

Hedgerow Habitat Action Plan



“There is no reason why you should be bored when you can be otherwise. But if you find yourself sitting in the hedgerow with nothing but weeds, there is no reason for shutting your eyes and seeing nothing, instead of finding what beauty you may in the weeds.”

Emily Post

1 Aims

- To maintain and enhance the ecological health of existing hedgerows and ensure that management is appropriate.
- To create new hedgerows and extend the existing areas; Any unavoidable loss should be adequately compensated with the securement of a Biodiversity Net Gain.
- To raise the awareness amongst Council Officers and the public of the importance of woodlands to encourage appreciation across the borough.

Acknowledgements

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2 Introduction

Hedgerows are the most widespread semi-natural habitat remaining in England and are critical to the existence of numerous plants and animals. There are 130 UK Biodiversity Action Plan species known to be closely associated with hedgerows in England, and many more utilise them for food, shelter or to complete their life cycles. They are of particular importance to a number of species of conservation importance whose numbers have declined in recent decades, including threatened lichens, invertebrates, reptiles, amphibians, birds and mammals. In addition, hedges help species to move through our landscapes from one habitat patch to another, allowing them to expand their range and increase their chances of survival.

As well as being a reservoir of diversity, hedgerows are historically important and make a distinctive feature of the British landscape. Many were planted in the 18th century after the Enclosures Acts was passed (17-20-1840), giving landowners the option to add large areas of common land to their estates. Unsurprisingly, hedgerows are mentioned in the earliest British texts to exist (Roseff, 2006) and an important archaeological excavation in Cambridgeshire revealed a sprig of blackthorn believed to be a hedge remnant dating back to 2000 B.C, suggesting hedgerows themselves have their origins in the Bronze Age or even the Neolithic period (Wright *et al.*, 2009).

The farmers who originally pioneered hedgerows would have cleared small areas for cultivation, leaving strips of vegetation as boundaries. When browsed by livestock, these strips would have formed vigorous new growth which not only became stock-proof, but also wind-proof – greatly enhancing the growth of crops within. These original hedges would have come at no cost to create, required no imported materials and yielded valuable produce such as fruits, berries and nuts.

Despite this ecological and cultural significance, the overall length of hedges is declining across Great Britain. After World War II, the modernisation of agriculture led to considerable hedge removal and in 1990, the Countryside Survey reported a drastic 23% decrease in the length of hedges in Britain (1984 – 1990). This drastic decline led to hedgerows being designated as a priority habitat for conservation in the 1994 UK Biodiversity Action Plan (now superseded by the 2010 Biodiversity Framework) (Gosling *et al.*, 2016). Since then the loss of hedgerows has slowed, but neglect, damage and removal remain significant threats.

In the most recent Countryside Survey (2007), a decrease in the length of managed hedgerow (6.1%) alongside an increase in the length of tree lines and relict hedges (13.2%) likely reflects a reduction in the management intensity of hedgerows. The data collected was also used to assess their condition against a set of agreed criteria, with only 31% meeting all of the criteria, and only 48% considered to be in good structural condition (Carey *et al.*, 2008; Woodland Trust, 2014).

Hedges fall into two categories: 'managed', so that trees no longer take their natural shape or 'relict', where trees were planted as hedges but are no longer managed. For the purpose of this document, hedgerows are broadly 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 (Bickmore, 2002). Included in this definition is any bank, wall, ditch, tree or herbaceous vegetation within 2m of the centre of the hedgerow (Natural England, 2014). This means that hedges not only consist of hedgerow shrubs, but also standard trees, deadwood and ground flora that should be incorporated into management.

Ancient hedgerows are classified as those that were in existence before the Enclosure Act passed (1720 - 1840) and tend to support a greater diversity of plants and animals than subsequent hedges. Species-rich hedgerows contain on average, five or more native woody species in a thirty-metre length, and it is estimated that 42% of hedges in the UK are ancient and/or species-rich.

This document is an updated version of the previously published [Habitat Management Plan](#) for 'Species-rich Hedgerows and Green Lanes' which was created in 2014. This Habitat Action Plan is not intended to provide site specific context and management recommendations, but provide an overview of the current borough level situation and a framework in which site management interventions can be agreed.

3 Current status

a. Legal / policy status

Table 1 Legislation relative to urban hedgerows.

Act	Description
The Environment Act 1995	Introduced the control and protection of hedgerows deemed to be species-rich or of historical importance, requiring land owners to seek permission from their local authority for their removal.
The Hedgerows Regulations (Section 97 of the Environment Act 1995)	Prevents the removal of hedgerows which are over twenty metres, on common land, on protected land, being used for agriculture, forestry or for the breeding of animals, without first submitting a removal notice to the local planning authority. The Hedgerow Regulations contain a system for determining whether a hedgerow should be considered important, such as their age and length. The regulations apply when undertaking most types of permitted development under the Town and Country Planning General Permitted Development Order 1995. The planning authority may also use these criteria to assess the environmental impacts of a proposed development that requires planning permission and to determine whether hedgerows should be retained as a planning condition. Government policy is that the local planning authority should consider hedges when determining planning applications.
Countryside and Rights of Way Act 2000 (Section 74)	Places a duty on Local Authorities to have regard to the purposes of conserving biological diversity. This includes habitats such as ancient and or species-rich hedges.
Tree Preservation Orders	An individual hedge can be subject to a TPO, although this is not common. It is more common for individual hedgerow trees to be protected by a TPO.

The Wildlife and Countryside Act 1981 & The Conservation (Natural Habitats, &c.) Regulations 1994.	Indirectly, a hedgerow may be protected where it forms a habitat for a legally protected species.
The NERC Act 2006 (Sections 41)	Hedgerows are listed as a Habitat of Principal Importance in England
Article 10 of the 1992 Habitats Directive	Encourages the management of linear features such as hedgerows to aid the migration, dispersal and genetic exchange of wild species.

b. Conservation status – Hedgerow is listed as a priority habitat in the UK Biodiversity Action Plan, which defines two types of significant hedgerows that need protection:

- **Ancient hedgerow** - describes those that were in existence before the Enclosures Acts passed between 1720 and 1840
- **Species-rich hedgerow** - containing five or more native flora along a 30 metre stretch.

A priority hedgerow is broadly defined as any boundary line of trees or shrubs consisting predominantly of at least one woody native species, being over 20m long and less than 5m wide, and where any gaps between the trees or shrubs are under 20m wide.

c. Distribution Sites in the borough which contain good examples of hedgerow include Tolworth Court Farm Fields and Medieval Moated Manor, The Grapesome, Manor Park and Green Lane. (See Appendix A for SINC designation sites in RBK with hedgerow habitat).

4 Associated Indicator Species

Hedgerows are utilised by a number of flagship and priority species found in the borough, including stag beetles, hedgehogs and badgers. Certain features are important for supporting particular species, though species-rich hedgerows can support an enormous diversity of life. Older hedgerows for example, often contain larger quantities of deadwood and leaf litter, thus providing valuable habitat for invertebrates and small mammals which ultimately attract a range of predators.

More than 20 species of butterfly found in lowland Britain breed in hedgerow, including the brown hairstreak butterfly (a UK BAP species) which is reliant on blackthorn, the holly blue butterfly whose caterpillars are only found in hedges with holly or ivy, and the brimstone which prefers alder buckthorn. Flowering hedge species such hawthorn, wild cherry and hazel also provide important feeding habitats for nectar and pollen loving insects, such as bumblebee species.

Overall, a combination of species richness (including in hedge trees, banks, basal flora and immediate margins), hedge size, connectedness within the landscape and hedge quality as a result of maintenance is important for biodiversity. Equally significant, is having a variety of successional stages on the landscape scale (hedges of different ages, from newly planted to ancient and managed on a rotational basis).

Table 1 Associated indicators of hedgerow habitats.

Group	Indicator Species
Bird	Skylark, grey partridge, song thrush, linnet, turtle dove, corn bunting, tree sparrow, house sparrow, bullfinch, wren, robin, willow warbler, blue tit, great tit, blackbird, chaffinch. Birds that prefer scrubby open woodland (e.g. dunnock, yellowhammer, whitethroat) also use hedgerows.
Mammal	Bats, badger, hedgehog, rodents (e.g. shrews, bank voles, wood mice).
Reptile	Common lizard, slow-worm, grass snake, adder.
Amphibian	Newts (including great crested), toads, frogs.
Invertebrate	Beetles, spiders, flies, pollinators (e.g. bumblebees). Lepidoptera: brown & black hairstreak butterflies, holly blue butterfly, brimstone butterfly, purple emperor butterfly, pearl-bordered fritillary butterfly, barberry carpet moth, goat moth.
Plant	Native: blackthorn, hawthorn, hazel, dogwood, dog rose, guelder rose, gorse, field maple, alder, yew, wild privet, ash, oak, rowan, wild cherry, crab apple, holly, ivy. Naturalised: barberry. Non-native: garden privet, leylandii, sycamore, cherry laurel.

5 Ecosystem Functionality and Services (Role in the Climate Emergency)

Hedgerows are important landscape features that help to build resilience in the face of a changing climate, increasing numbers of pests and diseases, and intensifying extreme weather events. Hedgerows help to mitigate these effects through carbon sequestration, improved flood control, storm damage protection, reducing the water requirements of plants and through the provision of microclimates. Hedge creation projects to connect isolated stands may also facilitate range expansion of species that are increasingly threatened by habitat loss and climate change (Lundy, Montgomery & Russ, 2010; Gaüzère *et al.*, 2020).

5.1 Connectivity

Linear landscape features provide wildlife corridors which facilitate the movement of species from one habitat patch to another. This makes them an important factor within residential and industrial areas by linking habitats of ecological significance and allowing species to extend their range. For example, a study by Lundy, Montgomery & Russ (2010) demonstrated the expansion of Nathusius' pipistrelle bat, from stable European populations into emerging suitable areas in the UK. This was thought to be the first study of its kind when published in 2010, linking contemporary climate-mediated change to the distribution of a mammal species. Bats are a particularly good example as they utilise hedgerows for foraging, navigation, shelter and roosting.

5.2 Buffer Effect

Urban cities are known to have hotter average temperatures compared to rural areas and the microclimate of hedgerows can act as a place of refuge for wildlife (Johnson *et al.*, 2019). Another advantage is that hedges act as natural barriers to adjacent habitats, protecting

them from wind, pollution, noise, soil erosion and water runoff.

5.3 Carbon Sequestration

Hedgerows can have complex structures and are often a combination of trees, shrubs and ground flora with an underlying layer of leaf litter and deadwood. A meta-analysis conducted by Drexler, Gensior & Don (2021) provided evidence to show that due to their density, temperate hedgerows can store similar amounts of carbon to forests. Though this varied with hedgerow characteristics such as age, height, management, species composition and adjacent land-use.

5.4 Food Production

Hedgerows have their role to play in food production by acting as a source of predators and parasites of crop and livestock pests, and as a source of nectar, pollen and nesting sites for insects. Around 70% of the UK is agricultural land (The World Bank, 2018) with hedgerows being traditional features within. They define boundaries, act as windbreaks, offer shade and shelter to animals and prevent the erosion of precious topsoil (Woodland Trust, 2014). Even in the urban context, hedgerows can perform similar functions in allotments as well as provide food such as blackberries, sloes and elderflowers for humans. These plants have been used for many centuries and among others are still foraged today.

5.5 Cultural

Hedgerows contribute to cultural services through recreation, spiritual enrichment and cognitive development. They are aesthetically pleasing, can be used as natural screens to give privacy or hide unsightly developments, and are educational tools for both local and national history and wildlife.

While few species are dependent on hedgerows alone, the loss of or decline in hedge quality is likely to have an adverse impact on their populations. Additionally, many of these species are reliant on a variety of connected habitats in close proximity to one another, and so conservation actions should consider the landscape as a whole.

6.1 Pests & Disease

Pests and diseases are a high risk factor for hedgerows as they are easily introduced and can cause significant damage. In their native environments, pests and diseases have co-evolved with their hosts to cause little harm. However, globalisation has seen the rise in non-native organisms, leaving our native tree and hedgerow species with little natural defence. Examples include ash dieback which has been estimated to cost the UK £15 billion (Hill *et al.*, 2019), and Dutch elm disease (spread by elm bark beetles) for which the economic cost has not yet been quantified but is considered to be one of the most serious tree diseases in the world.

6.2 Poor Management

Maintaining and laying hedges correctly is an art, a tradition and a skill. Management must be carried out sympathetically, whereby over-management or under-management can be a threat (See **Appendix B** for management guidance). Unfavourable practices may include leaf blowing which disturbs leaf litter, flailing, excessive cutting and laying hedges incorrectly.

6.2.1 Neglect

When hedgerows lack maintenance they can fall victim to aggressive plant species such as bramble, or non-native species

such as laurel and snowberry, which outcompete the desired hedgerow and can even lead to the spread of disease. Additionally, land managers are aware that neglected hedgerows can be a source of pests and weeds. Thus, they are targeted with pesticide and herbicide treatments which can have deleterious impacts on non-target species such as bees. Unkempt hedges are also more likely to attract litter which in turn may entice vermin.

6.2.2 Inappropriate Cutting Regime

Appropriate maintenance of hedges and trees may bring about rejuvenated growth with an increase in the quantity of fruit, nuts and berries produced. However, pruning and felling too much, too little or at the wrong time of year, can drastically decrease these resources for wildlife. For example, cutting hedgerows immediately after harvest in autumn removes flowers and berries important to birds and overwintering insects.

A study by Staley *et al.* (2007) showed that reducing the cutting of hawthorn hedgerow in lowland England from 2 to 3 years, increased the number of flowers by 2.1 times and berries by 3.4 times, providing an important food source for pollinators and birds. This was supported by a study by Facey *et al.* (2014), showing that moth abundance increased when hedgerows were cut less frequently and in

winter rather than autumn. Additionally, Croxton & Sparks (2004) found that most berries on non-cut hedges had been foraged by mid-January.

It is therefore recommended that hedges be trimmed on a staggered, rotational basis every 2 to 3 years, in winter rather than autumn. However, growth should not be left untrimmed for longer than 3 years as the woody growth becomes too thick.

6.3 Removal

Hedgerows are crucial for connecting other important habitats in the landscape such as rivers, woodlands and grasslands, meaning their loss can lead to the isolation of populations and local extinctions. Unfortunately, many hedgerows are removed in favour of fences and walls and their ecological and cultural value is lost.

6.4 Urban Development

Urbanisation has led to the removal and fragmentation of hedgerows, including those that may have been ancient or species-rich and corridors that would once have connected areas of ecological significance. Even surviving hedgerows are likely to have been impacted by urbanisation, due to variations in management practices compared to rural areas and from the construction of surrounding infrastructure such as roads, houses and cable pipes.

A citizen science study by Gosling *et al.* (2016) found that urban hedgerows in the UK were more likely to be negatively impacted by adjacent hard surfaces, had a lower structure score and provided less resources for wildlife (flowers, seed and

fruit) than rural hedges. Additionally, beech, holly, ivy, laurel, privet and yew

were recorded more often in urban hedges, while blackthorn, bramble, dog rose, elder and hawthorn were more prevalent in rural hedges. This difference in composition likely reflected a preference for non-spiny shrubs in public areas, suggesting that a more heterogeneous hedge planting regime by residents and authorities may improve these habitats for wildlife (Gosling *et al.*, 2016).

6.5 Climate Change

Warmer winters, direr summers and an increase in storm frequency all have potential consequences for hedgerows, including increased mortality from flood and drought, reduced flower and fruit production resulting from a decrease in frost events, and high winds resulting in the loss of mature and veteran trees (Natural England, 2014).

6.5 Lack of Information & Awareness

The art of maintaining and laying hedges is a skill that if not passed down can be lost forever. Training and the passing on of knowledge is therefore critical in reversing the decline of hedgerows and their quality. Hedgerows are just as important in urban areas as rural and agricultural landscapes as they harbour wildlife and also have a community value. If people understand the importance of them they are more likely to protect them and have them managed effectively. A systematic survey to quantify the amount of hedgerow and to define their status as ancient or species-rich would be useful to the borough – this can be partly achieved through citizen science.

7 Conservation actions (Tabulated)

Action	Timeframe	Lead	Partners	Evidence base
HR01 – Utilising available data, identify areas where new hedgerow can be planted. Ensure that native species-rich hedges are planted and sourced from recommended suppliers.	2023 - 2028	RBK		Hedge Planting Specifications for Planning Applications Plant and Manage Hedgerows - GOV.UK Hedgerow Planting -Hedgelink
HR02 – Plant and / or lay a minimum of 100m additional hedgerow annually.	2023-2028	RBK		See HR01
HR03 – Identify where existing hedgerows could be enhanced through planting, laying and/or maintenance schemes.	2023 - 2028	RBK		See HR01 See Appendix A See Appendix B
HR04 – Encourage land managers to establish hedgerow as an alternative / complementary feature to fencing and/or walling.	2023 - ongoing	RBK		See HR01
HR05 – Make efforts to record and map as much hedgerow in the borough as possible. RBK to make available all existing data it holds regarding hedgerow status and to use its Service Level Agreement with GiGL to access regionally held data.	2023 - 2028	RBK	GiGL	N/A

HR06 – Identify and disseminate grant providers who could be potential sources of funds to procure hedging plants.	2023 - 2028	RBK		N/A
HR07 – Utilise existing legal frameworks to encourage any breach of the law is pursued and prosecuted where possible and work with RBK to ensure that permission to remove ancient or species-rich hedgerows is only granted in exceptional circumstances.	2023 - ongoing	RBK		N/A
Engagement & Awareness	Timeframe	Lead	Partners	Evidence base
HR08 – Investigate the feasibility of a ‘Hedgerow Safari’ - a community- led citizen science programme that mobilises volunteers to explore the borough and survey existing hedgerow. This would need to be submitted to GiGL.	2023 - 2028	RBK		Hedgerows: Mapping the gaps - University of Hull Mapping the Gaps (Scientific Article) – Hull University Healthy Hedgerows Survey App –Peoples Trust for Endangered Species
HR09 – Hold a training workshop for land managers informing the appropriate management of hedgerows.	2023 - 2028	RBK		See HR02

HR10 – Produce and disseminate a factsheet of information on the importance of hedgerows with information on hedgerows within RBK.	2023 - 2025	RBK		N/A
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8 Planning Context - Biodiversity Net Gain

In the UK, a planning condition is defined as ‘a constraint placed on the granting of planning permission which allows development to go ahead only if the conditions are satisfied’. When used properly, conditions can enhance the quality of development and enable it to proceed where it would have otherwise been necessary to refuse, by mitigating the adverse effects. As an automatic condition of the Environment Act 2021, applicants will need to measure the existing and proposed biodiversity values of their sites before development begins in order for permissions to be granted.

As a priority habitat for the borough, hedgerows should be protected through the planning system and, where possible, habitat creation and enhancement is encouraged. As part of the new conditions, if the loss of a habitat cannot be avoided appropriate mitigation and compensation actions must be taken, with a minimum of 10% biodiversity net gain (calculated using The Biodiversity Metric 3.0). Additionally, these biodiversity enhancements must be secured for a minimum of 30 years. Reaches of adjoining priority habitats, such as woodland and grassland, may form an integral part of hedgerow conservation management.

The new Biodiversity Net Gain (BNG) policy does not trump other environmental policies, meaning irreplaceable and locally important habitats should remain protected from development and are not to be insufficiently replaced with newly created habitats. The delivery of BNG through landscaping and green infrastructure is preferred onsite. Where onsite improvements are not possible measurements must be delivered off site, on land holdings or via habitat banks, or as a last resort, through the purchase of statutory biodiversity credits.

9 Monitoring

Metric	Process of Monitoring	Timeframe	Lead	Partners
HR01, HR02, HR04 – Metres of hedgerow planted or laid.	Ad hoc, Annual account	2023 - 2028	RBK	

HR01, HR03, HR05 – Map of hedgerow in the borough including areas identified for planting and/or laying.	Annual account	2023 – 2028	RBK	
HR05 – Spreadsheet of records.	Ad hoc	2023 - 2028	RBK	
HR06 – Document of relevant grants and mailing list of groups / organisation / individuals shared with.	Quarterly	2023 – 2028	RBK	
HR07 – Record of permissions or refusals to remove ancient or species-rich hedgerow, record of where hedgerow has been illegally removed and record of whether prosecutions were made.	Ad hoc, 2028 report	2023 – 2028	RBK	
HR08 – Number of citizen science surveys supported / undertaken.	Annual Report	2023 - ongoing	RBK	

HR09 – Number of events held, number of attendees, collation of materials used and feedback surveys for participants .	Annual report	2023 - 2028	RBK	
HR10 – Collation of materials used.	Ad hoc	2023 – 2028	RBK	

10 Other relevant HAPs/ SAPs

- a. Amphibians
- b. Bats
- c. Badger
- d. Hedgehog
- e. Reptiles
- f. Stag beetle
- g. Grasslands
- h. Rivers and Streams
- i. Woodland

11 References

Bickmore, C. J. 2002. Hedgerow survey handbook: a standard procedure for local surveys in the UK. London: DEFRA

Carey, P. D., Wallis, S. M., Emmett, B., Maskell, L. C., Murphy, J., Norton, L. R., ... & Smart, S. M. (2008). Countryside Survey: UK headline messages from 2007.

Croxton, P. J., & Sparks, T. H. (2004). Timing of berry depletion rates of three common hedgerow shrubs. *Agriculture, Ecosystems & Environment*, 104(3), 663–666.
<https://doi.org/10.1016/j.agee.2004.01.028>

Drexler, S., Gensior, A., & Don, A. (2021). Carbon sequestration in hedgerow biomass and soil in the temperate climate zone. *Regional Environmental Change*, 21(3), 74.
<https://doi.org/10.1007/s10113-021-01798-8>

Facey, S. L., Botham, M. S., Heard, M. S., Pywell, R. F., & Staley, J. T. (2014). Moth communities and agri-environment schemes: Examining the effects of hedgerow cutting

regime on diversity, abundance, and parasitism. *Insect Conservation and Diversity*, 7(6), 543–552. <https://doi.org/10.1111/icad.12077>

Gaüzère, P., Barbaro, L., Calatayud, F., Princé, K., Devictor, V., Raison, L., Sirami, C. and Balent, G., 2020. Long-term effects of combined land-use and climate changes on local bird communities in mosaic agricultural landscapes. *Agriculture, Ecosystems & Environment*, 289, p.106722. <https://doi.org/10.1016/j.agee.2019.106722>

Gosling, L., Sparks, T. H., Araya, Y., Harvey, M., & Ansine, J. (2016). Differences between urban and rural hedges in England revealed by a citizen science project. *BMC Ecology*, 16(S1), 15. <https://doi.org/10.1186/s12898-016-0064-1>

Hill, L., Jones, G., Atkinson, N., Hector, A., Hemery, G., & Brown, N. (2019). The £ 15 billion cost of ash dieback in Britain. *Current Biology*, 29(9), R315-R316.

Johnson, J. C., Urcuyo, J., Moen, C., & Stevens, D. R. (2019). Urban heat island conditions experienced by the Western black widow spider (*Latrodectus hesperus*): Extreme heat slows development but results in behavioral accommodations. *PLOS ONE*, 14(9), e0220153. <https://doi.org/10.1371/journal.pone.0220153>

Lundy, M., Montgomery, I., & Russ, J. (2010). Climate change-linked range expansion of Nathusius' pipistrelle bat, *Pipistrellus nathusii* (Keyserling & Blasius, 1839). *Journal of Biogeography*, 37(12), 2232-2242. <https://doi.org/10.1111/j.1365-2699.2010.02384.x>

Natural England, 2014. Climate Change Adaptation Manual-Evidence to support nature conservation in a changing climate (NE546) pp. 75-79.

Roseff, R., 2006. Hedgerows and Enclosure in Central Herefordshire. *NATURALISTS' FIELD CLUB*, p.58.

Staley, J. T., Sparks, T. H., Croxton, P. J., Baldock, K. C. R., Heard, M. S., Hulmes, S., Hulmes, L., Peyton, J., Amy, S. R., & Pywell, R. F. (2012). Long-term effects of hedgerow management policies on resource provision for wildlife. *Biological Conservation*, 145(1), 24–29. <https://doi.org/10.1016/j.biocon.2011.09.006>

The World Bank, World Development Indicators (2018). *Agricultural Land (% of Land Area)*. Available at: Agricultural land (% of land area) - United Kingdom | Data (worldbank.org) (Accessed: 30 May, 2022)

Woodland Trust (2014). *Wood Wise, Hedgerows and Hedgerow Trees*. Available at: wood-wise-hedgerows-and-hedgerow-trees.pdf (woodlandtrust.org.uk) (Accessed: 30, May, 2022)

Wright, J., Leivers, M., Smith, R. S., & Stevens, C. J. (2009). *Cambourne New Settlement. Iron Age and Romano-British settlement on the clay uplands of west Cambridgeshire*.

12 Abbreviations

RBK - Royal Borough of Kingston
SINC - Site of Importance for Nature Conservation

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14 Appendix

Appendix A. SINC designation status of RBK sites with hedgerow habitat.

Site	Habitat	SINC Designation
Canbury Gardens	Defunct hedgerow with scattered trees	Unspecified
Edith Gardens Allotments	Young hedgerow, dead hedge	Local
Chessington Wood	Mature blackthorn hedgerow	Borough (Grade 1)
Surbiton Cemetery	Species-poor hedgerow	Unspecified
Hogsmill Valley	Wide native hedgerow, with trees, dominated by blackthorn	Borough (Grade 1)
Alric Avenue Allotments	Mature native hedgerow dominated by hawthorn	Unspecified
Coombe Wood Golf Course	Hedgerow	Borough (Grade 2)
Hogsmill Community Garden & Kingston University Land	Hedgerow	Unspecified
The Grapsome	Ancient hedgerow	Borough (Grade 2)
Green Lane	Important hedgerow with several mature, possibly veteran, trees	Borough (Grade 2)

Tolworth Court Farm Fields and Medieval Moated Manor	Important hedgerow with several mature/veteran trees and ancient features	Borough (Grade 1)
Fishponds	Hedgerow with diverse tree features	Borough (Grade 2)
Manor Park	Mature hedgerow	Local
Winey Hill	Old boundary hedgerows, mix of mature/diverse/ defunct, possible ancient tree features	Borough (Grade 2)
Clayton Road Wood	Hedgerow	Borough (Grade 2)
Causeway Copse	Reasonably mature and moderately rich hedgerow, ornamental hedgerow	Local
Mount Road Open Space	Hedgerow	Local
Raeburn Open Space	Old hedgerow	Borough (Grade 2)
Knollmead Allotments	Hedgerow	Unspecified
Beverley Park Allotments	Boundary hedgerow, small bushy hedgerow with tall trees	Unspecified
Beverley Park	Hedgerow with trees, immature defunct hedgerow	Unspecified
Alexandra Millennium Green	Hedgerow dominated by hawthorn	Unspecified

Appendix B Guidance for the management of hedgerows.

Hedgerow management can involve coppicing, hedge laying, pruning, scalloping etc, all of which creates a large amount of brash whose disposal must be considered and planned for.

It is not always possible to leave brash on site as it can take a long time to break down. Consequently, other options need to be available. Depending on the location and circumstances of the site, brash disposal can include bonfires, dead hedging, chipping or removal. What works on one site may not be appropriate for another and may be influenced by accessibility and costs.

Managing hedges on rotation is a good way of ensuring there is a variety of habitat available by creating diverse structures. If coppicing a section of hedgerow, it is important to prevent footpath access through the created gap, as this will prevent regrowth. Modern deer fence

netting (such as tenax) can be easily erected to prevent the public from taking short cuts and creating desire lines which will affect the ability of the hedgerow to reconnect.

Hedgerow management should not be considered in isolation. They provide links between habitat patches and these and adjacent habitats should also be managed accordingly. For example, adjacent meadows should be cut to allow good access to the hedgerows. Managing the meadow will also benefit birds and invertebrates that shelter in the hedgerows. Many sites are comprised of multiple habitats and these should be looked at on a larger scale. Some activities can be done by volunteers, others by staff or contractors using machinery where machinery can be effective.

The Lower Mole Partnership has carried out scrub, hedgerow and meadow management on various RBK sites in Kingston, particularly along the Bonesgate and Hogsmill valleys, including Hogsmill Open Space, Elmbridge Meadows, Bonesgate Open Space, Tolworth Court Farm and Six Acre Meadow. It is important that follow up work or maintenance is planned so that management is effective. Annual work programmes, highlighting who will manage which hedges, and when/who will carry out follow-up work will help to ensure that whole sites are managed rather than standalone features.

Appendix C. Plant species to be grown in hedgerows.

Common name	Latin name	Notes
Purging buckthorn	Rhamnus catharticus	Larval foodplants for Brimstone
Alder buckthorn	Frangula alnus	
Blackthorn	Prunus spinosa	Nectar source in spring and larval foodplant for Brown Hairstreak
Escallonia	Escallonia macrantha	Loved by bees
Guelder rose	Viburnum opulus	Nectar source and berries for birds in autumn
Ivy	Hedera helix	Late nectar source and larval foodplant for Holly blue
Honeysuckle	Lonicera periclymenum	
Elm spp	Ulmus spp	Attractive to many pollinators and larval foodplant for White-letter hairstreak