

Hedgerow Clues to Wolvercote's History

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They cut them into slender trees and bent them over so that many branches came out along their length; they finished these off by inserting brambles and briars, so that these hedges formed a defence like a wall, which could neither be penetrated nor even seen through.

Julius Caesar, *De Bello Gallico*, II:xxvii (c. 55 BC)

SUMMARY

After outlining the landscape and agricultural history of Wolvercote from the Iron Age to the 20th century two approaches are made to the history of the area: a botanical survey of the hedgerows, and an examination of local documents. Tree and shrub species in Wolvercote hedgerows were counted every thirty yards to assess the viability of Hooper's hypothesis that hedges are planted with a single species and an additional species enters a hedge every hundred years, enabling hedges to be dated according to the number of species they contain. Seven main documents, from the 12th to the 19th centuries, were examined for evidence relating to field-names, furlong-names and acreages in Wolvercote and Godstow. These suggested putative planting dates in the 14th century (reflecting a period when Godstow Nunnery was consolidating its landholdings),¹ 17th century (change of ownership from Richard Owen to the Walters), 18th or 19th century (change of ownership to the Earl of Abingdon who sold it on to the Duke of Marlborough, and 1834 enclosure).² Bringing the two approaches together made it possible to explain species-changes in part of the parish boundary; highlight the importance of English elm in parish and open-field boundaries; suggest a location for Wolvercote Hurst not shown on any map; trace an area through five name-changes and provide hints of its antiquity; and suggest explanations for botanical differences between a group of small enclosures in Godstow.

HISTORICAL PERSPECTIVE

Settlement occurred in or near Wolvercote in the Neolithic (in what became Horslow Field) and Bronze Ages (on the edge of Port Meadow). By the middle Iron Age pastoral farming had intensified and three settlements with stock enclosures flourished on Port Meadow.³ In a period of pastoral management, such as the Iron Age, simple ditches without hedges are effective in stock control, in delineating people's property and, at the same time, draining land subject to flooding.⁴ Although archaeological evidence shows Bronze Age and Iron Age field systems sometimes surrounded by hedges, the first documented record of a hedge was made

¹ *V.C.H. Oxon.* xii, 314.

² *Ibid.* 313.

³ G. Lambrick and A. McDonald, 'The Archaeology and Ecology of Port Meadow with Wolvercote Common', in G. Lambrick (ed.), *Archaeology and Nature Conservation* (1985), 95-109.

⁴ G. Lambrick, 'The Development of Late Prehistoric and Roman Farming on the Thames Gravels', in M. Fulford and E. Nicholas (eds.), *Archaeology of the British Gravels: A Review* (Soc. of Antiquaries of London, Occasional Papers, vol. 14, 1992), 78-105.

by Julius Caesar when he described those in what is now France. The first English record occurs in Northumbria in the Anglo-Saxon Chronicle in 547 AD, whilst that in Wessex may be found in the Laws of Ine c. 688 AD.⁵ Early Saxon settlement is suggested by the word 'croft' as in Heycroft and Churchcroft furlongs sited near St. Peter's church, Wolvercote, and Wycroft on the eastern edge of Port Meadow.⁶ Parish boundaries often coincide with land divisions in existence since Anglo-Saxon times or earlier, and, where these take the form of a hedge as at Oakley, Buckinghamshire, they are very rich in tree and shrub species.

As the population increased, farming intensified and townships became independent. As elsewhere, Wolvercote's land was divided between open-field arable, meadow and managed pasture by the 13th century, and perhaps by 1086 when there was arable for 6 plough teams, 120 acres of meadow and pasture of 6 furlongs \times $3\frac{1}{2}$ furlongs, excluding the common pasture, Port Meadow, presumably all within the extensive Thames flood-plain. Wolvercote was given *en bloc* to Godstow Nunnery on its foundation c. 1133 when the Isle of Godstow, as it became, included a series of small hams (meadows) and holts or hoults, 2–3 m. of land between the hams on which a mixture of native trees and shrubs or osiers grow. They were bounded by a complex of streams fed by the river Thames, draining into Wolvercote Mill stream, and in the early 20th century were deep enough in places to bathe in.⁷

In the later 14th century the nunnery consolidated its demesne into a single block of land straddling the boundary between Wolvercote and St. Giles's parish, including an exchange of land with St. Frideswide's Priory in 1358 when 40 acres at Twisdelowe in the north-east corner of Wolvercote field passed to the Priory. The open fields seem to have been completely reorganised in the later Middle Ages, possibly as part of the nunnery's consolidation. In 1636 there were four open fields: Blindwell, Churchcroft (later Horslow), Frise and Cowhill, and 36 acres of land at Wolvercote Leys had been converted from arable to pasture. By 1765 improved drainage in the south-east of Wolvercote Leys had led to it being increased to 45 a.⁸ There were other changes in the furlongs within the arable fields in the 18th century which may have led to the realignment of boundaries and the planting of hedges, but the open-field boundaries themselves remained the same until enclosure in 1834.⁹

In the 12th century, the widespread grassland along the Thames streams included small enclosed pieces of meadow, or hams, such as Boyeham, Heringesham and Licheseye, where the owner would make his property stock-proof.¹⁰ Northmead, later called Wolvercote Lot Mead, was recorded between 1236 and 1247. It was lot meadow in the 16th century, with strips allocated each year to commoners by lot until 1696 when it was divided permanently between eleven landowners and tenants.

It is apparent that even before the parliamentary enclosure of Wolvercote a network of living hedges, with or without ditches, crossed the landscape enclosing land in common or individual ownership. Some enclosure of small parcels of land for pasture took place around the villages of Upper and Lower Wolvercote in the 16th and early 17th centuries. The open

⁵ M. Robinson, 'The Problem of Hedges enclosing Roman and Earlier Fields', in H.C. Bowen and P.J. Fowler, *Early Land Allotment* (BAR xlviii, 1978), 155–8; E. Pollard, M.D. Hooper and N.W. Moore, *Hedges* (1974).

⁶ Croft: Old English 'small, enclosed field': M. Gelling, *The Place-Names of Berkshire*, 861.

⁷ Mr. Leslie Waine, personal communication.

⁸ *V.C.H. Oxon.* xii, 315.

⁹ *Ibid.* 306, 314; Bodl. MS. Top. Oxon. c 334 (Samuel Parsons, Survey of certain lands and tenements of the dissolved monastery of Godstow with the Manor of Wolvercote and Farm or Grange of Cutteslow in Oxon, October 1636); St. John's Coll. Mun., LVIII (copy of enclosure award map including earlier named furlongs, 1834); Blenheim Muniments, map of Wolvercote by Thomas Pride, 1765.

¹⁰ A. Clark (ed.), *The English Register of Godstow Nunnery, near Oxford* (1906), 572–3, 678.

fields, together with Wolvercote Leys and Wolvercote Lot Mead, were enclosed by Act of Parliament in 1834 when 550 acres were distributed among twelve owners.¹¹ Enclosure was always instrumental in increasing the number of hedges in the landscape. Wolvercote is part of this picture with its early enclosures in Lower Wolvercote and its enclosure award of 1834. After 1945 the policy was reversed and Government grants were provided for the removal of hedgerows to make larger fields accessible to larger machinery for greater profit and, more importantly, to ensure that during the Cold War Britain could produce enough food to feed itself. By 1990 some 140,000 miles of hedgerow, including many in Wolvercote of various ages, had been destroyed.¹²

From the various periods of agricultural development and enclosure it is apparent that field boundaries or hedges in Wolvercote could date from any period from the Saxon to the 20th century. This work combines botanical evidence with seven main documents: the register of Godstow Nunnery, written c. 1450,¹³ Samuel Parsons's survey of Wolvercote (without a map) for David Walter (1636),¹⁴ Wolvercote Survey for the Duke of Marlborough (1731),¹⁵ plans for a house at Godstow Bridge for the Duchess of Marlborough (1736),¹⁶ Thomas Pride's map of Wolvercote for the Blenheim Estate (1765),¹⁷ a St. John's College map showing the layout of the village and arable furlongs with the 1834 enclosures superimposed,¹⁸ and the Enclosure Award map (1834).¹⁹ There is considerable similarity between the 1834 enclosures and the furlongs on Pride's map (1765) and a repetition of the furlong names on the St. John's map, Thomas Pride's map and those in Samuel Parsons's survey (1636). Success in tracing the history of hedges is limited however by their fragmentation in the 19th and 20th century by roads, railways, canal, golf course and general urbanisation.

DATING HEDGES

Wolvercote lies in what Oliver Rackham describes as planned countryside in which the hedgerows are generally planted with a single species, usually common hawthorn.²⁰ Older or woodland relict hedges contain field maple and dogwood (for their Latin names see Table 1) which are poor colonisers of recently planted hedges and are regarded as ancient hedgerow indicator species. Midland hawthorn, too, is a woodland indicator which normally grows in the centre of a mature wood, whilst common hawthorn grows in open places. Both hawthorns are very long-lived species, especially if they are cut back (laid or coppiced on a regular management cycle). In disturbed conditions where, for example, secondary woodland grows up, or in hedgerows next to ancient woodland, the two species can grow together and, in time, form hybrids.²¹ Hedgerow trees and shrubs may reflect the conditions surrounding them when they were first planted or first entered the hedge. For example, woodland indicator species from a medieval

¹¹ *V.C.H. Oxon.* xii, 317.

¹² L. Clements, 'The Statutory Protection of Hedges', *Ecos*, 13(3) (1992), 34-5.

¹³ Clark, *Register of Godstow Nunnery*.

¹⁴ Bodl. MS. Top. Oxon. c 334 (Samuel Parsons, survey).

¹⁵ Blenheim Mun. box 151, small notebook, 41 pages (Wolvercote Survey, 1731).

¹⁶ Blenheim Mun. Shelf G.1, misc. box 10, unnumbered bundle (Wolvercote: plans etc. for a house at Godstow Bridge, 1736).

¹⁷ Blenheim Mun., map of Wolvercote by Thomas Pride.

¹⁸ St. John's Coll. Mun. LVIII.

¹⁹ Oxfordshire Archives, QSD/A, Book 61 (Wolvercote enclosure award, 1834).

²⁰ O. Rackham, *The History of the Countryside* (1986), 315.

²¹ Pollard, Hooper and Moore, *Hedges*, 106.

woodland might remain in a hedge in the 1990s despite the adjacent wood being clear-felled in the 19th century. However, if the hedge is not managed the trees come to the end of their natural life and die. If the owner of the hedge allows too many standard trees to grow in it and so fails to keep it thick and stock-proof, the base of the hedge becomes too light for woodland species to germinate and become established in it; an old hedge then loses species, and old and young hedges gain elderberry.

For nearly thirty years Hooper's hypothesis that on average a new species enters a 30 yd. stretch of hedge every hundred years has been tested in various parts of Britain.²² The hypothesis is based on the formula: age of hedge = $(99 \times \text{number of species})$ minus 16 years. For example, a hedge planted with hawthorn in 1837 would be 160 years old in 1997. It might contain 2 species, i.e. $(99 \times 2) - 16 = 182$ indicating 182 years old while, according to the formula, a hedge with 10 species might be 974 years old. However, the hypothesis allows for considerable variation; 95% of ten-species hedges, for example, may vary in age from 800 to 1,500 years old. The hypothesis is dependent upon two factors: good management of hedges and their origin. A boundary might at first be a series of hurdles or a stream along which a natural multi-species hedge grew up and was then managed as a hedge; it might have been planted with quickthorn in the traditional manner and colonised by a new species every 100 years; or be a woodland relict hedge (a line of trees and shrubs left when woodland is cleared). Hedges planted with several species are common in wooded areas such as Shropshire and Warwickshire,²³ less so in the upper Thames valley. Differences also occur because of the geology of the area, whether the soil is free-draining, waterlogged or flooded in winter, or is acid or alkaline. So, ecologically speaking, these constraints form a limit to the number of species able to colonise hedgerows which, round Oxford, seems to be a mean of 10 species/30 yds.

Hooper's hypothesis is relevant where, as in Wolvercote, large open fields were sub-divided by straight, species-poor Enclosure Act hedges, where there are relatively few ancient hedges in which there is an increased number of species per 30 yd. stretch, and where woodland is scarce or absent. However, near Oxford in Wolvercote, Marston, Yarnton and Cassington parishes, there is a problem with this kind of dating. Most early enclosure and common-field boundary hedges contain elm to a greater or lesser degree and, on the flood-plain, others are dominated by crack willow. The effect of elm on the species-composition of hedgerows may be profound. English elm was introduced from Eastern Europe in the Bronze or Iron Ages because its dried leaves and branches were excellent food for stock in winter. English elm is generally recognised as a midland species, developed from a single clone, perhaps as a distant relative of the smooth-leaved elm. It is only fertile in very warm summers so its fruits are usually sterile, and, though it suckers freely along hedge-lines²⁴ it does not have sufficient genetic variation to make it resistant to disease such as Dutch Elm disease, the fungal spores of which are carried from tree to tree by *Scolytus* beetles during windless summer days. It was particularly virulent in the early 1970s. When allowed to grow to their full height elms shade out many smaller species and the suckers out-compete tree seedlings trying to become established in the gaps produced by dead elms. Thus the number of species per 30 yd. stretch is reduced and Hooper's hypothesis is no longer valid.

HEDGEROW SURVEY

During 1993 tree and shrub species were recorded in 103 hedges in Wolvercote and Godstow. Each is numbered and shown on Fig. 1. The hedge data are arranged in Table 1 in five

²² Ibid. 79.

²³ Ibid. 84-5.

²⁴ Ibid. 112.

historical or geographical groups: parish and open-field boundaries, parliamentary and other enclosure hedges, the possible location of Wolvercote Hurst, hedges in Wolvercote Lot Mead, and Godstow holts and hams. In each group the hedges are listed in numerical order according to the average number of species per 30 yds. A total of 43 species was recorded, including raspberry, honeysuckle and red currant which should not be counted for the purpose of Hooper's hypothesis but are included in the data for interest. Species are shown in Table 1 with the most abundant on the left, starting with common hawthorn which was recorded in 80 hedges. Dogrose was found in more than 50 hedges and elderberry, blackthorn, elm, crack willow, ash, field maple and wild privet in between 20 and 50 hedges. Oak, dogwood, goat willow, purging buckthorn and midland hawthorn were less common, occurring in between 10 and 20 hedges and the remainder, including the woodland indicator species hazel and wild crab apple, are found in fewer than 10 hedges.

For simplicity the 1834 Enclosure Award Map was chosen as a base map for Fig. 1, with Godstow holts and hams shown separately (Fig. 2). Each hedge is numbered and, where appropriate, modern features are indicated with a dot and dash line (railways), a dashed line (roads), and a dotted line (modern and other boundaries not on the 1834 map).

Parish and Open-field Boundaries (Hedges 1-29)

In Wolvercote in the north, south and west, the parish boundary takes the form of a stream beside which there may or may not be a hedge. Hedges beside Honeycut ditch (nos. 1, 7 and 24) on the Wolvercote/Yarnton boundary form the northern boundary of Wolvercote Lot Meadow and are very rich in species (max. 10, min. 3, mean 5 spp./30 yds.) including elm and woodland indicator species such as hazel, dogwood and midland hawthorn. They are growing on a 2 m. wide bank to the west of the actual boundary stream. Hedge no. 4, to the west of Wolvercote Lot Mead, is also species-rich (11 species) but is more obviously formed by colonisation along Honeycut ditch bank.

The parish boundary is picked up again in hedges 8 and 15 (max. 6, min. 4 spp./30 yds.) beside the turnpike to Woodstock, on the eastern boundary of Frise Field. Both contain elm (now alas represented only by suckers and/or stumps up to 2.5 m. wide). Parish boundary hedges 9 and 16 have an average of 5 and 4 spp./30 yds. from a pool of nine species, including common hawthorn, blackthorn, elderberry, common privet and dogwood, perhaps reflecting an old hedge along the edge of Frise Field in existence before the turnpike was built. Hedges 10, 17, 18 and 25 (mean 5, 4 and 3, max. 6, min. 3 spp./30 yds.) on the northern boundary of Blindwell Field are atypical. No. 17 is an orchard boundary, and nos. 10 and 25 are next to the railway. They do not contain elm, and ornamental species such as garden privet and cherry are found in both. Hedge no. 18 is not species-rich either but it does contain elm and field maple which one might expect in Wolvercote's parish boundary hedges.

Another section of the parish boundary, hedge no. 11 to the north-east of Wolvercote, contains 15 tree and shrub species: average 5 (max. 7, min. 2) per 30 yds. including hawthorn, blackthorn, elm, ash, dogrose, field maple, hazel, elderberry and oak, together with beech, lime, rowan, large-leaved lime and wild service tree planted post-1945. It borders a field called Twisdewlowe (meaning 'forked burial mound')²⁵ in Water Eaton, and forms the eastern boundary of Blindwell Field (now North Oxford Golf Course) in which ridge and furrow is visible in places. Twisdewlowe's eastern boundary (hedge no. 19) is less rich than no. 11 with an average

²⁵ M. Gelling, *The Place-Names of Oxfordshire* (1952-3), 34.

TABLE 1. WOLVERCOTE HEDGEROW SURVEY, 1993-5

[illegible]

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[illegible]

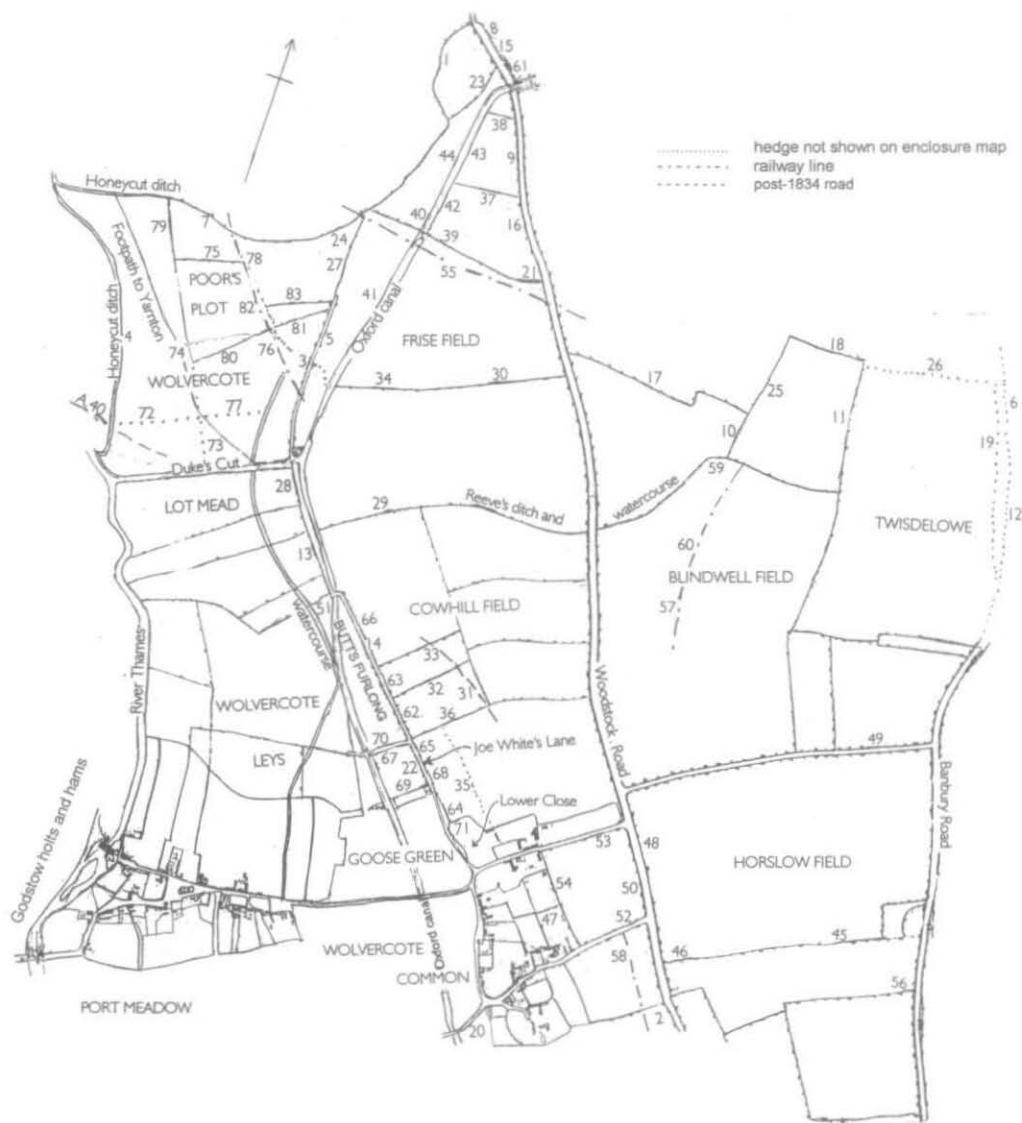


Fig. 1. Map of Wolvercote showing hedge numbers, based on enclosure map of 1834 (not to scale).

of 4 species per 30 yds. (max. 4, min. 3) and only 6 species. Its northern boundary, no. 26, is not under discussion here. Bearing in mind the allowed variation, are these averages of 5 and 4 spp./30 yds. significant?

The documents show that in 1358, the ownership of Twisdelowe was transferred from Godstow Nunnery to St. Frideswide's Priory. If the hedge was newly planted when the field changed hands one would expect to find 6.5 species per 30 yd. stretch and a mean of 5 in

hedge no. 11 falls within the expected variation. In 1588, Twisdelowe was again transferred, this time from William Lenthall of Cutteslowe to William Frere of Water Eaton parish.²⁶ A mean of 4 spp./30 yds. for hedge no. 19 might indicate a planting date *c.* 1600, again with the expected variation. Here the hypothesis seems to hold true. This hedge is separated from Banbury Road by a strip of woodland including common hawthorn, elder, blackthorn, elm, ash, field maple, wild privet, midland hawthorn, and dogwood. Banbury Road hedges 6 and 12 are poorly maintained and have an average of 5 spp./30 yds. (max. 8, min. 3). The 17 species recorded include elm and ancient woodland indicators such as midland hawthorn, wild privet, field maple, dogwood and purging buckthorn. A planting date of *c.* 1500 or 1400 is suggested but there is a strong influence of ancient woodland species. This is not out of place beside an old drove road where for more than a thousand years barriers were important to stop animals from eating crops in the adjacent fields.

Moving southwards through a residential area we come to hedge no. 2 which is part of the southern parish boundary lying on the south side of Bladon Close. It is, perhaps, surprising that the hedge still contains elm, ash, hazel, elderberry and crack willow, species which might well reflect a parish boundary hedge, as it also has an ornamental cherry and no hawthorn or blackthorn. Finally, also on the southern boundary, there is the Winterbourne stream (hedge no. 20) lying between Wolvercote's common pasture and 16th-century or older enclosures in St. Giles's parish.²⁷ The poorly maintained hedge contains elm (suckers and 1.5 m. stumps), crack willow, common hawthorn and elderberry. Its position suggests that it is much older than the ± 400 years the number of species might indicate. The Winterbourne's name means that it is mainly active in winter. It flows into Shiplake ditch, the final stretch of the parish boundary separating Port Meadow (Oxford City) from Wolvercote Common (Wolvercote parish). The practice of inter-commoning between these two common pastures meant that the boundary did not have to be stockproof, so no hedge was necessary along Shiplake ditch.

Just as Wolvercote's parish boundaries have several stories to tell so do those of the open fields. There are no early records of Wolvercote's open fields. Were Cowhill, Frise, Blindwell and Horslow Fields laid out and the boundary hedges planted at Godstow's founding when one might expect them to contain some 8 or 9 species per 30 yd. stretch, or in the 14th century during the reorganization of Godstow's lands? The average number of species for hedges in which elms are found frequently is 6 or less, which is within the allowed variation for a 14th-century origin. As mentioned above hedges may be less species-rich where elm trees grow sufficiently large to shade out smaller trees and stop their regeneration from seed, so perhaps the field boundary hedges are more than six hundred years old. Occasionally elm may enhance a hedge as, for example, where elm suckers in old hedges such as nos. 21 and 39 have entered the younger canal-side hedges nos. 40 and 42.

West of the Oxford canal, nos. 3, 5 and 27 appear to be internal hedges but have means between 3 and 7 spp./30 yds. (max. 9, min. 3), from a suite of twelve species including elm, field maple, wild privet and dogwood. For reasons discussed below it may be significant that they are growing on a bank some 2 m. wide. The Enclosure Award map clearly shows these hedges to be part of the Frise Field western boundary, prior to the advent of the canal, and the eastern boundary of a 25 ft. wide track to Wolvercote Lot Mead. This is a northern continuation of the green lane, now known as Joe White's Lane. Hedges 13, 14 and 22 form the lane's western boundary and 14 and 22 are also the eastern boundary of Butts Furlong in Wolvercote Leys which is shown, un-named, on Pride's map with a stream as its western

²⁶ *V.C.H. Oxon.* xii, 181, 201, 305, 314.

²⁷ *Valor Ecclesiasticus* (Rec. Comm. 1810-34), ii, 191.

border. Hedge no. 29, however, is a collection of trees colonising the Reeves Ditch and marks the boundary between Cowhill and Frise Fields prior to 1834. The unmanaged trees and shrubs growing on its bank have an average of 3 spp./30 yds. (max. 4, min. 2), including common hawthorn, blackthorn, elderberry and dogrose.

Parliamentary and other Enclosure Hedges (Hedges 30–50, 52–61)

Wolvercote was enclosed in 1834, despite St. John's College's pleas against it on behalf of their poor tenants, and the open fields were divided up. Each new owner was expected to fence his own allotments with a live or dead hedge and, where an owner could not afford to erect a fence, he had to sell his allotment and make the best he could of the money he received. These hedges are usually easy to recognise because they do not follow the topography or the direction of ridge and furrow. They are straight because they follow lines marked on a map in an office!²⁸ Hooper's hypothesis suggests that such hedges should contain 1.7 species per 30 yd. stretch. Hedges 32, 33 and 36 in Cowhill Field are shown on the enclosure map as a line of trees and appear to be prime examples, but in 1993 the species averaged 4 and 3 per 30 yds. (max. 5, min. 2) respectively. At first sight it might appear, therefore, that Cowhill Field had effectively been enclosed long before 1834. Apparently similar hedges in Frise Field, nos. 30 and 34, revealed on examination, however, that when Pear Tree Roundabout was built in 1991, soil was spread over the land between Woodstock Road and the canal, and the hedges were replanted with a mixture of native species! Hedges 37 and 38 are post-1834 examples in Frise Field not shown on the original map, containing hawthorn and elderberry, with some dogrose and blackberry.

Yet other changes to open field boundaries took place: in Frise Field nos. 41–44 have an average of 2 or 3 spp./30 yds. including hawthorn, blackthorn, elderberry and/or elm, thus falling well within Hooper's hypothesis for a planting date when the Oxford canal was built in 1788.²⁹ When the railway was built in 1845 hedges disappeared from Wolvercote Lot Mead south of Duke's Cut as it became a borrow pit and filled with water. After urbanisation spread in Wolvercote remnants of some hedges, such as nos. 45–49, which contain elm and are relict open field boundaries, became garden boundaries. Nos. 50, 52–54 and 56 are suburban hedges of mixed origins whilst nos. 55, 57–59 and 60 border railway lines.

The Possible Location of Wolvercote Hurst (Hedges 51, 62–71)

Hedge no. 51 is a remnant lying to the west of the Oxford canal. It is rich in species (mean 6 spp./30 yds.) and the bank on which it was planted is still visible. It now forms a line of trees which, before the canal was built, grew along Joe White's Lane. Hedges 62–66, 68 and 71 form the western boundary of Cowhill Field and also border this green lane, separating the floodplain with its pastoral rights from the arable on the hill. These hedges have an average of between 3 and 6 spp. per 30 yds. (max. 8, min. 1). Remnant elm stumps c. 2.5 m. in diameter can still be seen with elm suckers up to 25 ft. high, and there are substantial ash stools. Hedge no. 71 is a remnant hedge including elm, crack willow and hawthorn, part of which was destroyed when Goose Green Close was built and a line of Italian poplar planted.

²⁸ St. John's Coll. Mun. LVIII.

²⁹ *V.C.H. Oxon.* xii, 308.

No. 64 borders the field next to Goose Green Close and has hawthorn, blackthorn, elm, ash, elderberry, crack willow and goat willow with an average of 5 spp. per 30 yds. (max. 6, min. 3). No. 68 is a short stretch of hedge with common hawthorn and elm, and crack willow which reflects the presence of a silted-up pond. The richest sections of Joe White's Lane in total number of species are hedges 62, 63 and 66 with a mean of 6, 6 and 4 species respectively (max. 9, min. 1 per 30 yds.), including the ancient woodland indicators, field maple, wild privet, midland hawthorn and hazel, together with midland and common hawthorn hybrids. Why are they so rich in species?

Referring to the documents again, the 1834 Enclosure Award mentions Wolvercote Common, Goose Green and Wolvercote Hurst but does not locate the latter on the map. At first it seemed likely that the Hurst might be wood pasture on the hill above the Plough public house because the name hurst means 'wood on a hill'.³⁰ No other evidence could be found and it is not known when the trees, if any, disappeared from the Hurst, nor the exact location of the 6 furlongs \times $3\frac{1}{2}$ of pasture (possibly including wood pasture) at Domesday. Parsons in 1636 included the Hurst (11 a. 1r. 30p.) amongst the commons or wastes and also noted 'the close of pasture by the hurst called the lower close' and 'one little close by the hurst side called the Butts'.³¹ Lower Close is shown on the St. John's map and part of it is now Goose Green Close (hedge no. 71), but the location of the Butts is unclear. In 1731 there were Butts in the Clay and Short Clay in Blindwell Field, which Parsons does not mention, Butts Furlong in Horslow Field which Parsons describes between Little Harslow Furlong and Henslow Furlong and Butts Furlong in Wolvercote Leys.³² Looking for the lost 11 a. 1r. 30p. takes us to the only place where there seems to be a change in acreage in the fields, Wolvercote Leys, which was increased from 36 a. to 45 a. by draining swampy land after 1636.³³ It was this swampy ground over which the canal was built in 1788 and the railway in 1846 thus destroying any evidence in the field.³⁴ In 1731 the Plats, subdivided into strips, is recorded in Wolvercote Leys and in 1765 Pride shows the strips in the Plats between Butts Furlong and what became Home and Further Furlongs in Wolvercote Leys. Did these extra 9 a. come from a piecemeal enclosure of the Hurst, leaving a 2 a. remnant of the Hurst for inclusion in 'the commons and waste lands known or called by the names of Port Meadow Wolvercote Moor Wolvercote Hurst and Goose Green' of parliamentary enclosure, and subsequently sold to the railway company?³⁵ If this is the case, the species-rich hedges in Joe White's Lane may simply indicate the antiquity of the lane itself but this does not address the extent of the Hurst several centuries ago.

Hedges 67 and 70 have an average number of 3 and 4 spp./30 yds. (max. 4, min. 2) including hawthorn, elm and purging buckthorn, and lie on either side of a path from Joe White's Lane to Wolvercote Leys, crossing Butts Furlong and a bridge over the canal. The number of species tells us that these hedges are contemporary with the canal but the elm and buckthorn suggest an earlier origin. In contrast, the north boundary (hedge no. 69) of a close apparently encroaching on to the common land, Goose Green, comprises crack willow with occasional common hawthorn as if willows had been planted to stabilize a ditch bank, but more documentary evidence is needed in order to discover the age of these hedges.

³⁰ Gelling, *Place Names of Oxon.*

³¹ Bodl. MS. Top. Oxon. c 334, pp. 11, 25.

³² Blenheim Mun. Box 151 (survey of Wolvercote, 1731).

³³ *V.C.H. Oxon.* xii, 315.

³⁴ *Ibid.* 308.

³⁵ Oxfordshire Archives, QSD/A, Book 61 (Wolvercote enclosure award, 1834).

Hedges in Wolvercote Lot Mead (Hedges 72–83)

The hedges in the north-west corner of Wolvercote west of the canal tell a different story. The boundary of Wolvercote Lot Mead to the west and north is Honeycut ditch, the same as the parish boundary (see above). To the south is the Oxford–Witney road built c. 1930, and Duke's Cut built in 1789, both fenced. The longest of the internal hedges includes nos. 73 and 74, with a mean of 8 spp./30 yds. (max. 10, min. 6) including the ancient woodland indicators, field maple, wild privet and midland hawthorn. Hedges 72 and 77 are also rich in species with a mean of 10 and 9 spp./30 yds. (max. 10, min. 5). No. 79 is less rich (5 spp./30 yds.) including midland hawthorn, and seems to be affected by the railway embankment.

Also within the Mead is Poor's Plot. Its boundary hedges, nos. 74, 75, 76, 78 and 82, grow on a 2 m. bank and have a mean between 5 and 8 spp./30 yds. (max. 10, min. 3) from a total of 18 species, including hawthorn, blackthorn, elm, ash, field maple, wild privet, oak, dogwood, goat willow, purging buckthorn, midland hawthorn, wild crab apple and whitebeam. Four species stand out because they are woodland indicators – midland hawthorn, hazel, dogwood and wild crab apple – which do not occur in the rest of the parish except in Joe White's Lane. Hedges 81 and 83, also growing on a 2 m. bank, have means of 5 and 4 spp./30 yds. respectively. They are tall, gappy hedges which have suffered from lack of management and cattle grazing. All these hedges are clearly either associated with woodland or are ancient. If the former is correct, i.e. these are assart hedges, one would expect woodland indicator species in the ground flora as well as among the trees and shrubs, but none were found and no woodland was recorded in Wolvercote in 1087.³⁶ If the hedges are ancient then according to Hooper's hypothesis they could be more than 1,000 years old.

The documents shed some light on this. Wolvercote Lot Mead was known as Northmead in the 13th century.³⁷ Poor's Plot had been called the Great and Little Hams in Northmead in 1540, which in turn had been Heryngisham and Licheseye when Godstow Nunnery was founded c. 1133.³⁸ These 'unenclosed' lot meads were enclosed in 1698.³⁹ If, as the 1698 Chancery Decree states, the boundaries of new enclosures were fenced and planted with quick-set (hawthorn) within five days of the Award being made, one would expect to find about 3 spp./30 yds. and this is clearly not the case. The 8 or 9 spp./30 yd. stretch suggest that these hedges were not planted in the 16th century when Sir John Owen acquired the land, and that they predate Godstow's foundation. However, bearing in mind ecological reasons for a limit of 10 or 11 as the maximum number of spp./30 yds. which might be found in these Oxfordshire floodplain hedges, and the medieval names Heryngisham and Licheseye, the enclosure of these hams could be much earlier. A similar hedge in the Yarnton flood-plain with a comparable set of species growing in a double row on a 2 m. bank is bordered by a Roman track and the first cutting of the associated ditch was into a Roman plough-soil.⁴⁰ We are left with a question. Do the hedges in Wolvercote Lot Mead, and those similar ones in Yarnton, form part of the same pastoral field system of Anglo-Saxon or perhaps, Iron Age or Roman origin?

³⁶ J. Morris (ed.), *Domesday Book: Oxfordshire* (1978).

³⁷ *V.C.H. Oxon.* xii, 314.

³⁸ Clark, *Register of Godstow Nunnery*, 572–3. Katherine Rawson's Charity bought a piece of meadow in Wolvercote called Great Ham (8 a.), and 1 a. meadow adjoining Great Ham on N.E., from Sir John Walter of Sarsden in 1706: Oxfordshire Archives, MS. Misc. Su. LXXVII/i/1–7.

³⁹ *V.C.H. Oxon.* xii, 315; Oxfordshire Archives, MS. Dash. VI/i/a/24 (copy of Chancery Decree for enclosure of Lot Meadow, 1698).

⁴⁰ G. Hey, Oxford Archeological Unit, unpublished report, 1997.



Fig. 2. Godstow holt and hams (not to scale).

Godstow Holts and Hams (Hedges 84-103)

West of Wolvercote Mill there is a group of small hams, some of which are separated from each other by holt (Fig. 2). The boundaries of Great and Little Baynhams (nos. 84-91) are species-poor, mainly crack willow with hawthorn bushes and some lombardy poplar (1, 2 or 3 spp./30 yds.). Crack willow is often planted so that the roots maintain ditch-banks. The size of the trees on these boundaries suggests that crack willows may have been planted or replanted about a hundred years ago and the lombardy poplar more recently. Where there is a ditch it is dry and has been since c. 1958 when the Oxford western bypass was built. These species-poor, predominantly willow boundaries are significantly different in species-composition from the common hawthorn Enclosure Award hedges, and Hooper's hypothesis does not apply to them.

In contrast to Great and Little Baynhams, East and West Cowleys have some species-rich hedges. In East Cowleys nos. 92-94 have an average of 5 or 6 spp./30 yds. (max. 7, min. 3 spp./30 yds.) from a list of 13 species including crack willow, dogwood, common hawthorn, dogrose, blackthorn, elderberry, wild privet, hazel, domestic crabapple, oak, purging buckthorn, goat willow and guelder rose. Raspberry is also found in these hedges. No. 93 divides East and West Cowleys and is situated on a 2 m. bank, similar to those round the Great Ham. Boundary hedges 95, 96 and 98 have a mean of 5, 4, and 2 spp./30 yds. respectively, even though they are chiefly crack willow with common hawthorn. They are now fenced but the boundaries themselves may be the adjacent ditches. Hedge no. 99 was planted with common hawthorn c. 1958. The hedges of Baker's Close, nos. 100-103, are different again.

They have an average of 5 spp./30yds. (max. 6, min. 4) including elm and, in no. 100, hazel, and are similar to the open field boundary hedges discussed above. The species in the holt boundaries, however, may reflect an ancient woodland origin like hedges in the Great Ham, the colonisation of an osier bed by a variety of species over a period of many years, or supplementary planting in the 20th century. Storehouse Close comprises the Trout Inn's car-park, allotment gardens and a recently planted orchard of rare fruit trees.⁴¹ It is now fenced.

What do archaeology and the documents say? It is not clear how much of Godstow Isle, 'the island between two bridges', was sub-divided when it was given to Godstow Nunnery c. 1133.⁴² Baynham was recorded amongst the Godstow demesnes in 1536.⁴³ Cow Leys is not mentioned until 1636 when, like Wolvercote Lot Mead, it was described as Lammis land subject to winter floods.⁴⁴ Place-name evidence suggests a medieval element in the name Baynham, which could have been derived from the Abbess of Godstow's bay horse, and Fair Close at the southern tip of the Isle could have been named after the fair held there in Stephen and Matilda's reign.⁴⁵ The possibly medieval origin of these names may be reflected in the average of 5 spp./30 yds. and would fit an enclosure date in the 15th century associated with Godstow's grange in Storehouse Close. Nineteenth and 20th-century cartographic evidence is not helpful because details such as boundary trees are not always included. However, the Ordnance Survey 1st edition (1876) does show Great and Little Baynham with trees along their boundaries.⁴⁶

Holts on the Isle of Godstow formed part of the demesnes of Godstow in 1535,⁴⁷ and were noted in 1636, 1736 and 1765, but were not included in the 1834 Wolvercote Enclosure Award because at that time Godstow was extra-parochial. The holt between hedges 94, 96 and 98 is one of the last remnants of c. 16 a. of holts recorded in 1636 and 1765. Although some of the holts contained willow (probably osiers) in 1736, this strip of woodland is now similar to the ancient floodplain woodland in Godstow Holt and Medley Wood.⁴⁸ Those hedges that are adjacent to or butt up to a holt, from which several species may have colonised the hedge, and those in Baker's Close where elm trees may reflect medieval enclosure, do not support Hooper's hypothesis. Reconciling Hooper's hypothesis with historic evidence has proved to be difficult for this set of boundaries.

CONCLUSION

When all the evidence is taken into consideration one can affirm that the number of spp./30 yds. in Wolvercote hedgerows provides clues to the village's agricultural and landscape history but the use of Hooper's hypothesis is not straightforward. There are ecological reasons for a maximum of 10 spp./30 yds. in the upper Thames valley near Oxford. Hedges containing

⁴¹ Blenheim Mun., Shelf G.1, misc. box 10, unnumbered bundle (Wolvercote: plans etc. for house at Godstow Bridge, 1736.)

⁴² Clark, *Register of Godstow Nunnery*.

⁴³ *Valor Ecclesiasticus*, ii, 191.

⁴⁴ Bodl. MS. Top. Oxon. c 334, p. 2.

⁴⁵ Gelling, *Place Names of Oxon.*; Clark, *Register of Godstow Nunnery*.

⁴⁶ O.S. 6" map XXXIII (1876).

⁴⁷ *Valor Ecclesiasticus*, ii, 191.

⁴⁸ Survey of Wolvercote (1736), Blenheim Mun., Shelf 19, misc. box 10 (survey of Wolvercote, 1736); D. Ayres, 'Floodplain Woodland in the Thames Floodplain near Oxford' (Oxford University Dept. for Continuing Education unpubl. thesis for Certificate in Countryside Conservation, 1991).

elm may have fewer species than expected and unmanaged hedges in permanent pasture may gain species such as elderberry through neglect and lose others. As one might expect in those parts of the parish on the flood-plain, the parish boundaries take the form of a stream whose banks are sometimes colonised by trees. On higher ground in the north-east they comprise hedges bordering open fields, and the species-richness of two of these hedges seems to reflect changes in ownership in the 15th and 16th centuries. The difference between the open field boundaries and the less species-rich parliamentary enclosure hedges is significant with variation from the expected which has some possible explanations. Ancient woodland indicators in Joe White's Lane could be foreseen along an ancient trackway lying between arable and common pasture but the reason for their concentration in one section is unclear, though it may be associated with Wolvercote Hurst in the distant past. In the north-west corner of the parish there is convincing evidence from species-rich hedges and the documents that sub-divisions in Wolvercote Lot Mead were in place long before its 17th-century enclosure, but in the area north of the Trout Inn the field-boundaries could not be reconciled with Hooper's hypothesis largely because most of them began as a complex of streams fed by the Thames and draining into Wolvercote Mill Stream, whilst the species-composition of others may have been enhanced by species colonising from adjacent holts. In conclusion, therefore, Hooper's hypothesis has proved not to be a wholly reliable indicator of the age of a hedge, but is a very efficient tool in pointing out differences between groups of hedges which have different origins.

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