

## EYNSHAM ABBEY & THE ARCHAEOLOGISTS

The archaeologists completed their field work behind St Peter's Church at the end of February, and the site has been back-filled and re-turfed.

Graham Keevill, in charge of the project in succession to Charlie Chambers, had hoped to provide an article for this number of the Record, but the interval between the completion of the dig and our deadline for going to the printers proved too short. Instead he has offered to write an article for 1993. Waiting for a year will have advantages: further laboratory work on the finds will have been carried out; and Graham will have had more time for reflection, and analysis and interpretation of more than two years of hard work.

In March the Unit turned its attention to a small part of the fishponds area, namely the site interpreted from documentary sources as a moated property purchased by the Abbey in the early 13th century from Hervius, son of Peter.

A trench across the north end of the site confirmed the former presence of the moat; Hervius's house was not found, but probably lay a little to the south. Many fragments of Roman pottery were discovered, perhaps surprisingly in view of the relative paucity of Roman remains previously found in the Eynsham area.

The Royal Commission on Historical Monuments is providing funds for a detailed topographical survey of the fishponds area, and a geophysical survey of other areas such as the Nursery field remains a possibility. (Editor)

## BENEATH THE SURFACE

by Peter Way

*First an aerial photo. This might be the site.  
Then a JCB clanking, heaps topsoil and stone.  
Spadework and sieving bring artefacts up to the light.  
Like lucky phrases, pottery shards and carved bone.  
From the cesspit's recesses a plentiful yield.  
Pieced from fragments the past begins to be known.  
From the steel scaffold a view of what was concealed.  
The camera's dispassionate eye probes and then prints.  
Foundations laid and forgotten now stand revealed.  
Tokens and keys emerge to give whispers and hints.  
Buried conduits convey lost images once more bright.  
Poems are excavations, their sources hidden long since.<sup>1</sup>*

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<sup>1</sup> Extract from Eynsham Record 9, 1992, pages 2-17 (full text online at [www.eynsham.org.uk/ER9.pdf](http://www.eynsham.org.uk/ER9.pdf))

# THE FISHPONDS OF EYNSHAM ABBEY

by James Bond

## Introduction

This article is based upon an unpublished site appraisal of the Eynsham Abbey fishponds carried out in May 1979 while the author was on the staff of the Field Section of Oxfordshire Museum Services<sup>1</sup>. The original report was intended only for limited circulation, and one of its purposes was to draw together from available sources what was then known about the abbey fishponds, set against the broader background of fish farming and fishpond management in the Middle Ages. Much of the basic information on the site was already available in undigested form within the County Sites and Monuments Record<sup>2</sup>, including previously published historical documentation, vertical and oblique aerial photographs, sketch plans and reports of field inspections. The 1979 appraisal also assessed the state of preservation of the ponds, their archaeological potential, the measures for protection then available, and possible future management strategies.

So far as I am aware no detailed archaeological or documentary investigations of the abbey fishponds have taken place since that date. However, in the meantime, our general understanding of the role of fish in the medieval diet, and of the construction and management of medieval fishponds, has been enhanced considerably by several more recent publications, some of which have resulted in a significant modification of the views which prevailed in 1979<sup>3</sup>. Moreover, the importance of the abbey site itself has been underlined by the publication of Bishop Gordon's book on the abbey and Alan Crossley's account of the town and parish in the most recent volume of the Victoria County History<sup>4</sup> and by a new campaign of excavations undertaken by the Oxford Archaeological Unit<sup>5</sup>. This therefore seems an opportune moment to exhume and reassess the factual and interpretative parts of the original appraisal and to offer them for wider circulation in the light of our present understanding.

## Archaeological Observations

It is now recognised that the fishponds of Eynsham Abbey were of considerable extent and complexity, occupying at least 1.5 hectares along the Chil Brook valley, to the south and southwest of the main claustral buildings. Their principal component was a chain of five, or possibly six large rectangular ponds extending for some 260m from the modern Station Road downstream to a point due south of the parish church of St Leonard. In addition there was a more compact group of four or five smaller ponds, perhaps breeding tanks, some 130-210m further downstream on the north side of the valley, immediately south of the former nursery garden.

Although the earthworks of the dams and leats of the abandoned ponds survived in reasonably good condition into the early 1960s, regrettably they remained unsurveyed. Since that date they have become obscured by partial infilling and levelling, and today the greater part of the complex can hardly be recognised on the ground. A provisional reconstruction of their original form has emerged only slowly and with some difficulty, through the successive efforts of several different investigators.

The first observation on the ponds to be published in modern times was a passing reference made by Chambers in 1936<sup>6</sup>. He says nothing about their general layout, but does make an interesting comment on the supply of water to the site, to the effect that the abbey fishponds were fed by a stream rising in a spring called the Holewelle just south of the present Abbey Farm barn; and that this stream probably once ran straight into the Chil Brook, but seems to have been blocked at that end

and turned east to feed the abbey fishponds. The Holewelle spring is mentioned in one of the deeds by which land was transferred to the abbey in the thirteenth century, discussed further below. In fact the Chil Brook itself must always have been the main source of water for the ponds; the stream described here by Chambers appears to be led below the dam of the third pond from the west into the southern side leat for the lower ponds of the main flight. It also bypasses the smaller group of ponds lower down, which were probably fed directly by springs.

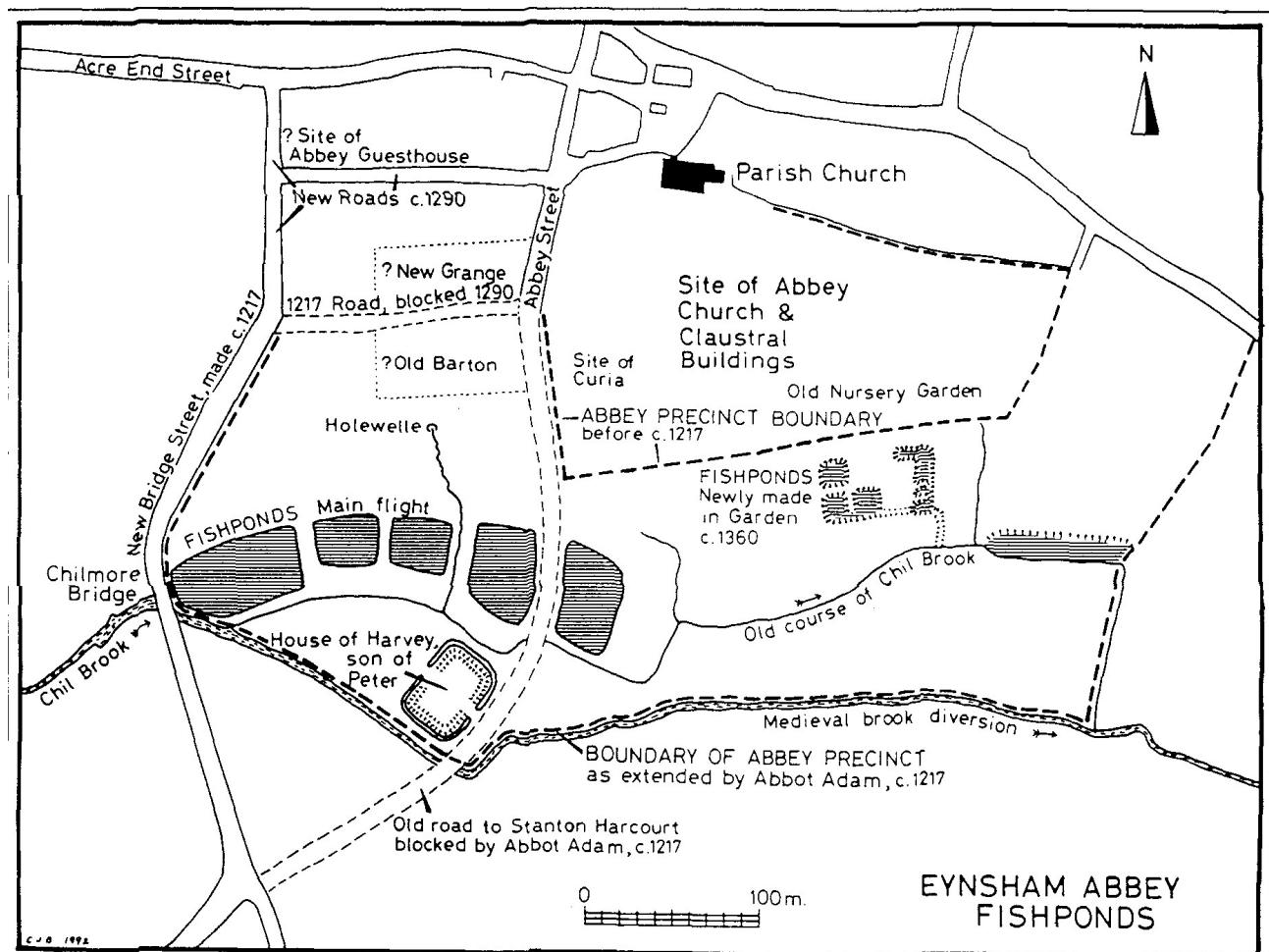
The earliest aerial photograph of the site known so far was taken in July 1929, but no comments on this seem to have been recorded until November 1968, when routine scanning of the collections at Southampton by staff of the former Archaeology Division of the Ordnance Survey resulted in the identification of 'a possible moat and fishponds' on the southern side of the abbey precinct. The ponds were also clearly shown on an oblique aerial photograph in the Cambridge University collection taken on 10th April 1964<sup>7</sup>.

The first substantial entry in the Oxfordshire Sites & Monuments Record is a report of a field inspection and sketch survey made by Michael Aston in 1971. He made a number of pertinent observations, in particular:-

1. The pattern of channels and leats and the general configuration of the contours indicate clearly that the Chil Brook had been diverted into a new channel on the southern flank of the valley in order to make room for the construction of fishponds in the old valley bottom. The stream still follows this diverted course today.
2. Without benefit of access to the earlier aerial photographs, Aston was unable to make much sense of the main flight of ponds on the ground, and it is clear that they had suffered considerable damage within the previous ten years. The intervening dams had been levelled, and although Aston noted low-lying marshy areas with vestigial banks and drainage channels cut through them in one or two places immediately to the north of the valley bottom, where the old course of the Chil Brook could still be traced, he seems to have envisaged this area as consisting of simply one large pond. However, he noted the main dam surviving at the bottom of the flight, and also immediately to the north the foundations of a wall aligned in a roughly north-south orientation.
3. To the south of the main flight, between the old and new courses of the Chil Brook, Aston's sketch plan showed a rectangular enclosure surrounded by a bank and ditch. This can be equated with the 'moat' noted in the Ordnance Survey archaeological records. Aston's field notes do not include any particular comment on this feature, and he was evidently unaware of the documentary evidence for the location of a medieval house site in this vicinity, to be discussed further below.
4. Below the main flight Aston identified the group of smaller ponds south of the old nursery garden. He recorded the remains of at least five small, shallow, rectangular ponds, describing the uppermost pair as arranged in an east-west alignment one above the other, with the remaining three arranged in a north-south row at right-angles to the former stream course.
5. He also noted that all vestiges of a long marshy strip to the south of the playing-field shown on earlier editions of the Ordnance Survey 1:2500 map, which could have been the remains of yet another pond, had by 1971 entirely disappeared.
6. Aston's sketch plan shows minor earthwork features extending as far downstream as the railway bridges, but apart from the outflow leat below the ponds these appear to be related mainly to later drainage operations.
7. Regarding the general condition of the complex in 1971, Aston describes the ponds as a whole as overgrown, the five small ponds as 'rather ruined', and 'one fishpond destroyed'.

In 1975 a complete set of vertical aerial photographs from 4,000 feet, commissioned by

Oxfordshire County Council from Fairey Aviation Surveys and flown in 1961, was deposited with the Sites and Monuments Record<sup>8</sup>. These photographs produced important new evidence, showing the state of the main flight of fishponds prior to the damage which had confused their surface configurations. Several of the features noted by Aston show up clearly on the 1961 photographs, including the old and new courses of the Chil Brook; but the five smaller ponds south of the nursery garden are not very clear, and could barely have been detected from the photographs alone. The main flight of ponds, on the other hand, is very clear, with five or six dry rectangular depressions with intervening dams strung out in a row along the north side of the original course of the Chil Brook, extending upstream as far as the Station Road bridge. The rectangular enclosure to the south can be seen to have causeway entrances across its surrounding ditch on both east and west sides. The general configuration of these newly-detected earthworks was sketch-plotted from the aerial photographs by the present writer in 1976.



In 1977 the site was re-examined on the ground by John Steane<sup>9</sup>. By that date the documentary evidence for the extension of the monastic precinct early in the thirteenth century had been recognised (discussed further below), and the information from the 1961 aerial photographs was readily available. Steane's sketch map shows six ponds in the main chain, with a substantial dam at the lower end, and the rectangular ditched enclosure to the south between the old and new courses of the brook. In one respect his plan is incorrect, showing the line of the old Stanton Harcourt road across the valley (again, see further below) passing below the third pond from the top, west of the rectangular enclosure, whereas in fact it crossed below the fourth pond, east of the enclosure. Steane's field report comments on the features already noted, and adds further information on the condition of

the site. The two easternmost ponds of the main flight had been filled by dumping. It has not been established whether this operation was preceded by levelling, but it is possible that some remnants of the original earthworks may have been sealed intact beneath the dumped material. Sizeable remains of the fishpond earthworks were still visible immediately east of the Chilmore Bridge.

No scientific excavation has yet taken place on the fishponds themselves, but the magnetometer survey and one of the trial trenches cut in the Nursery Field by Margaret Gray and Nicholas Clayton in 1971 located a very large ditch which was provisionally interpreted as the southern perimeter of the abbey precinct<sup>10</sup>. If, as seems likely, this interpretation is correct, it very probably represents the early precinct boundary prior to the enlargement of the early thirteenth century which brought the land containing the fishponds within the bounds. The evidence for this precinct extension is discussed in the following section.

## Documentary Evidence

Little is known about the condition and appearance of the Chil Brook valley at Eynsham before the early Middle Ages, though the original course of the brook can be traced on aerial photographs. The monastic precinct of the eleventh and twelfth centuries appears to have been relatively small, bounded on the south by the large ditch identified in the 1971 excavation and on the west by the old road from Eynsham to Stanton Harcourt. The present Abbey Street, now a cul-de-sac, represents the northernmost end of this road. It is quite clear from both archaeological and documentary evidence that it originally continued across the valley, curving round to link up with the bend in the present Stanton Harcourt road immediately south-east of the point later occupied by the railway station.

Documentary records of a series of significant changes in the early thirteenth century provide the earliest likely context for the construction of the main flight of ponds. During the time of Abbot Adam (1213-28) a major extension to the abbey precinct was carried out. This was one of a number of ambitious and expensive schemes undertaken by this abbot, which brought the community into debt and led eventually to his deposition. Abbot Adam embarked upon a policy of purchasing land to the west of the old Stanton Harcourt road. A house, courtyard and croft which stood beyond the brook towards Stanton was acquired from *Herveius filius Petri*, in exchange for another house and croft previously held by Henry Banastre<sup>11</sup>. Some years ago Hugh Cooper pointed out that the position of the small embanked and moated enclosure identified in Aston's survey, which is clearly aligned upon the course of the old road south of the original course of the Chil Brook, fits perfectly the position of the house of Harvey, son of Peter, as described in the Cartulary. In mid-December 1991, when the final draft of this paper was in preparation, trial trenches were cut across this earthwork by the Oxford Archaeological Unit as part of the archaeological evaluation of the proposed route of a new main sewer. The evidence from this exercise was wholly compatible with Cooper's interpretation. Pottery from the site suggested that the moat was constructed over an area of Roman and late Saxon settlement in the mid- or late eleventh century, and was occupied into the early thirteenth century. The moat was then apparently allowed to silt up, and the absence of later material suggested that the site of Harvey's house was entirely abandoned after its acquisition by the abbey<sup>12</sup>.

Another messuage, garden and croft next to the abbot's barton, with a plot extending in length from the new bridge to the angle of the barton wall on the north, and in width from the new street to the barton, was acquired from Ralph, son of Walter Clarkson (*Radulphus filius Walterii filii clericis*)<sup>13</sup>. A third property, consisting of arable land in Heycroft eight perches in the south and nine perches in the north by six perches in breadth, was granted to the abbey by Robert Haltein. The side of this plot was said to be separated from the new street by the spring called 'Holewelle', while

its end abutted upon the *hospitale*<sup>14</sup>. The location of several of the landmarks described in these documents has been identified by Chambers and more recently by Crossley: the *barton* (a term which means 'farmyard' or 'steading') evidently stood to the south of the present Abbey Farm, while the *hospitale* may have been the abbey guesthouse or almonry rather than a separate hospital or almshouse, south of Acre End and west of Abbey Farm somewhere near the Swan Inn and Railway Inn<sup>15</sup>.

The line of the 'new street' had clearly come into existence by the time that the transactions described above were entered in the Cartulary, and further information on its creation is preserved in the Patent Rolls.

In 1217 Abbot Adam acquired licence to block off the original course of the Stanton Harcourt road which is described as passing east of the house of Harvey (*Herveius de Heinesham*), inconveniently separating the *curia* (the great court to the west of the church and claustral buildings forming the link between the abbey and the outside world) from the barton. In consequence he had to replace the original road and crossing by a new road and bridge outside the limits of the extended precinct, which now enclosed the barton and the former properties of Harvey and Walter Clarkson. The new road was to diverge from the old outside the door of Reginald Painter (*Reginald Pictor*), passing between the abbey barton and the tenement of John the Porter (*Johannes Janitor*) to the gate of the cemetery of the 'great church'<sup>16</sup>. The effect of this action can clearly be seen today. Abbey Street was stopped up and diverted, first to the west, probably along the line of the drive through the middle of Abbey Farm, then to the south, almost certainly along the line of the present Station Road over Chilmore Bridge: before the coming of the railway this was, significantly, known as New Bridge Street. Although Chilmore bridge itself has been enlarged and rebuilt in modern times, masonry which appears to be medieval still survives in the underside of its arch<sup>17</sup>. There were no houses along this new road as late as 1650.

Towards the last decade of the thirteenth century another street was closed off, with the abbot again undertaking to provide a new alternative route outside the precinct. The street blocked on this occasion formerly linked the abbey with the almonry, and if, as seems likely, the latter is identical with the *hospitale* mentioned in c.1217, then it is likely that the road closed was the east-west drive through Abbey Farm and its replacement the north end of the the present Station Road and/or Swan Street<sup>18</sup>.

The blocking and diversion of the Stanton Harcourt road, together with the acquisition of the lands described above, had permitted the abbot to add a western extension of considerable size to the abbey precinct. The only motive for this operation stated at the time was to allow the abbot to build a new grange or home farm adjoining the old barton on part of the ground gained thereby. Initially the land acquired from Robert Halthein was intended to be used for the new grange, but in fact it was built on a plot previously acquired from Walter Clarkson, as is made clear in the deed of his son Ralph<sup>19</sup>. The purpose of the second road diversion may have been to include the whole of the new home grange buildings as well as the old barton within the precinct. However, the new grange can have occupied only a very small proportion of the 1217 precinct extension, and the opportunity to acquire more valley-bottom land for fishpond construction may have ranked as a secondary motive, though not stated in the contemporary sources.

Only one contemporary medieval reference to fishponds at Eynsham Abbey is known. This occurs in a survey of the abbey demesne dating from c.1360, which includes a description of a large garden '*cum vivariis pro piscibus recentibus er inponendis*' (with fish-ponds recently made), planted with trees and plots of beans, cabbages, leeks, hemp and flax, bringing in 40s a year, and a large *curia* (court) on the western side of the abbey with a barn, sheds for oxen, cattle and sheep, and

storehouses, bringing in 40s more<sup>20</sup>.

There are often considerable difficulties in correlating documentary and field evidence and in establishing beyond all reasonable doubt that features visible on the ground today are identical with those specified in the documents. In this particular case, there seems little reason to question that the fourteenth-century document mentioned above does relate to at least part of the known fishpond complex; but its implications for the dating of the ponds as a whole are less clear-cut.

To sum up, at least three possible conclusions on the dating of the ponds can be drawn from the documentary evidence as currently known:

(1) The main flight of ponds can hardly have been constructed in its final form before 1217, as the western part of the system continues into the extension added to the earlier precinct in that year by Abbot Adam. They are not mentioned in the charter recording the acquisition by the same abbot of the house of Harvey, son of Peter, and the implication is clearly that the fishponds did not yet exist and that the diversion of the brook had not yet been carried out. However, assuming that our reconstruction is correct, the precinct extension seems far too large to have been made only for the purpose of accommodating the new home grange buildings. One possibility is that the entire group of ponds was built soon after 1217 and that the extra land was intended for this purpose from the outset; but it is difficult to reconcile this with the record of c.1360 unless a very elastic interpretation of their description as 'recently made' is taken.

(2) A second possibility is that the entire system of ponds was not laid out until a considerable time after the diversion of the old road and the extension of the precinct, and that the whole flight was built not long before 1360 when some ponds were said to be newly-made. There are two arguments against this. Firstly, it begs the question why Abbot Adam took the trouble to extend the precinct by such a large additional area in 1217: the land was not all needed for his new farm buildings, and although the unmodified valley bottom might have provided valuable meadow-land this was not in particularly short supply in the vicinity of Eynsham, and it hardly seems necessary to go to the expense of including it within the new precinct wall. Secondly, the middle of the fourteenth century was in general one of economic decline, when labour costs were high in the wake of the Black Death, and the opportunities and incentives for a scheme involving considerable capital investment were not particularly great.

(3) The third, and perhaps most likely possibility, is that not all of the ponds were of the same date. There are several well-authenticated instances elsewhere where monastic fishponds were altered in form, extended, or in some cases contracted during the Middle Ages<sup>21</sup>. The main flight of ponds at Eynsham, which clearly represented the greatest capital expenditure, fit so neatly into the precinct extension scheme that it seems likely that their construction was intended from the outset and was achieved in or very soon after 1217. The 'recently-made' ponds of c.1360, which are stated specifically to lay within the abbey garden, might be equated with the five small ponds below the main flight first recorded by Aston in 1971; the juxtaposition in the survey description, whereby the garden and new ponds are followed by the western *curia*, could almost be taken to imply that they lay towards the eastern side of the precinct.

Finally, one early post-medieval description of the Eynsham Abbey fishponds is of some interest. Thomas Hearne visited the abbey in 1706, and relates as follows:

'I am told by some of ye seniors at Einsham y<sup>t</sup> the Monastery there had 52 Fish-Ponds belonging to it, according to ye Number of Weeks in a year, which seems to be true from divers Holes near to ye Place where the Monastery stood, w<sup>ch</sup> without doubt were once Fish Ponds'<sup>22</sup>.

While there is certainly evidence for quite a few separate ponds at Eynsham, the total is nowhere near 52, and this would indeed be unparalleled on any other monastic or secular site in England. It is

difficult to escape the suspicion that Hearne was having his leg gently pulled by 'some of ye seniors'!

### Monastic fisheries and fishponds: a general background

Fish played a vital part in the medieval diet, partly because meat was expensive and partly because of religious prohibitions on meat-eating. The Rule of St Benedict observed at Eynsham Abbey insisted upon abstention from the flesh of all four-footed beasts except in cases of sickness<sup>23</sup>, and although some relaxation is evident in many monastic houses by the thirteenth century, economic necessity dictated what strict religious observance had failed to enforce, and the custom of eating fish on fast days in particular (Fridays and Lent) tended to be maintained. Even in the later fifteenth century there were still around 175 fish-days in the year. A regular source of fish was, therefore an essential pre-requisite of monastic life.

One of the most important personalities associated with Eynsham Abbey is Aelfric, who was appointed to be its first abbot in 1005. In his previous monastery at Cerne (Dorset) he had been given special responsibility for teaching, and amongst his written works was the *Colloquy*, an educational text designed to teach the oblates Latin for everyday use, by means of a series of contrived dialogues with men of different occupations. Bearing in mind the purpose of the *Colloquy*, it is likely that it reflects familiar contemporary scenes, and the 'interview' with the fisherman probably gives a reasonably faithful portrayal of late Saxon fishing practices. In Aelfric's text the fisherman describes how he lays down nets in the stream from his boat and sets baited hooks and basket traps. He catches eels, pikes, *mynas* or *menas* (' minnows ', probably any small fish), burbots, trouts and lampreys from the stream. Sometimes he goes to sea to catch herrings, salmon, dolphins, sturgeon, oysters, crabs, mussels, winkles, cockles, plaice, flounders and lobsters; but he prefers not to join the whalers, for while this was profitable it was too dangerous. He sells his fish in the city, and would be able to sell more fish if his catch was greater<sup>24</sup>.

It is significant that Aelfric, while describing fish caught by nets, hooks and traps from rivers and from the sea, makes no mention of fishponds: very probably at the time he was writing artificial ponds had not yet become a regular feature of monastic precincts in England, and rivers remained the principal source of fresh-water fish. Certainly from the evidence of charters, fish-weirs with basket traps were common features of the landscape by the tenth century<sup>25</sup>. The Domesday survey records an annual yield of 450 eels from Eynsham Abbey's mill, and there are references to river-fisheries belonging to the Abbey in both the Thames and the Evenlode in the thirteenth and fourteenth centuries<sup>26</sup>. However, it is also evident that, even in the midlands, freshwater fish contributed far less to the diet than did marine species such as herring and cod. Other local monastic records, such as the accounts of Bicester Priory and Abingdon Abbey, make it very clear that dried, smoked, salted, pickled and even fresh marine fish were readily available, even this far inland, in the thirteenth and fourteenth centuries<sup>27</sup>. By comparison freshwater fish were expensive luxury items<sup>28</sup>, and in the monastery would tend to be reserved for feast days and for special occasions such as the entertainment of important guests.

While river fisheries remained important throughout the Middle Ages, they were not wholly reliable as a source of supply, and were sometimes located at an inconvenient distance from the abbey. The solution to the problem of ensuring that fish were available on the spot when needed was to construct artificial ponds in which live fish could be stored and bred. The techniques of making fishponds can be traced back to the Roman world at least, but in England fishpond construction acquired its strongest momentum during the twelfth, thirteenth and early fourteenth centuries.

Fishponds are frequently encountered on monastic sites but are by no means restricted to them, being found also on many secular estates in association with castles, manor-houses, moated homesteads and parks. In the modern county of Oxfordshire alone the first attempt to draw together

the evidence in 1985 resulted in the recognition of at least 148 examples of single fishponds or fishpond groups, about half of which probably date from the Middle Ages<sup>29</sup>, and several further examples have been discovered since then<sup>30</sup>. Of these, no more than ten or a dozen are unambiguously of monastic origin. This point needs emphasis, because the particular religious connotations of fish-eating and the widespread occurrence of ponds on monastic sites have misled many investigators (including the present writer) in the past into crediting the monastic orders with a more significant role in the introduction and development of fishponds than in reality they possessed. More recently Christopher Currie has argued persuasively that the introduction of fishponds in England was a secular aristocratic initiative and that, although ponds were undoubtedly an important component of many monastic sites, the monasteries were considerably less innovative in this field than had previously been assumed<sup>31</sup>.

Monastic ponds are enormously varied in character, ranging from small single store-ponds to complex series covering many hectares, the construction of which involved impressive feats of earth-moving and water-engineering. It has been observed that the most complicated and extensive systems of ponds tend to be associated with the reformed monastic orders and houses of canons which made their first appearance in the twelfth century, while the older Benedictine houses rarely seem to have more than two or three small, simple ponds. Several possible reasons for this distinction have been suggested. Many of the older Benedictine houses were situated in towns, where they had less room to lay out extensive ponds (or perhaps where there was more risk of their subsequent obliteration). Many of the older houses were also located close to major rivers where there was more opportunity to draw supplies from fish-weirs<sup>32</sup>. By contrast, houses of the reformed orders were often in rural upland locations, further away from the principal rivers but with ample space in which to develop pond systems. Whatever the general explanation, the arrangement of ponds at Eynsham finds no parallel amongst the other Benedictine houses in the south midlands, and it is difficult to see any obvious reason why it should be so atypical.

One final misconception propagated in earlier works (again by the present writer amongst others) ought now to be discarded: the suggestion that the more elaborate forms of ponds, such as those at Eynsham, were built not just to supply local subsistence needs, but were conceived as large-scale commercial ventures. At one time this view seemed to be supported by the occasional references to the feeding of fish (for example, at Abingdon Abbey in 1322-3) and to sales of surplus freshwater fish (from the same abbey in 1388-9 and 1412-13)<sup>33</sup>; but it is now realised that such records are exceptional, and that they pale into insignificance compared with records of purchases. Christopher Dyer has recently quoted the high prices paid for freshwater fish - 1s-3s for a mature pike or 5d-6d for a bream or tench in the fifteenth century, compared with a farthing for a herring or a halfpenny for a plaice or flounder - which indicates the intensity of labour necessary for fish-farming<sup>34</sup>.

Christopher Currie has emphasized the other side of the same coin, the low yield of most medieval ponds - without supplementary feeding a pond one hectare in extent could hold about 227 kilos of bream, but since these take about five years to reach edible size, it would be capable of producing only about 45 kilos per annum. Assuming 175 fish days per year at which each monk would receive a minimum of 170 grams (227 grams unprepared weight) per day, Currie calculates that, in order to be self-sufficient in fish, a small house of ten brethren would need to produce 385 kilos of fish a year and would therefore require 8.5 hectares of ponds, while a large house of 40 brethren would require 36.5 hectares<sup>35</sup>. The number of monks at Eynsham is not recorded before 1380, when there was a proposal to enlarge the community to 30 brethren as soon as suitable applicants could be found; in the early fifteenth century it may have been close to achieving this total, though by the Dissolution the number of monks had dwindled to ten<sup>36</sup>. The needs of monastic servants, corrodians and guests must also be taken into account. It is very evident that production from ponds not much more than 1.5 hectares in extent would have been quite incapable of satisfying the regular domestic

demand of the community even at its smallest recorded size, let alone producing a regular marketable surplus. In such circumstances the extent to which monastic communities depended upon supplies of sea fish is readily explicable. The earlier hypothesis that the more elaborate ponds were established through commercial motives is, therefore, no longer tenable.

## Conclusion

The scope of this contribution has been modest: it was intended to do no more than consolidate what is known and what can be inferred from the evidence currently available, and to update the general background information provided in the 1979 appraisal. It will certainly not be the last word on the subject. Further documentation awaits study, in particular the surviving compotus roll drawn up by John Lynby, the abbey's fisherman, on September 29th 1442, with its list of expenses incurred in the operation of the fishery<sup>37</sup>. A more adequate record of the existing remains has long been needed, and a detailed survey of the earthworks was proposed by the Oxford Archaeological Unit in June 1990 as part of the overall research strategy for the site; arrangements are now in hand for this to be undertaken by staff of the Royal Commission on Historical Monuments (England), probably early in March 1992. Any future archaeological examination, particularly any work which may involve the environmental sampling of the pond sites or the examination of the abbey's kitchen-middens could add considerably to our present state of knowledge<sup>38</sup>. Indeed, while this article was in the final stages of preparation the Oxford Archaeological Unit were beginning to examine the abbey kitchen, where the ash layers from the raking-out of hearths have turned out to include valuable assemblages of fish bones; these have yet to be examined in detail, but I am informed that sea fish are undoubtedly represented<sup>39</sup>.

## *Acknowledgements*

The basis of this paper is the work of those earlier investigators whose observations have been acknowledged in the text and references. I would also like to record my gratitude to Dr Brian Atkins of the Eynsham History Group and Graham Keevill of the Oxford Archaeological Unit for their helpful comments on an earlier draft.

## *References and footnotes*

1. Bond, C.J., *The Eynsham Abbey Fishponds: a Preliminary Report and Appraisal* (Unpublished report for limited circulation, Oxfordshire Museum Services, 30th May 1979). This document, together with the reports of field inspections by Michael Aston and John Steane, are filed within the Oxfordshire Sites & Monuments Record. Specific material covering only the fishponds is filed under the reference PRN.4615; more general information on the abbey precinct as a whole is filed under the reference PRN.3112.
2. Then housed at the Oxfordshire County Museum at Woodstock, now part of the Centre for Oxfordshire Studies within the Central Library, Westgate, Oxford.
3. Notably Aston, M. (ed.), *Medieval Fish, Fisheries and Fishponds in England* (British Archaeological Reports, British Series, Vol.182, Oxford, 1988). See also Brinkhuizen, D.C. & Clason, A.T. (eds), *Fish and Archaeology: Studies in osteometry, taphonomy, seasonality and fishing methods* (British Archaeological Reports, International Series, Vol.294, Oxford, 1986); Wheeler, A. & Jones, A.K.J., *Fishes* (Cambridge Manuals in Archaeology, Cambridge University Press, 1989); and several papers in R. Gilchrist & H. Mytum (eds), *The Archaeology of Rural Monasteries* (British Archaeological Reports, British Series, Vol.203, Oxford, 1989), especially C.K. Currie, 'The role of fishponds in the monastic economy' (pp.147-172), A.K.G. Jones, 'The survival of fish remains at monastic sites' (pp.173-184) and C.J. Bond, 'Water management in the rural monastery' (pp.83-111, esp. pp.100-102).
4. Gordon, 1990; Crossley, A. in 'Eynsham', *V.C.H. Oxon.*, Vol.XII.
5. Brief interim reports by R.A. Chambers (to September 1990), and by G. Keevill (since December 1990), have appeared in *Archaeological News* (Quarterly Newsletter of the Oxford Archaeological Unit) from Vol.XVII no.4 (Dec.1989). See also Chambers, R.A., 'Eynsham Abbey Excavations', *ER*. no.7 (1990), pp.3-6, and *ER*. no.8 (1991), pp.4-9.
6. Chambers, 1936, p.77.
7. Ordnance Survey record card SP.40.NW.25, quoting Crawford collection AP, SH.63722- 3; Cambridge University Collection of Aerial Photographs, AIP.77 (I am grateful to Dr F.B. Atkins for the latter reference).
8. Fairey Aviation Surveys, 6125/4.031-2.
9. A brief summary with the sketch map was published in the annual report of the work of the Museum's Field Section in *Council for British Archaeology Group 9 Newsletter* no.8 (1978), pp.65-7.
10. Gray, M. & Clayton, N., 'Excavations on the Site of Eynsham Abbey, 1971', *Oxoniensia*, Vol.43 (1978), pp.100-122, esp.p.114.
11. *Eynsham Cart.* Vol.1, Charter no.216, p.161; Chambers, 1936, pp.76-7.
12. Oxford Archaeological Unit, *Thames Water Rising Main Sewer, Eynsham, Oxfordshire: Archaeological Evaluation Report* (December, 1991), esp.pp.3-4 & appendices 2 & 3.
13. *Eynsham Cart.* Vol.1, Charter no.224, pp.165-6.
14. *Ibid.*, Charter no.209, pp.156-7.
15. Chambers, 1936, p.77; Crossley, 'Eynsham', In *V.C.H.Oxon.*, Vol.XII, p.118.
16. *Cal.Patent Rolls, Henry III*, Vol.1, 1216-25 (1901), p.78.
17. I am grateful to Graham Keevill for this information.
18. Crossley, 'Eynsham', In *V.C.H.Oxon.* Vol.XII, p.118, quoting O.R.O. DL I/xii/6, p.338.
19. Chambers, 1936, p.77.
20. *Eynsham Cart.* Vol.2, Charter no.607, p.37.
21. For example, the system at Evesham Abbey (Worcestershire) was extended by the addition of two ponds to an earlier one before 1214-16: see Bond, CJ., 'The Estates of Evesham Abbey: a preliminary survey of their medieval topography', *Vale of Evesham Historical Soc. Research Papers*, Vol.4 (1973), esp.pp.31-3. Conversely, the replacement of one large pond at

- Marton Priory (Yorkshire) by five smaller ones some time after 1300 has been demonstrated by Mackay, D.A. & Swan, V.G., 'Earthworks at Marton and Moxby Priories', *YorksArchaeological Jnl.* Vol.61 (1989), pp.71-84 , and Swan, V.G., 'Marton Priory Fishponds: a Postscript', *Yorks Archaeological Jnl.* Vol.63 (1991), pp.219-20.
22. Doble, C.E. (ed.) *Remarks and Collections of Thomas Hearne*, i (Oxford Historical Soc. Vol.2, 1884), p.244.
  23. McCann, J. (ed.), *The Rule of St Benedict* (2nd edn., Sheed & Ward, London, 1976), Chapters 36 & 39.
  24. Garmonsway, G.N. (ed.), *Aelfric's Colloquy* (Methuen's Old English Library, London, 1939, pp.26-30.
  25. For references see Bond, C.J., 'Monastic Fisheries', in Aston (ed.), *Medieval Fish, Fisheries and Fishponds in England*, i, esp. pp.85-6.
  26. *V.C.H. Oxon.*, Vol.I, p.403; *Eynsham Cart.*, i, no.VIII (p.12), no.475 (pp .3 1 6 -7), no.541 (pp.369-70); *ibid.*, ii, p.lxxiv, no.607 (p.38); Chambers, 1936, pp.16, 35, 7981; Crossley, 'Eynsham', In *V.C.H. Oxon.* Vol. XII, p.142. For other monastic fisheries on the Thames see Bond, 'Monastic Fisheries', in Aston(ed.), *Medieval Fish, Fisheries and Fishponds in England*, i, esp.pp.89-92.
  27. Blomfield, J.C., *History of the Deanery of Bicester* (London, 8 vols, 1882-94), ii (1884), pp.137-8, 141-2, 145, 148-9, 157-8, 174; Kirk, R.E.G. (ed.), *Accounts of the Obedientars of Abingdon Abbey* (Camden Soc., new series, Vol.51 (1892), p.38; for further examples, see Bond, C.J., 'Monastic Fisheries', in Aston (ed.), *Medieval Fish, Fisheries and Fishponds in England*, i, esp.p.77.
  28. Dyer, C., 'The Consumption of Fresh-water Fish in Medieval England', in Aston (ed.), *Medieval Fish, Fisheries and Fishponds in England*, i, pp.27-38.
  29. Bond, C.J. & Chambers, R.A., 'Oxfordshire Fishponds', in Aston (ed.), *Medieval Fish, Fisheries and Fishponds in England*, pp.353-370.
  30. E.g. Parry, C., 'A Survey of a Fishpond at Lower Brookend Farm, Chastleton', *Oxonienia*, Vol.54 (1989), pp.405-9; Bond, C.J., 'A Medieval Fishpond at Bruern Grange', *Wychwoods History* no.6 (1991), pp.36-50.
  31. Currie, C.K., 'The Role of Fishponds in the Monastic Economy', in Gilchrist & Mytum (eds), *The Archaeology of Rural Monasteries*, pp.147-72.
  32. Bond, CJ., 'Monastic Fisheries', in Aston (ed.), *Monastic Fish, Fisheries and Fishponds in England*, i, esp.pp.103-4.
  33. Kirk, R.E.G. (ed.),*Accounts of the Obedientiars of Abingdon Abbey* (Camden Soc., new series, Vol.51 (1892), pp.3, 52, 74.
  34. Dyer, C., 'The Consumption of Fresh-water Fish in Medieval England', in Aston (ed.), *Medieval Fish, Fisheries and Fishponds in England*, pp.27-38.
  35. Currie, C.K., 'Medieval Fishponds in Hampshire' , in Aston (ed), *Medieval Fish,Fisheries and Fishponds in England*, pp.267-89, esp.pp.275-6; Currie, C.K., 'The Role of Fishponds in the Monastic Economy', in Gilchrist & Mytum (eds), *The Archaeology of Rural Monasteries*, esp.pp.151-6.
  36. Salter, H.E., 'Abbey of Eynsham', in *V.C. H. Oxon.* Vol.II (1907), pp.65-7.
  37. British Library, Harleian MS. F.14 (1-2).
  38. See, for example, Shackley, M., Hayne, J. & Wainwright, N., 'Environmental analysis of medieval fishpond deposits at Owston Abbey, Leicestershire', in Aston (ed.), *Medieval Fish, Fisheries and Fishponds inEngland,ii,pp.301-8; Thawley, C.R., 'The mammal, bird and fish banes', in Mellor, J.E. & Pearce, T, *The Austin Friars, Leicester*, C.B.A.Research Report no.35 (1981), pp.173-5.*
  39. I am grateful to Graham Keevill for this information.