble and climbers like honeysuckle which are not classed as woody or

¹Woody species in Dorset, Box 5

²Woodland indicator species (including Ancient Woodland Vascular Plants and Hedgerow Notables), Box 6 & 7.

³Examples of Section 41 and Red Listed species recorded from Dorset hedgerows Section 7. para. 7.1

- 2.9. indicators will be important for S41 species and must be valued appropriately in the overall assessment.
- 2.10. Hedgerows qualifying as Significant Dorset Hedges will be viewed in a similar way to a Site of
- 2.11. Nature Conservation Interest (SNCI) or a grassland of local interest and proposals to remove them or sections of them will not be acceptable under the DBAP. The mitigation hierarchy (see 1.2 above) must be applied seeking to avoid impacts through design to avoid loss or damage rather than attempting to mitigate them. As a last resort should this not be possible, mitigation must be in accordance with multipliers in Section C. Compensation.
- 2.12. Identifying and assessing Significant Dorset Hedgerows, Bryan Edwards, Dorset Environmental Records Centre (January 2022) and The Hedgerow Survey Handbook (Defra, 2011) is recommended reading for more detailed guidance.
- 2.13. If using the DEFRA Biodiversity Metric, hedges which qualify as Significant Dorset Hedges must be categorised as Very High or High distinctiveness.
- 2.14. The overall assessment taking into account length, distinctiveness and condition and spatial relationship will provide the basis for determining the level of mitigation and / or compensation required.
- 2.15. Developments affecting hedgerows must be subject to adequate survey for protected species including activity and hedgerow tree surveys for bats, surveys for Hazel dormouse and reptiles and amphibians. Where indicated by initial phase 1 surveys, professional judgement and desk top survey records, additional surveys may be required, at appropriate times of year, for other S41 species for example Breeding Bird Surveys and specialist invertebrate surveys. Hedges will be considered 'affected' by disturbance during construction and the proximity of development boundaries as well as removal of all or sections of hedges. Therefore, surveys for Hazel dormouse must be undertaken even where the removal of part or all the hedge is not planned. This is to take account of the potential for development proposals to change and to establish appropriate buffers - for both during and post construction - at the outset.
- 2.16. Where replacement planting is required as mitigation, the length of the replacement hedgerow will be calculated using the multipliers set out in the Dorset Biodiversity Compensation Framework (refer to Section C).
- 2.17. Mitigation measures can include the restoration and enhancement of existing hedges; however, a measurable upgrading of distinctiveness and / or condition must be demonstrated.
- 2.18. Improved management and gap planting which is less than 20 metres in any one length will not qualify as mitigation for hedgerow loss and will be considered as 'enhancement' contributing to securing biodiversity net gain rather than as mitigation.
- 2.19. Where a hedge will be translocated on-site, or a new hedge is being planted adjacent to the location of an existing hedgerow there may still be a requirement to address the interim loss of biodiversity value and function in accordance with the DBCF multipliers.
- 2.20. Hedges bounding green lanes and double hedges must be treated as two hedges and not a single hedge and as Significant Dorset Hedges
- 2.21. A hedge with more than 90% non-native species comprising its structure, will not be regarded as a hedgerow for the purposes of compensation. Mitigation, however, will still need to be applied as for example it may be used as a navigational feature by bats.
- 2.22. Residual loss of hedgerows will be compensated under the DBCF (see Section C).

- 2.23. Where trees are present within the hedge line the Root Protection Zone must be increased as per BS 5837:2012. See 6.7. below for veteran trees.
- 2.24. All retained hedges and new hedges which are included as mitigation or net gain must not be included within gardens of new residential development and must be buffered e.g., by public open space, SANGs, public rights of way and other green infrastructure and SUDs features.
- 2.25. During construction hedgerows must be protected by appropriate buffers of no less than 2m from the edge of the hedge, increasing to allow protection of root protection zones in-line with BS 5837:2012 Trees in relation to design, demolition, and construction.
- 2.26. New hedgerow planting must aim to create a hedgerow habitat with features such as banks and ditches with buffers. Planting must consider local variation in species composition with a minimum of 8 woody species including year-round nectar sources (February to October). Refer to Identifying and Assessing Significant Dorset Hedgerows - Box 9.
- 2.27. New hedgerows must include standard native trees. The Countryside Stewardship grants scheme advice under TE1: Planting standard hedgerow tree recommends irregular spacing with a minimum of 20m between trees to allow for full crown development.
- 2.28. For the operational phase of development hedges within development sites must be subject to a permanent – to be retained for the lifetime of the development - minimum 2m buffer either side of the hedge starting at the edge of the hedge. For non-residential developments this will be increased to a minimum 5m buffer (Cornwall planning for Biodiversity Guide).
- 2.29. Hedgerows with protected species interests will also require a buffer during and post construction and this must be agreed with the NET. Where linear habitats e.g., hedgerows, scrub, ditches tree lines, river corridors etc., act as commuting and foraging features for highly light sensitive bat species – long-eared bats, Myotis (which include whiskered, Natterer’s, Brandt’s, Daubenton’s and Bechstein’s), barbastelle and greater and lesser horseshoe bats – **a minimum buffer of 6m with a long sward is required along its entire length.** This must be measured from the edge of hedgerows and must be incorporated within **a minimum 10m dark corridor along its entire length.** Management of the buffer post development must be detailed in the BP or LEMP.
- 2.30. The long-term management of hedges; their associated buffers and other ecological features such as ponds and woodlands must be addressed and included within management plans detailed within BP or LEMP.
- 2.31. The management of hedges that are retained in developments but fenced out of gardens must be included in a BP or LEMP and managed long term as countryside hedges and include prescriptions for any associated protected species.
- 2.32. Where a Construction Environment Management Plan (CEMP) is required, this must be cross referenced with appropriate detail in the BP or LEMP.

3. Hazel dormouse

- 3.1. Developments affecting hedgerows must be subject to adequate survey for Hazel dormouse and take account of the potential for development proposals to change and to establish appropriate buffers - for both during and post construction - at the outset (see above).
- 3.2. The NET accepts the use of footprint tunnels as a survey methodology; please contact the NET to discuss cases where this methodology in combination or alone is being proposed.
- 3.3. Hedges with Hazel dormice present must be retained and protected from development both during construction and in perpetuity. Management plans must be provided which might include

techniques such as hedge laying and will need to ensure arboreal connectivity it maintained. Additional planting at the hedge base should seek to curtail cat predation where residential development is concerned by allowing the growth of scrub and planting species such as bramble, gorse and where soil conditions allow Butchers broom.

- 3.4. For hedges and woodland edge habitat with Hazel dormice present, buffers during and post construction and their on-going management post construction must be agreed with the NET. The habitats / planting within buffers and how they are situated in relation to the development must also be agreed.

4. Dorset Hazel Dormouse Conservation Strategy Pilot

- 4.1. Hazel dormice are experiencing ongoing declines, having fallen by 72% across Britain between 1993 and 2014 (Goodwin et al, 2017) due to the loss, fragmentation, and degradation of suitable habitat. The new Environment Act (2021) has provisions to develop Species Conservation Strategies (SCS) and a study is currently underway to develop a pilot Strategy for dormice in Dorset and Devon. The study is a partnership between Natural England, University of Exeter, Devon County Council and Dorset Council, and consists of two parts. Part one is being led by Exeter University with the aim of developing and testing evidence for a Strategy that will restore and improve the conservation status of dormice. The second part is a review of the current regulations for the planning and licencing systems with the aim of improving the existing systems and reducing bureaucracy.
- 4.2. On completion of the study, a pilot Hazel Dormouse Conservation Strategy will be trialled in Dorset and Devon. Once in place, the pilot Strategy will be implemented under the DBAP. Further updates will be provided by email and on the DBAP webpages. In the meantime, the above paragraphs remain applicable.

5. Hedgehogs

- 5.1. Where habitat suitable for hedgehogs is present consideration of the need to survey should be discussed in ecology reports. The optimum period to survey for hedgehogs is between May and September when they are active. A licence from Natural England will be required to survey by trapping or taking using an artificial light (such as a torch). A licence is not required for surveys that are limited to searching for field signs; direct observation or presence/likely absence surveys using techniques that do not involve trapping or handling such as footprint tunnels or camera traps. CIEEM has the species-specific survey competencies information sheet - [CSS-HEDGEHOG-April-2013.pdf \(cieem.net\)](#)
- 5.2. Where suitable habitat is present, precautionary mitigation for hedgehogs must be included for works that have the potential to cause disturbance or harm:
 - Removal of suitable vegetative cover during the winter **OR** phased removal of vegetation only after a hand search for hogs by an ecologist.
 - Dismantling of log and debris piles by hand by an ecologist.
 - Open trenches, pits, ditches, ponds and drains must be covered over or fitted with ramps to allow for escape. Netting must be kept off the ground to avoid entanglement and any slack netting tied up. Rubbish must be kept contained in a designated area to avoid animals becoming trapped in litter.
 - Provision of refuge such as log piles.
 - Permeable fencing to provide gaps under gates, brick walls and in gravel boards measuring 13cm x 13cm.

- 5.3. A guide for development can be found on the People's Trust for Endangered Species website: [Hedgehogs-and-developers-ZR.pdf \(hedgehogstreet.org\)](#). A general advice is also available with the [NET series of advice and guidance notes](#).

6. Trees

- 6.1. Trees must be assessed for their own ecological value and as landscape and their importance to habitat connectivity and continuity.
- 6.2. Assessments must include consideration of the level of predicted impact during and post construction and must be included in ecology reports and BP or LEMP.
- 6.3. Ancient semi-natural woodland habitat must have a minimum buffer of 20m (Basingstoke & Deane Borough Council Landscape and Biodiversity SPD).
- 6.4. Ancient, veteran, and notable trees require special attention in accordance with the NPPF (2021) and British Standard BS. 5837:2012. Ancient and veteran trees are classed as irreplaceable habitats and must be assessed at the earliest possible stage in the design process with the presumption such trees will be retained. Veteran features such as dead wood and cavities provide valuable wildlife habitats for species such as bats, fungi, birds, invertebrates, and lichen.
- 6.5. Ancient, veteran, and other notable trees are defined by the [Ancient Tree Forum](#). In addition, the [VETREE](#) website provides useful information and guidance.
- 6.6. The ecological consultant will review the arboricultural report and ensure the Tree Protection Plan has addressed ancient, veteran, and notable trees which should almost always be included in Category A3 (high quality, cultural value including conservation). The design, protection and management will ensure their long-term retention.
- 6.7. Root Protection Zones (RPZ) for ancient, veteran and notable trees will be calculated as an area with a radius 15 times the diameter of the tree at breast height or 5m beyond the crown whichever is the greater (see [Ancient woodland, ancient trees and veteran trees: protecting them from development](#)).
- 6.8. Where appropriate, other trees (not currently ancient, veteran or notable) within the tree populations on site should be highlighted as the future Veteran and Notable trees and provided with appropriate mitigation / RPZs.
- 6.9. Tree replacement / financial compensation will follow the recommended levels set by Bristol City Council (listed in the Planning Obligations Supplementary Planning Document 2012). Where trees will be felled for development, replacement will be dependent upon the size of the trees to be lost and in accordance with the following table:

Trunk diameter of tree lost to development (cm measured at 1.5m above ground level) ⁴	No. of replacement trees required (all replacement trees must be 16-18cm girth)
Less than 19.9	1
20 - 29.9	2
30 - 39.9	3
40 – 49.9	4
50 – 59.9	5
60 – 69.9	6
70 – 79.9	7
80 +	8

- 6.10. 50% of replacement or new trees will be large canopy trees such as oak, lime and beech.
- 6.11. Replacement and new tree planting will include a combination of at least 75% British native including smaller canopy trees such as hawthorn, field maple, rowan, whitebeam, silver birch, crab apple, willow and 25% non-native such as fruit trees and sycamore to ensure ecological value and resilience.
- 6.12. Where the grant of permission for development will result in the loss of a notable, veteran or ancient tree, the level of compensation tree planting required on-site will be calculated in accordance with recognised methodology [Capital Asset Value Amenity trees](#) (CAVAT).
- 6.13. If tree replacement cannot be secured on-site then CAVAT or a bespoke approach appropriate to the site taking into account species and the position of planting, will be used to determine the level of financial compensation required.

7. Watercourses and water bodies

- 7.1. For main rivers a minimum buffer zone of 8m must be provided with a minimum 5m buffer zone provided for non-main rivers, ditches, or ponds. Buffer zones start at the top of the bank not mid-channel. (Basingstoke & Deane Borough Council Landscape and Biodiversity SPD).

⁴ With the exception of notable, veteran or ancient trees.