DESK-BASED ASSESSMENT OF ABBEY BRIDGE AND VIADUCT, EVESHAM, WORCESTERSHIRE

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Part 1: Summary

A desk-based assessment was undertaken of Abbey Bridge and viaduct, Evesham, Worcestershire (centred on NGR: SP 034 431). It was undertaken on behalf of Halcrow Group Ltd, whose client Worcestershire County Council (Highways and Transportation) intends to replace the current structures, for which a planning application will be submitted.

The aims of the assessment were to summarise the character and extent of any identified features of the historic environment, indicate their significance, assess the impact of the proposed development and identify mitigation measures, where appropriate.

It is considered that the remains of late prehistoric and Roman settlement might be adversely affected by the development. It is therefore recommended that a field evaluation be undertaken to establish whether such remains are present and if so, what form of mitigation is required.

The assessment also notes the architectural significance of the bridge and viaduct themselves. It is recommended that both structures be recorded before demolition.

Part 2: Report

1. Background

1.1 Reasons for the project

A desk-based assessment was undertaken of Abbey Bridge and viaduct, Evesham, Worcestershire (centred on NGR: SP 034 431; Fig 1). It was undertaken on behalf of Halcrow Group Ltd, whose client Worcestershire County Council (Highways and Transportation), intends to replace the current structures, for which a planning application will be submitted to Wychavon District Council.

1.2 Project parameters

The project conforms to the *Standard and guidance for archaeological desk-based assessment* (IfA 2008), Planning Policy Guidance Notes 15 '*Planning and the Historic Environment',* and 16 *'Archaeology and Planning'* and relevant EIA guidance and Legislation.

The project also conforms to a proposal (including detailed specification; HEAS 2009).

1.3 Aims

The aims of the project were to summarise the character and extent of any identified features of the historic environment, indicate their significance, the impact of the proposed development and identify mitigation measures, where appropriate.

More specifically the following aims have been identified.

- to collect relevant information relating to the archaeological potential of the study area;
- to assess the potential significance of any archaeological remains and the built heritage;
- to assess the impact of the proposed development on these archaeological remains and the built heritage;
- to recommend mitigation measures to offset detrimental effects of the development.

2. Methods

2.1 Study area

The study area comprises the land around the bridge and viaduct, as shown on Figures 2-6. As described below, there is enough information relating to this area to provide a sound basis for assessment.

2.2 Documentary search

Prior to fieldwork commencing a search was made of the Historic Environment Record (HER), the County Record Office and History Centre. The event reference given by the HER is WSM 40836.

The HER is a GIS system that combines information about archaeological sites and historic buildings with modern and historic maps. The staff were asked to provide 'reports' and maps relating to the study area. The most important information is summarised in the main text and shown on Figure 2.

The index to archives held at the County Hall branch of Worcestershire Record Office was searched for material relating to the study area. The search identified several archives relating to the planning and construction of the bridge. In addition, newspaper accounts of the opening ceremonies were consulted at the History Centre. Finally, some information was obtained from books and journals held by the Service, and from various internet resources.

The following sources are relevant to the study area.

Cartographic sources

- 1827 Plan of All Saints and St Lawrence and St Peters, Bengeworth (WRO ref. f989.9:151, BA 3873)
- Ordnance Survey, 1st edition, 1886, *Worcestershire, Sheet 49.3* (1:10,560; Fig 3)
- Ordnance Survey, 1904, *Worcestershire, Sheet 49.3* (1:10,560; Fig 4)
- Ordnance Survey, 1923, and 1938, *Worcestershire, Sheet 49.3* (1:10,560; Fig 5)
- Ordnance Survey, 1938, *Worcestershire, Sheet 49.3* (1:10,560)
- Ordnance Survey, 1973, *Sheet SP 04SW* (1:10,000)
- Ordnance Survey, 1973, *Plan SP 0234-0343* (1:2,500)

Aerial photographs

Worcestershire Historic Environment Record

- WR 7768 (WSM 26957)
- WR 1683 (WSM 26973)

Archives

County Record Office (Headquarters Branch)

- ref. 705:184, BA 9186/21 (i) Indenture made 3 November 1925 between (1) John Edward Rudge and and Florence Haynes-Rudge of Abbey Manor, Evesham and (2) Worcestershire County Council, conveying land for new bridge and viaduct. Includes schedule of deeds and 1:500 plan; Plates 5 and 6)
- ref. 250:1, BA 6440 (i) Nine items relating to commissioning and construction of bridge and viaduct, 1925-8. Includes report recommending ferro-concrete over steel construction; bound contract and specification; bound form of tender, bills of quantity, and schedule of prices; and tagged bundle of payments to contractors November 1925-March 1928.

Record Office (History Centre)

- *Evesham Journal and Four Shires Advertiser* for 17th, 24th, and 31st March 1928 (microfilm)

Published Sources

- Bond, C J, 1973 The Estates of Evesham Abbey: a preliminary survey of their medieval topography, in *Vale of Evesham Historical Society Research Papers* Vol. 4, 1-62
- Brooks, A, and Pevsner, N, 2007 *The Buildings of England: Worcestershire,* London: Yale University Press
- Cox, D C, 1990 The building, destruction, and excavation of Evesham Abbey: a documentary history, in *Transactions of the Worcestershire Archaeological Society*, New Series Vol. 12, 123-146
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- Department of the Environment, 1990 *Planning Policy Guidance 15; Archaeology and Planning*
- Department of the Environment, 1994 *Planning Policy Guidance 15: Planning and the Historic Environment*
- Dugdale, W D, 1846 *Monasticon Anglicanum*, Vol. 2, London
- English Heritage, 2006 *Understanding Historic Buildings: A guide to good recording practice,* Swindon
- Gaffney, V, and Tingle, M, 1989 *The Maddle Farm Project,* British Archaeological Reports, British Series, no. 200
- Geological Survey of Great Britain (England and Wales), 1974 *Sheet 200, Stratford-upon-Avon* (1:50,000)
- Hughes, J, 1990 Survey and Excavation at Evesham Abbey, in *Transactions of the Worcestershire Archaeological Society*, New Series Vol. 12, 147-200
- Institute for Archaeologists, 2008 *Standard and guidance for archaeological desk-based assessment*
- Macray, W D (ed.), 1863 *Chronicon Abbatiae de Evesham Ad Annum 1418*, London: Rolls Series
- Soil Survey of England and Wales, 1983 Midland and Western England, sheet 3, scale 1:250,000 + *Legend for the 1:250,000 Soil Map of England and Wales (A brief explanation of the constituent soil association*
- Thorn, F, and Thorn, C (eds.), 1982 *Domesday Book, no. 16: Worcestershire,* Chichester: Phillimore
- Wilks, M, 2007 *The Defence of Worcestershire and the southern approaches to Birmingham in World War II*, Wooton Almeley: Logaston Press

Internet resources

- Defence of Britain database, Archaeology Data Service, online at http://ads.ac.uk
- Listed Buildings Online, English Heritage, at http://lbonline.english-heritage.org.uk

The following unpublished sources have also been cited in this assessment.

- Dalwood, H, 1996 *Archaeological Assessment of Evesham and Bengeworth, Hereford and Worcester,* County Archaeological Service, Hereford and Worcester County Council, report 315

- Cook, M, Pearson, E, and Ratkai, S, 1996 *Excavation and salvage recording on the Evesham WRW,* County Archaeological Service, Hereford and Worcester County Council, report 390

- Goad, J, 2004 *Archaeological evaluation at Abbey Lane Bus Depot, Evesham, Worcestershire,* Historic Environment and Archaeology Service, Worcestershire County Council, report 1233

- HEAS, 2009 Historic Environment and Archaeology Service, Worcestershire County Council, unpublished document dated 9 July 2009, **P3382**

- Jackson, R, 2005 *Huntsman's Quarry, Kemerton, Worcestershire: Late Bronze Age settlement and landscape,* Historic Environment and Archaeology Service, Worcestershire County Council, report 1302

- Jackson, R, and Dalwood, H, 2007 *Archaeology and aggregates in Worcestershire: a resource assessment and research agenda,* Historic Environment and Archaeology Service, Worcestershire County Council, report 1477

- Mann, A, 2008 *Archaeological Excavation at Abbey Road, Evesham, Worcestershire,* Historic Environment and Archaeology Service, Worcestershire County Council, report 1658

- Mann, A, forthcoming *Archaeological watching brief at Clifton Quarry,* Historic Environment and Archaeology Service, Worcestershire County Council, report 1612

- Miller, D, and Darch, E, 2002 *Archaeological watching brief on the Evesham outfall sewer,* Archaeology Service, Worcestershire County Council, report 983

- Vaughan, T, 2004 *Archaeological Evaluation on land adjacent to Hampton Cemetery, Pershore Road, Evesham,* Historic Environment and Archaeology Service, Worcestershire County Council, report 1296

- Worcestershire County Council, 2006 *Worcestershire's Bridge Bid for Capital Maintenance Funding,* Environmental Services, Worcestershire County Council

2.3 Other methods

A site visit was undertaken on 1 August 2009. The area around the bridge and viaduct was inspected. Digital photographs were taken, and notes were made on a 1:2,500 Ordnance Survey map.

A detailed specification was prepared by the Service (HEAS 2009).

2.4 Results

The results are mapped on Figure 2 and the details of individual features of the historic environment are given in Appendix 1. Event records have been omitted where this would repeat information in other record types, and would not materially affect the assessment. HER references have been used throughout this assessment but during its preparation further

historic environment features have been identified (reference numbers have been allocated with the prefix HEF) and their details are given in Appendix 2.

2.5 Impact assessment criteria

The criteria cited below have been used to identify the significance of unmitigated impacts. The criteria are in keeping with Planning Policy Guidance notes 15 and 16 (DoE 1990 and 1995).

Table 1: Significance Criteria for Cultural Heritage Issues

	Severe Adverse: Loss of integrity of nationally important archaeology/cultural heritage including Scheduled Ancient Monuments, Grade I/II* registered parks and gardens and registered battlefields. Demolition of a Grade I/II* Listed Building. Dramatic adverse change in the setting or visual amenity of the feature/site.
	Major Adverse: Land take resulting in the degradation of a cultural heritage site of national importance and/or extensive change to the setting or visual amenity of such a site e.g. intrusion into the setting of a Scheduled Ancient Monument. Loss of integrity of sites of archaeological interest of regional value, or Grade II registered parks and gardens, e.g. a dramatic change in the setting or visual amenity of a regionally important site such as a Conservation Area. Widespread adverse effects on the setting or structure of a Grade I/II* Listed Building. Demolition of a Grade II Listed Building.
	Moderate Adverse: Land take resulting in the degradation of a cultural heritage site of regional importance and/or extensive change to the setting or visual amenity of such a site. Extensive change to the setting or structure of a Grade II Listed Building. Demolition of a locally listed or other historically important building. Encroachment upon a Conservation Area, historic parkland or other historic landscapes where the quality of the setting or its amenity would be noticeably impaired. Slight change to the setting or structure of a Grade I/II* listed building. Removal of a historically important hedgerow (after the Hedgerows Regulations).
	Minor Adverse: Loss of integrity of an area where archaeological features/areas of local importance have been identified. Slight change to the setting or structure of a Grade II Listed Building. Limited encroachment upon a Conservation Area or historic parkland or other historic landscape where intrusive views are created or slight effects upon its integrity would result.
	Not Significant: Landscape or ecological planting on an area where locally important archaeological features have been identified but impacts are thought to have no long term effect on the resource. Removal of common hedgerows and limited damage to important hedgerows where no replacement proposed.
	Minor Beneficial: Perceptible improvement in the setting or structure of a Grade II listed building, Conservation Area or Grade II historic parkland. Improved management of locally/regionally important archaeological site.
	Moderate Beneficial: Perceptible improvement in the setting or structure of a Grade I/II* listed building, Conservation Area or Grade I/II* historic parkland. Improved management of nationally important archaeological site.

2.6 The methods in retrospect

All available relevant sources were located and studied at an appropriate level of detail. There remains the potential for unexpected remains, and for further research on the bridge and

viaduct. However, in general, the methods adopted allow a high degree of confidence that the aims of the assessment have been achieved.

3. Context and assessment

3.1 Natural deposits

All the archaeological remains identified in this assessment will be associated with or derived from natural deposits. The nature of these deposits will also affect the preservation of archaeological remains. A brief description and assessment is therefore appropriate.

The viaduct and bridge connect the second terrace of the River Avon, on the north bank, with upper lias on the south bank (Geological Survey of Great Britain 1974). The soils developed on the second terrace are silt loams with common small to medium gravels (Mann 2008, Appendix 1; Goad 2004, 9-12). They have been classified as typical calcareous pelosols (Soil Survey of England and Wales 1983). Around the viaduct, and all along the north bank of the Avon, the terrace is overlain by alluvium. The soils formed on the alluvium have been classified as pelo-alluvial gley soils (*ibid*).

The results of previous investigations in the study area allow the effects of these conditions on archaeological remains to be assessed. Despite bioturbation and a fluctuating water-table, features on the terrace have kept their integrity and most ceramics have survived (Mann 2008; Goad 2004). Plant and animal remains are not well preserved on the terrace but survive in excellent condition on the floodplain, as observed during salvage recording opposite Avon Nurseries, just north of the study area (WSM 29584; Cook, Pearson, and Ratkai 1996).

3.2 Archaeological remains

3.2.1 Prehistoric

There is some evidence of activity in the study area before the late Bronze Age but it is very ephemeral and difficult to interpret. A small assemblage of Mesolithic or Early Neolithic flint was found during recent excavations on the west side of Abbey Road (Fig 2; WSM 37561; Mann 2008, 13). A similar flint assemblage was found a few years earlier on the other side of the Avon, next to Hampton Cemetery (Fig 2; WSM 33906; Vaughan 2004). In addition, the pottery assemblage from the Abbey Road site included a single sherd from an early Bronze Age food vessel (Mann 2008, 11 and fig. 7, no. 1). Finally, a small pit containing Neolithic, Bronze Age, or Iron Age pottery was found at the Hampton Cemetery site, only 20m from the river (Vaughan 2004, 6-7). These remains attest to a human presence in the study area over several millennia, but it is not clear whether this was occasional or frequent, or whether groups or individuals were involved. However, the evidence does at least indicate a limited potential for similar remains in the area of the bridge and viaduct.

The area was certainly settled and farmed by the 8th or 9th century BC. The excavations off Abbey Road identified a roundhouse, an earlier rectangular structure, and a scatter of pits of a type associated with grain storage (Mann 2008, 7-8). These remains were interpreted as part of a larger settlement that shifted its focus over time (Mann 2008, 21-24). Similar remains have been found at two sites in Worcestershire and elsewhere in mid and southern England (Jackson 2005; Mann forthcoming). There is therefore a definite context for late Bronze Age activity in the study area and a distinct possibility that remains of this period extend across the terrace, if not onto the floodplain.

There is also a context for Iron Age activity and associated remains. Two areas of cropmarks have been identified within the study area (Fig 2): one to the north of the Abbey Road excavation (WSM 26957), the other to the east, between the council offices and the north end of the viaduct (WSM 26973). In both cases, the cropmarks suggest a sequence of ditched

enclosures. Enclosures of this type have been identified all along the Avon and its tributaries (Jackson and Dalwood 2007, 91-94). Few have been excavated to any extent, but the results to date suggest that most of them represent small farmsteads established between the middle Iron Age and late Roman period (*c*300 BC-300AD). Indeed, as some of the pottery from the Abbey Road site would also be consistent with an early Iron Age date (Mann 2008. 9-11), it is possible that the terrace was settled and farmed throughout the late prehistoric period.

3.2.2 Roman

At least one of the enclosures noted above is conjectured to have continued into the Roman period. This inference is supported by the small amounts of Roman pottery and tile found on the Abbey Road site (Mann 2008, 9 and 15). Similar quantities have been found in earlier investigations to the north and west (Fig 2, WSM 29585 and 31620), and on the site of Evesham Abbey (Fig 2, WSM 6005 and 32766). Larger amounts of Roman material have also been observed in the fields to the south of the abbey (Fig 2; WSM 9222). This material probably represents manuring with domestic refuse and muck. As shown elsewhere, in Roman and later contexts, fields manured in this way were usually near settlements and intensively cropped (e.g. Gaffney and Tingle 1989). There is therefore some potential for Roman remains around the bridge and viaduct. In addition, it is considered possible that there was a Roman ford on the site of Abbey Bridge, and a track leading northwards more or less on the line of Abbey Road. This inference can be drawn from two observations: the apparent antiquity of the A4184 Cheltenham Road, at least from Hinton-on-the-Green to Abbey Bridge, and the suggestion by Bond (1973, 44) and Dalwood (1996, 7) that Littleworth Street, Briar Street, and Worcester Road in Evesham represent a pre-urban route.

3.2.3 Post-Roman and Anglo-Saxon

There is very little evidence relating to the study area in the post-Roman and Anglo-Saxon periods. However, it probably continued to be settled and farmed, notwithstanding evidence for demographic and agrarian decline elsewhere. A degree of continuity is suggested by the 7th century burials found across the river Avon in Little Hampton (now Fairfield) in 1862 (Fig 2; WSM 41425). Although the exact location of the cemetery is uncertain, and details are few, its very existence implies a local farming community. Moreover, it is likely that the site of Evesham Abbey was a magnate residence before the monastery was founded in 706, and that the 50 hides that formed the core of the monastic estate in 1086 were granted with the site (Cox 1975). Nevertheless, it seems that the area was untenanted farmland by the late Anglo-Saxon period. This is indicated by the Domesday survey of 1086 (Thorn and Thorn 1982, 10,1), which records three ploughs (representing about 300 acres of arable land) and 20 acres of meadow in demesne (i.e. reserved for the use of the abbot and convent). The study area probably contained some of the arable land and most of the meadow. There is therefore some potential for post-Roman and Anglo-Saxon remains, especially on the terrace.

3.2.4 Medieval

Unfortunately, there is little information relating to the study area in the medieval period, apart from a few references in the so-called Chronicle of Evesham, and a few documents produced at the Dissolution. It remained in demesne, inside the wall commissioned by Abbot de Chyryton in the early 14th century (Macray 1863, 292; Fig 2, WSM 2821). The same abbot was remembered for planting trees ‘in the outer orchard opposite Hampton’ (Macray 1863, 292-3), and he may well have created the 30-acre park recorded in a description of the demesne made in 1540 (Dugdale 1846, 43; Bond 1973, 41-2). Although the description does not specify its location, it probably covered most of the land to the west of Abbey Road, excluding the floodplain. The land to the east seems to have been divided between pasture closes and orchards, while the floodplain was enclosed meadow. All this indicates a limited potential for medieval remains within the development area

3.2.5 **Post-medieval**

The development of the study area between 1540 and 1800 has not been researched in detail. It is not considered that such research would be suitable for the project at this stage, as no detailed local maps were made in this period and the deeds that might provide some information are scattered among many different deposits. Moreover, it seems that that the main change in this period was the felling of the trees in the park. In all likelihood, the landscape of the 17th and 18th centuries was little different to that shown on the earliest detailed map of 1827 (WRO ref. f989.9:151, BA 3873) and the 1:10,560 Ordnance Survey map of 1886 (Fig 3). According to these maps, the only features in the area of the bridge and viaduct were field boundaries. The remains of these features are not considered to be of archaeological significance.

3.2.6 **Modern**

The Ordnance Survey 1:10,560 maps published in 1886, 1904, and 1923 are reproduced as Figures 3-5. They show considerable changes across the study area (notably the growth of the sewage treatment works), but none in the immediate area of the bridge and viaduct. The maps of 1925 and 1938 (Plates 5 and 6; Fig 6), show the bridge, viaduct, Abbey Road, and several buildings north of Abbey Lane. More recent developments in the area have included the construction of a car park and link road on the east side of the viaduct, and a toilet on the west side. The construction of Abbey Road and the road to the car park will certainly have truncated the remains indicated by cropmarks in this area (Fig 2). Given the potential for associated remains identified above, the other developments may also have taken their toll. In particular, the construction of the viaduct clearly involved both ground reduction and extensive piling (Plate 4).

3.2.7 **Undated**

One of the cropmarks on the east side of Abbey Road appears to indicate a rectangular stone-founded building at least 22m long by 18m wide (Fig 2; WSM 29673). It is clearly an ancient feature, but at present, it is impossible to infer its date or function. It could be Roman, and related to the other evidence discussed above (but not necessarily to the adjacent cropmarks). Alternatively, it could be medieval, and related to the demesne or park. It is most unlikely to be post-medieval, although the possibility cannot be ruled out. Its location at the northern end of the viaduct suggests that it could be affected by the proposed development. It is also likely that such a large and clearly significant building stood within a plot or courtyard. Here, as elsewhere, the cropmarks only serve to indicate a small portion of what may lie beneath the surface.

3.3 Built heritage

The following sections are based on appendix 4 of Worcestershire County Council's *Bridges Bid for Captial Scheme Funding* (WCC 2006), articles in the *Evesham Journal and Four Shires Advertiser* for 1928, and County Council archives (WRO ref. 250.1, BA 6440): Other information has been added from published sources (Brooks and Pevsner 2007; Wilkes 2007) online databases (Defence of Britain database and Listed Buildings Online), and first-hand observation.

3.3.1 **Bridge**

The bridge was designed in 1925 by B C Hammond, who at that time was assistant to the County Surveyor, G.F. Gittings (Plates 5 and 6). It was built over the next two years by Thomas Vale and Sons of Stourport and opened on 29 March 1928 by Wilfred Ashley, the Minister of Transport from 1924 to 1939. It cost a total of £40,600, £26,390 of which was supplied by a grant from the Ministry of Transport. The rest was raised by Worcestershire County Council and the Evesham Corporation.

The bridge is made of reinforced concrete (ferro-concrete). It has a single span of 110 feet (35.5m) and two parallel arches of bowstring form (Appendix 3, Photographs 1 and 2). These are connected by vertical ties to a road deck with eight cross beams. The bridge is 42 feet (12.8m) wide, carries two lanes of traffic, and has two sidewalks for pedestrians. Other features include the rectangular piers topped with obelisks at the corners of each abutment, the steps on both sides of the north abutment, and the ironwork that forms the parapet on both sides. The piers were once fitted with electric lamps, and for a time there was an illuminated signpost at the junction of Pershore Road, Waterside, and Cheltenham Road.

Between 1940 and 1942, the bridge was provided with sockets and concrete blocks to serve as anti-tank barriers in the event of the expected German invasion (Fig 2, HEF 1 and HEF 2). There were also pillboxes on both sides of the south abutment (HEF 3 and HEF 4), a sandbagged defence post at the north end of the bridge (HEF 5), and an anti-tank gun emplacement on the west side of the viaduct (HEF 6). The sockets for the road blocks were exposed and probably removed during resurfacing work in the 1990s. Concrete cylinders forming part of the western pillbox (HEF 3) were photographed in 1998 (Wilkes 2007, 70). They may or may not survive today behind impenetrable trees and shrubs. Until 2005, the bridge carried all kinds of traffic, but a Principal Inspection in 2004-5 showed that the cross beams, deck slab, and parapet edge beams were sub-standard, and a weight restriction of 7.5 tonnes was imposed.

With regard to the architectural significance of the bridge, more research would be needed to establish its intrinsic value and its relationship to contemporary bridges in Worcestershire and the West Midlands. However, it can be said that the bridge received fulsome compliments when it was opened in 1928, and that the new edition of Pevsner's *Worcestershire* describes it as ' a notable ferro-concrete period piece' (Brooks and Pevsner 2007, 68-9). It is one of five bridges singled out for special comment, the others being Stanford Bridge (1905), Upton-upon-Severn (1933), and Knightsford Bridge (1956-8). It is not listed, but only a few concrete bridges of this period are (e.g. Wisbech Town Bridge), reflecting an ongoing and largely reactive process.

3.3.2 Viaduct

The viaduct and bridge were designed and built together. The viaduct begins at the north abutment and continues northwards for 486 feet (148m). Like the bridge, it is made of reinforced concrete. It is raised to a maximum height of 8 feet (2.4m) above the surface on two rows of piles (Appendix 3, Photographs 3 and 4). These support the road deck, while the sidewalks are carried on cantilevers. It is a composite structure, however, made of four sections of equal length. In keeping with the bridge, it has posts and iron fences, and the posts at the end of each section are larger and topped with obelisks.

Between 1940 and 1942, there was a sandbagged defence post at the north end of the viaduct (Fig 2, HEF 7). The viaduct was inspected along with the bridge in 2004-5 and is subject to the same weight restriction.

As with the bridge, more research would be needed to establish the architectural significance of the viaduct. However, it might be seen as a rare example of its type and period, at least in Worcestershire, and especially since the demolition of the near-contemporary viaduct at Upton-upon-Severn in 2004-5.

4. Potential impacts

The current plan proposes the full replacement of the bridge and viaduct. In view of the comments made above, this impact is considered to rate as **moderate adverse** (i.e. involving the demolition of an historically important structure).

The first and potentially most significant impact on archaeological remains would result from removing the existing foundations. In particular, the removal of the concrete piles of the viaduct might well affect any remains in this area, truncating or removing them completely.

The second impact would result from the construction of the new bridge and viaduct (including the works compounds, the construction of a temporary road and river crossing). At present, it is uncertain what this might mean in terms of groundworks, but any scheme is likely to involve both ground reduction and piling. These operations would certainly have an **adverse** effect on any remains.

If well-preserved remains of late prehistoric, Roman, or medieval date were present, both impacts would rate as **major adverse** (i.e. involving a loss of integrity to an archaeological site of regional value). In view of their rarity, the same rating would apply to any remains of post-Roman or Anglo-Saxon activity.

5. Mitigation and recommendations

The only way of mitigating the replacement of the bridge and viaduct would be to record the existing structures. In the light of the comments made above, an analytical rather than merely descriptive record is considered to be appropriate, corresponding to English Heritage record levels three or four (English Heritage 2006, 14). It may also be appropriate for some recording to take place during demolition, to gain a better understanding of construction methods and materials, and to identify any extant hidden remains of WWII defensive structures.

At present, it is not possible to propose any mitigation strategy in relation to archaeological remains. The only known remains in the immediate area of the proposed development are those of the undated building at the north end of the viaduct. The presence of other remains is considered very likely, both here and further to the south, but this needs to be demonstrated before any assessment can be made of their significance, and of how best to mitigate the impacts described above.

What can be proposed, however, is an appropriate form of field evaluation. Ideally, this would involve trenches on both sides of the viaduct to test for inferred remains, and shorter trenches at either end to establish the depth of ground reduction (and therefore whether any remains are likely to have survived). Depending on the scheme of the proposed development, it may also be appropriate to locate trenches within the site of the temporary bridge. This would also add information on the alluvial sequence and associated organic remains.

6. Publication summary

The Service has a professional obligation to publish the results of archaeological projects within a reasonable period of time. To this end, and unless directed otherwise, the Service intends to use the following summary in appropriate local or regional journals.

A desk-based assessment was undertaken on behalf of Halcrow Group Ltd of Abbey Bridge and Viaduct, Evesham, Worcestershire (centred on NGR SP 034 431; HER ref. WSM 40836).

The assessment analysed information relating to archaeological remains in the vicinity, including reports on previous investigations, aerial photographs, and archives. On this basis, it is considered that remains of late prehistoric and Roman settlement may be adversely affected by the development. It is recommended that a field evaluation be undertaken to establish whether such remains are indeed present. The assessment also addressed the architectural significance of the bridge and viaduct themselves. They were designed and built together in the late 1920s by the County Surveyor, B C Hammond, the contractors being Thomas Vale and Sons of Stourport. Neither structure is listed, however the bridge has been

described in the latest edition of Pevnser as 'a notable ferro-concrete period piece'. The assessment recommended that that both structures be recorded before demolition.

7. Acknowledgements

The Service would like to thank the following for their kind assistance in the successful conclusion of this project, Tony Rich (Halcrow Group Ltd) and Mike Glyde (Historic Environment Planning Advisor, Worcestershire County Council).

8. Personnel

The assessment was undertaken by Darren Miller. The project manager responsible for the quality of the project was Tom Vaughan. The illustrations were prepared by Carolyn Hunt.

Appendix 1 Selected features recorded in Worcestershire Historic Environment Record (Fig 2)

Reference number and status	Name	National Grid reference	Record type	Date	Description
SAM 253	Evesham Abbey	SP 03765 43656	Scheduled Ancient Monument	*c*706-1540	Site of church and conventual buildings
WSM 572	Fishpond	SP 03697 43450	Monument	1160-1229	Lowest in chain of three fishponds
WSM 573	Fishpond	SP 03794 43531	Monument	1160-1229	Middle in chain of three fishponds
WSM 2821 & SAM 221	Abbot Chyryton's wall	SP 03142 43656	Scheduled Ancient Monument	1316-1344	Part of wall around abbey precinct
WSM 6005	Abbey precinct and enclosure	SP 03677 43626	Activity	*c*1540-1950	Excavation of 11 sample trenches, 1987-8
WSM 9922	Fields south of Abbey Park	SP 03717 43366	Activity	Roman	Observations and metal-detecting after ploughing, 1990
WSM 29584	Land opposite Avon Nursery	SP 03036 43894	Activity	Post-medieval and modern	Salvage recording during sewerage works, 1994
WSM 29585	Abbot Chyryton's wall	SP 03010 43650	Activity	13/14-20th C	Salvage recording during sewerage works, 1994
WSM 29657	Land west of Abbey Road	SP 03205 43566	Monument	Iron Age/Roman	Cropmarks of enclosure and field ditches
WSM 29673	Land south-west of Evesham Abbey	SP 03464 43355	Monument	Roman/Medieval	Negative cropmarks of enclosure and field ditches; positive cropmark of stone walled structure
WSM 31620	Abbot Chyryton's wall	SP 03195 43665	Activity	Roman, post-medieval and modern	Watching brief on sewage works, 2002
WSM 32766	Abbey Gate	SP 03622 43335	Activity	Roman, medieval, post-medieval and modern	Excavation of three sample trenches and test-pits, 2003
WSM 33543	Abbey Lane Bus Depot	SP 03422 43521	Activity	Post-medieval and modern	Excavation of three sample trenches, 2004
WSM 33906	Land adjacent to Hampton cemetery	SP 03009 43127	Activity	Prehistoric and medieval	Excavation of three sample trenches, 2004
WSM 41425	Anglo-Saxon cemetery at Little Hampton	SP 028 431 to 430 034	Monument	AD *c*600-700	Burials and grave goods discovered in 1862

Appendix 2 Additional features of the Historic Environment (Fig 2)

Reference number	National Grid reference	Record type	Date	Description	Source
HEF 1	SP 03390 43130	Monument	1940-1942	Anti-tank road barrier	Wilkes 2007, 122-3
HEF 2	SP 03395 43095	Monument	1940-1942	Anti-tank road barrier	Wilkes 2007, 122-3
HEF 3	SP 03385 43090	Monument	1940-1942	Pillbox	Wilkes 2007, 70 and 122-3
HEF 4	SP 03405 43095	Monument	1940-1942	Pillbox	Wilkes 2007, 122-3
HEF 5	SP 03390 43140	Monument	1940-1942	Sandbagged defence post	Wilkes 2007, 122-3
HEF 6	SP 03355 43175	Monument	1940-1942	Anti-tank gun emplacement	Wilkes 2007, 122-3
HEF 7	SP 03405 43290	Monument	1940-1942	Sandbagged defence post	Wilkes 2007, 122-3

Appendix 3 Plates

Plate 1: View north-west of the bridge from the south bank

Plate 2: West arch, vertical ties, piers and the iron parapet

Plate 3: View north-east of the viaduct from the footpath

Plate 4: Piles and deck slab of the viaduct, view north from the north abutment of the bridge

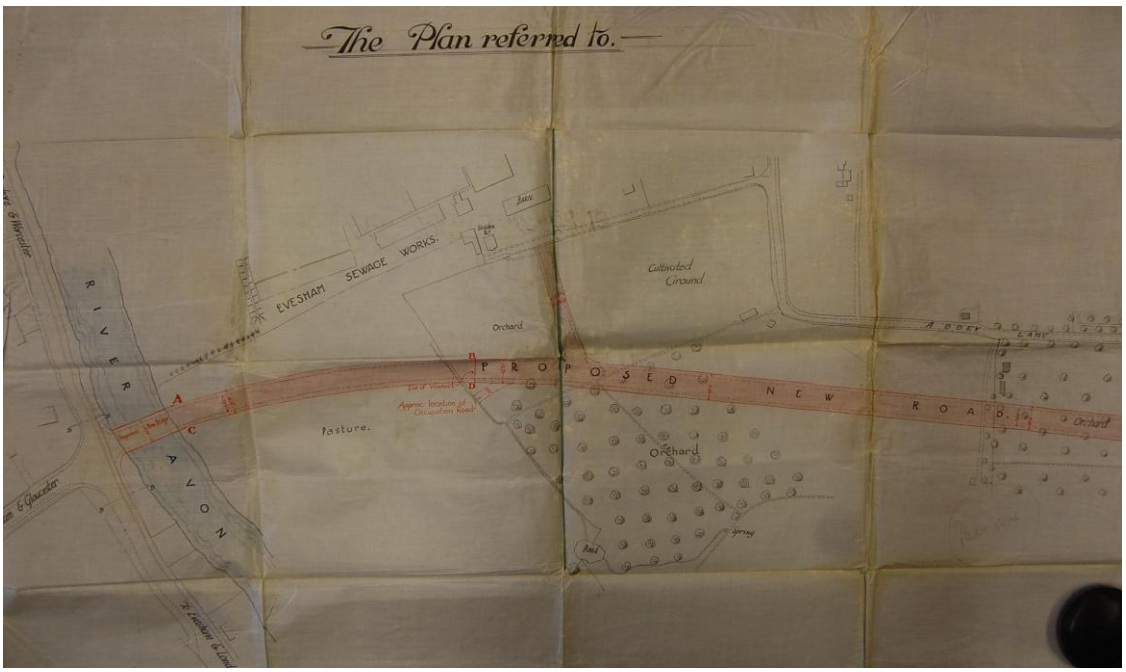


Plate 5, South portion of the map accompanying an indenture, dated 3 November 1925 (WRO 705:184, BA 9186/21)

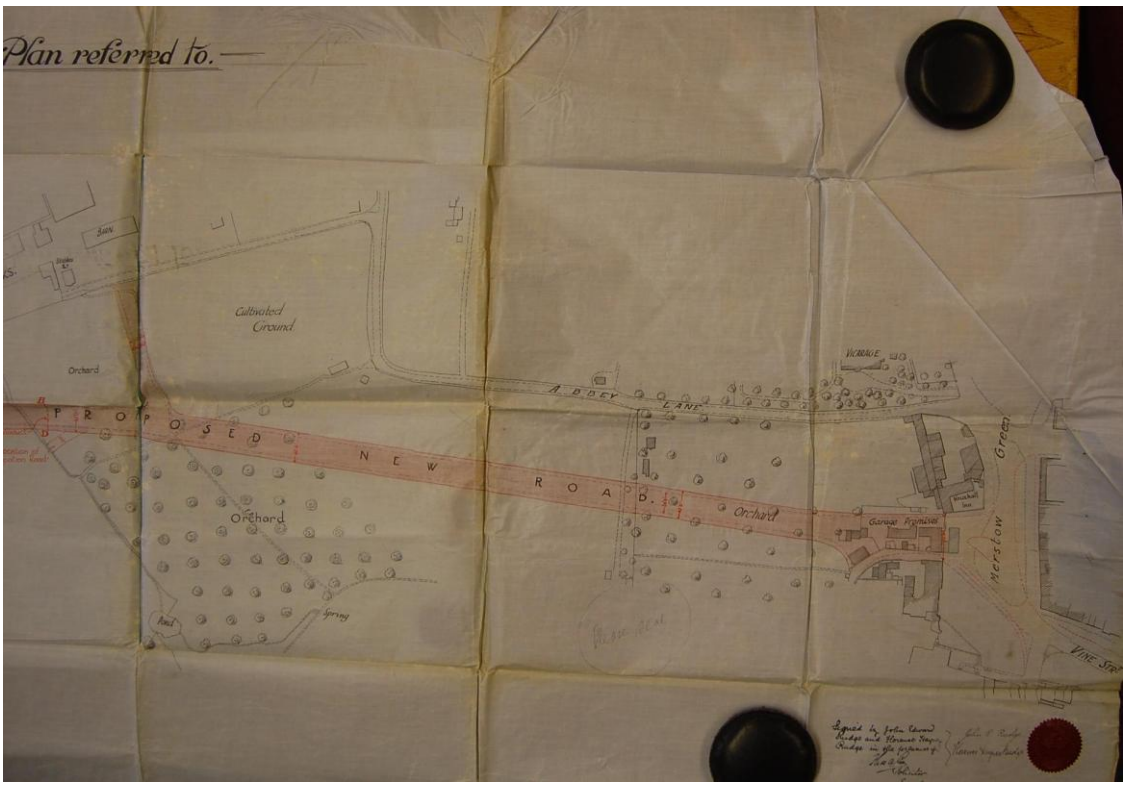
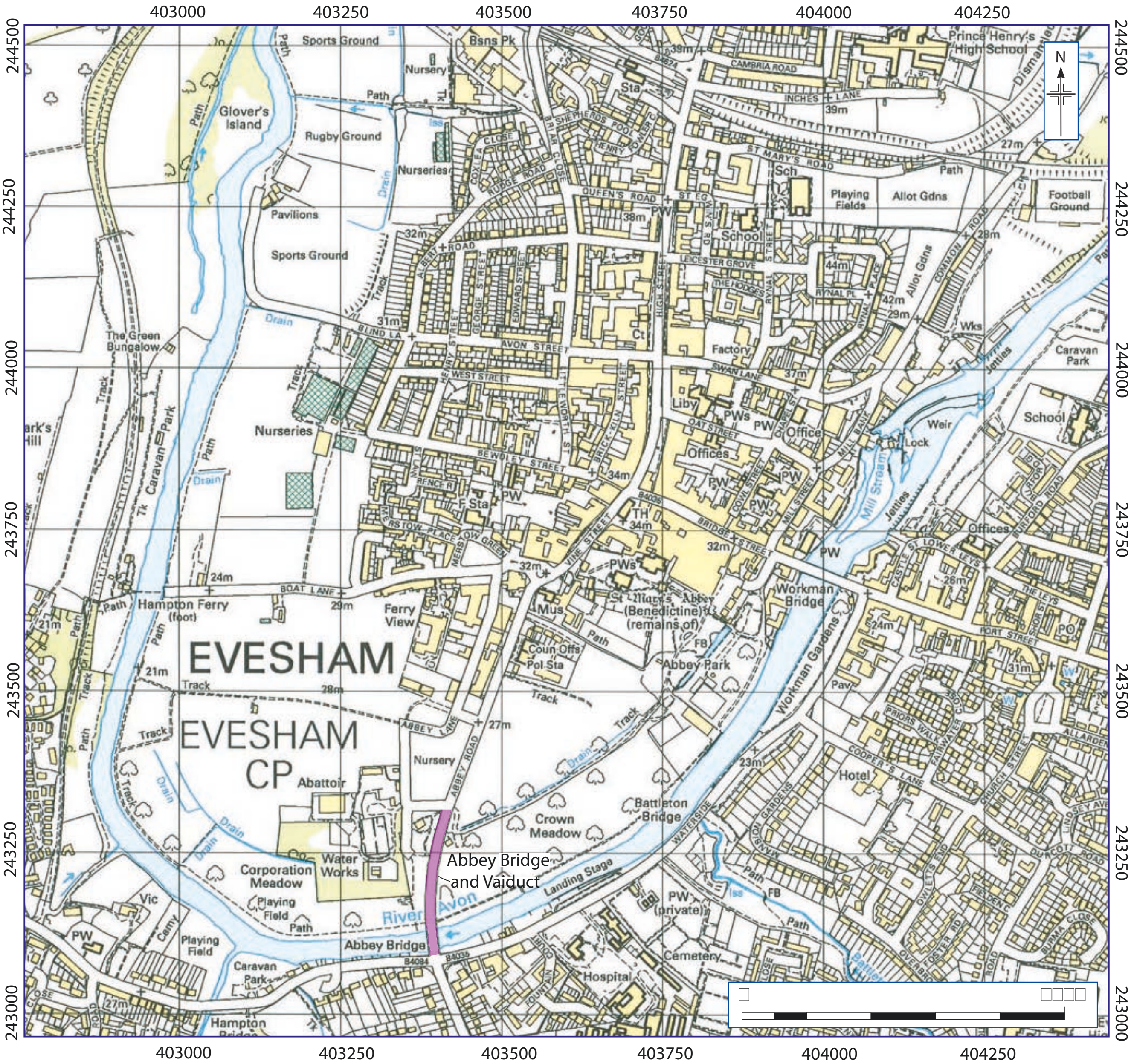


Plate 6, North portion of the map accompanying an indenture, dated 3 November 1925 (WRO 705:184, BA 9186/21)

Worcester
EVESHAM



403000
403250
403500
403750
404000
404250
244500
244250
244000
243750
243500
243250
243000
N
EVESHAM
EVESHAM CP
Abbey Bridge and Vaiduct
River Avon
Abbey Bridge
Workman Bridge
Crown Meadow
Abbey Park
Hampton Ferry (foot)
Corporation Meadow
Water Works
Glover's Island
Sports Ground
Rugby Ground
Nurseries
Hospital
Cemetery
Prince Henry's High School
Mill Stream

N

Watching Brief
WSM 31620

WSM 29585

Abbot Chyryton's Wall
WSM 2827, SAM 221

WSM 6005

WSM
32766

site of Evesham Abbey SAM 253

Salvage Recording

cropmarks
WSM 26957

Evaluation
WSM 33543

site of
fishpond
WSM 573

site of fishpond
WSM 572

WSM 26973

Excavation
WSM 37561

metal detecting
WSM 9922

sandbagged defence
post HEF 7

sandbagged defence
post HEF 5

gun emplacement HEF 6

roadblock HEF 1

roadblock HEF 2

pillbox HEF 3

pillbox
HEF 4

WSM 41425?

WSM
33906

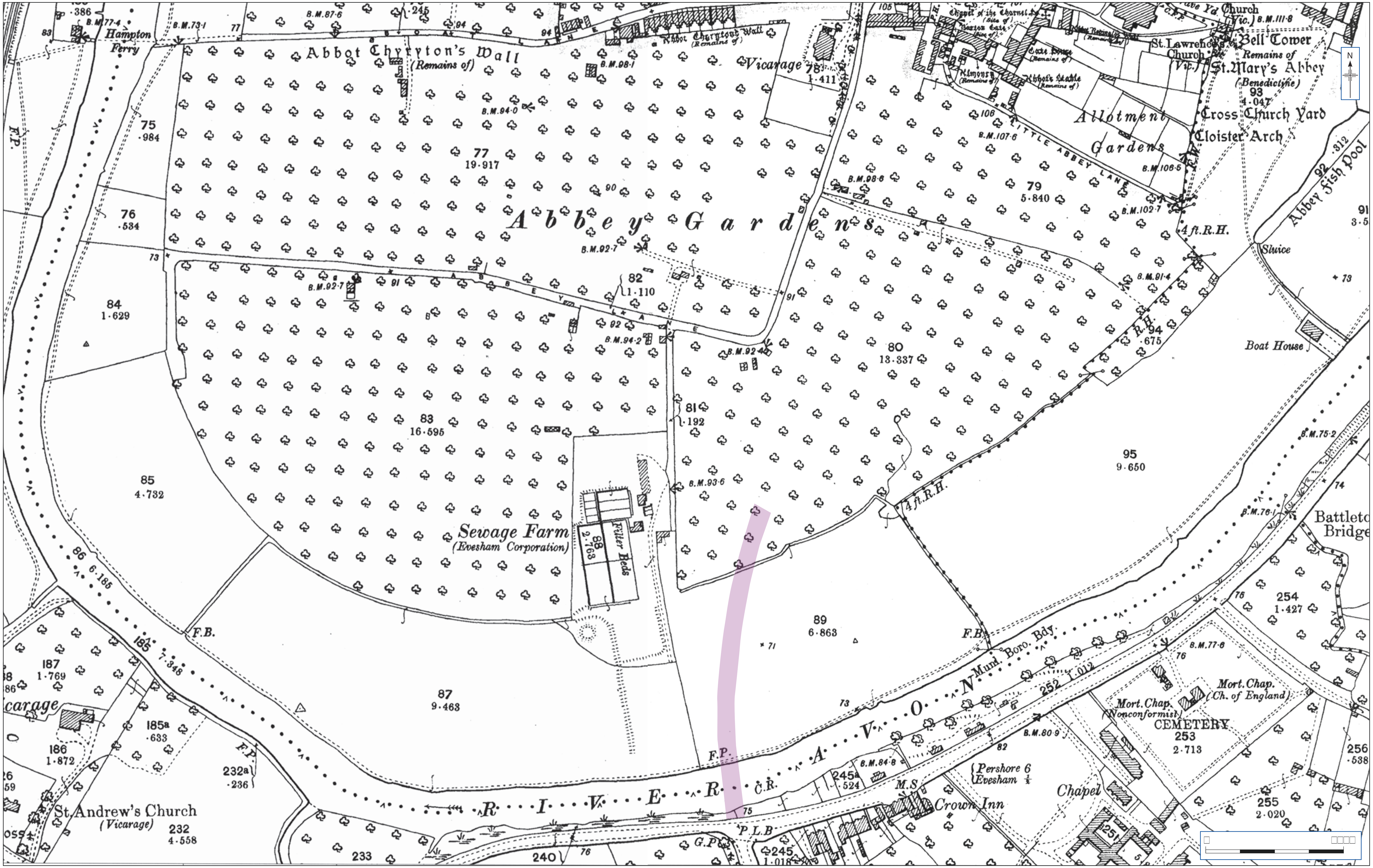
Excavation

WSM 41425?

30m
25m
35m

KEY
contours
cropmarks
monuments
activities
sites of
WWII defences

0 100m



Hampton Ferry
Abbot Chyryton's Wall
(Remains of)
Abbot Chyryton's Wall (Remains of)
Vicarage
Chapel of the Charnel
Almonry (Remains of)
Abbot's Stable (Remains of)
Bell Tower
St. Lawrence's Church (Vic.)
Church (Vic.)
St. Mary's Abbey (Benedictine)
Allotment Gardens
Little Abbey Lane
Cross Church Yard
Cloister Arch
Abbey Fish Pool
Abbey Gardens
Abbey Lane
Sluice
Boat House
4 ft. R.H.
Sewage Farm
(Evesham Corporation)
Filter Beds
F.B.
F.P.
River Avon
Mun. Boro. Bdy.
Battleton Bridge
Mort. Chap. (Ch. of England)
Mort. Chap. (Nonconformist)
CEMETERY
Pershore 6
Evesham ¼
Chapel
Crown Inn
M.S.
P.L.B.
G.P.
St. Andrew's Church
(Vicarage)
Vicarage
77
19·917
80
13·337
83
16·595
85
4·732
87
9·463
89
6·863
95
9·650