



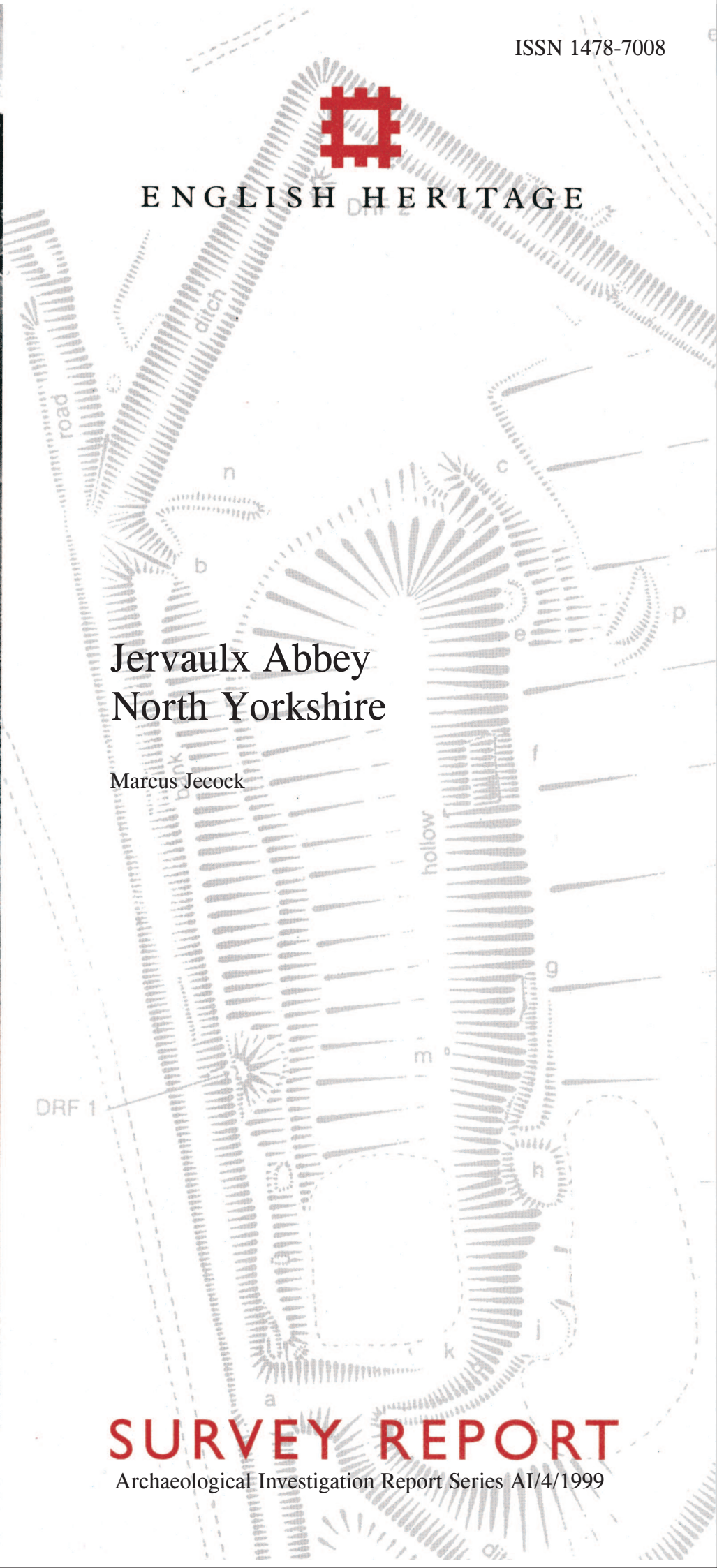
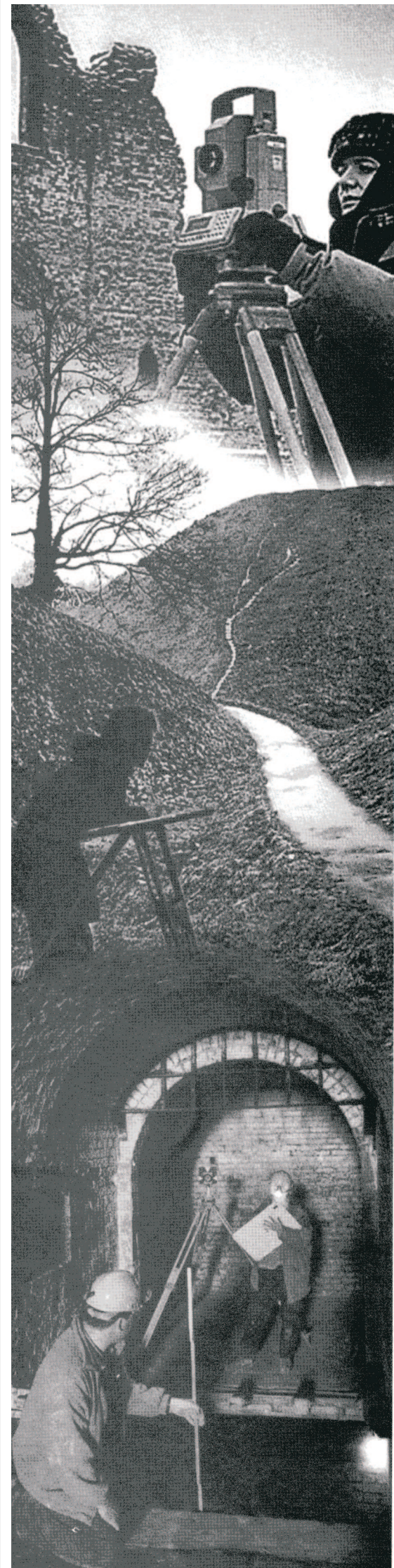
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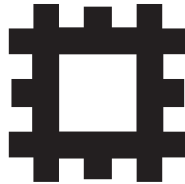
Jervaulx Abbey
North Yorkshire

Marcus Jecock

SURVEY REPORT

Archaeological Investigation Report Series AI/4/1999





JERVAULX ABBEY NORTH YORKSHIRE

Archaeological Investigation Report Series AI/4/1999

**NMR Nos: SE 18 NE 1, 5, 122-3 and 139-201
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1. INTRODUCTION

The ruins of the church and claustral ranges (the conventual buildings) of the medieval Cistercian abbey of Jervaulx (NMR No. SE 18 NE 1) are situated in Wensleydale, North Yorkshire, close to the north-west corner of Jervaulx Park which was laid out around them in the early-19th century. The ruins themselves are a scheduled ancient monument, but are surrounded by dense and complex earthworks never previously recorded in detail. This report presents the results of an archaeological survey of these earthworks carried out by the Royal Commission on the Historical Monuments of England (RCHME) between May 1998 and January 1999. The survey, which encompassed a total of some 33ha at the western end of the Park, and included the production of a new plan of the ruins (although without any fresh analysis of the fabric or constructional history of the abbey) was undertaken for management purposes at the request of English Heritage.

The survey has identified for the first time the likely area of the abbey precinct, and has also produced evidence for the sites of a number of buildings, fishponds, roads and other features which are likely to be contemporary with it. In so doing, it has called into question the hitherto accepted wisdom that ruins incorporated into a 19th-century building now known as 'The Old Gatehouse' are in fact those of the main gatehouse of the abbey. The survey has also shown that while the conventional identification of the site of the abbey mill at the northern edge of the Park is in all likelihood correct, the area has been heavily landscaped which must cast some doubt over whether the extant ruins are those of the medieval mill rather than a romantic feature contemporary with the later landscaping.

The survey has also produced evidence for features pre- and post-dating the abbey. The earliest is a series of denuded lynchets probably forming part of a rectilinear field system of prehistoric or Romano-British date, succeeded in the century or so before the foundation of the abbey in 1156 by a system of strip lynchets, ridge-and-furrow ploughing and local roads. Features later than the abbey include the remains - or at least sites - of a number of post-medieval tenanted farm complexes together with their associated access roads and field boundaries, succeeded in turn by features contemporary with the laying out of Jervaulx Park in the early-19th century. Ten small earthwork enclosures have also been found which indicate that in the Second World War, Jervaulx Park was used for ammunition storage by the Royal Air Force.

However, perhaps the chief discovery has been the identification by the survey of the earthwork remains of a previously unrecognised post-Dissolution grand house and garden overlying the site of the abbey and its precinct. Although no research has been undertaken to look for surviving documentary evidence, what little evidence is readily available suggests that both house and garden were the creation of Matthew, Earl of Lennox, between 1544 and 1577, and/or his heir, James VI of Scotland, the future James I of England. In any event, although conceived on a grand scale - the formal element alone of the gardens covers at least 8ha and includes water features, pavilions and gazebos - the house and gardens lasted no more than 80 years, and can be shown to have been abandoned before 1627.

2. SITE LOCATION, GEOLOGY, TOPOGRAPHY AND LAND USE

Jervaulx is now a small hamlet (National Grid Reference SE 169 857) situated respectively some 5km south-east and 7km north-west of the historic small market towns of Middleham and Masham in Wensleydale, North Yorkshire (Fig. 1). Below Middleham, Wensleydale runs generally in a south-easterly direction, but at Jervaulx it turns and for a few kilometres heads almost due east. The dale is heavily glaciated, and here consists of a broad alluviated floodplain up to 1km wide with fairly gently sloping valley sides, although to the south these later steepen as they rise up onto high moorland at over 300m above Ordnance Datum.

The ruins of the conventual buildings of Jervaulx Abbey lie on the southern side of the dale at SE 1717 8575 within what is now Jervaulx Park. They are situated at *c* 100m above OD almost in the bottom of the valley just above the floodplain of the River Ure. The underlying geology is Carboniferous limestone, comprising Namurian rocks of Millstone Grit facies, but these are masked in the valley bottom by alluvium and on the dale sides by substantial drift deposits of glacial origin (British Geological Survey 1985a; 1985b). The conventual buildings lie immediately south of a sinuous glacial ridge (esker) which marks the transition from valley-floor alluvium to dale-side drift deposits. Further east within the modern Park this broadens out into an area of rounded hills called locally the Wind Hills. In consequence the drainage pattern within the Park is impeded. Water from a series of springs at *c* 110m above OD on the gently-rising dale side to the south of the ruins seems originally to have drained north-eastwards into the Ure via a small break between the esker and the Wind Hills. The head of a small valley lies in the extreme south-west corner of the Park, but in the absence of any visible remnant stream channel running from it through the area behind the esker, the probability is that the lowest-lying ground here would formerly have been bog. These areas are today underdrained, but are still prone to waterlogging after heavy rain. The small valley was dammed by the abbey, which used the springs as its principal water supply (see section 6.2.4 below). They are now the source of the water supply to the majority of properties within the hamlet of Jervaulx.

After the dissolution of the abbey in 1537, the abbey buildings and surrounding area were by 1627 divided up into a series of rented farms and closes. At the beginning of the 19th century, however, the estate was re-integrated and laid out as the present parkland with the buildings at its north-west corner forming the residence and estate offices for the then owner, Lord Ailesbury, and his steward. It was at this time that the ha-ha enclosing the main abbey ruins was created. The estate has changed hands twice since, and latterly Jervaulx Hall functioned as a hotel. The Hall has subsequently been subdivided and sold off, and together with a strip of land along the north edge of the Park now forms three private residences known as Jervaulx Hall, The Old Hall, and The Old Estate Yard, all in separate ownerships. The former estate office, alias The Monastery/Old Gatehouse, is also now in separate private ownership. The main abbey ruins are open to the public, whilst the remainder of the Park is rented out as pasture for sheep, cattle and horses.

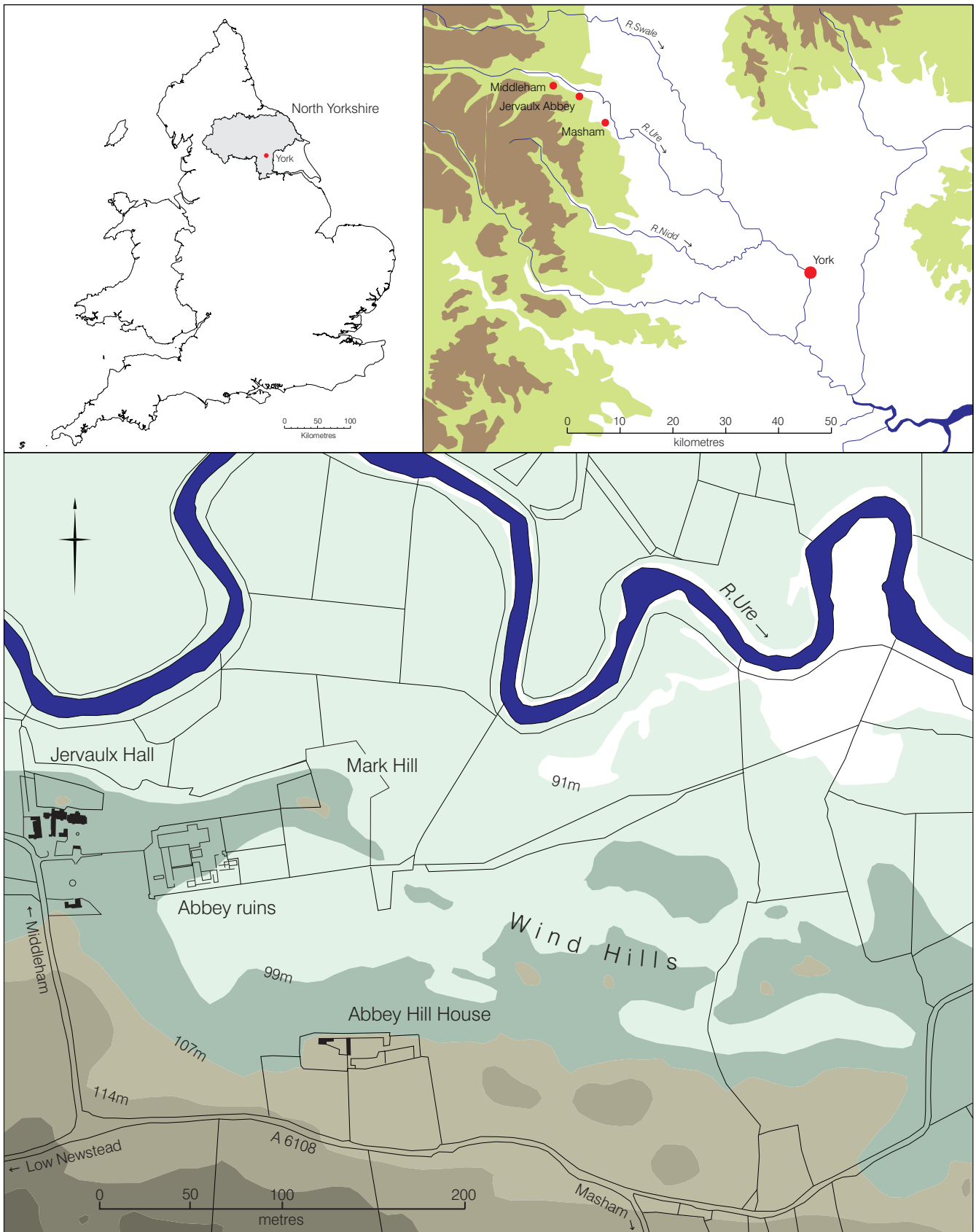


Figure 1. The location of Jervaulx Abbey.

3. BACKGROUND TO SURVEY

In early 1997 English Heritage asked the Newcastle upon Tyne office of the RCHME to survey the ruins of the conventual buildings of Jervaulx Abbey together with the earthworks surrounding them in what is now Jervaulx Park. The ruins, the site of the alleged abbey mill to the north, land around a house to the west known as The Old Gatehouse (which incorporates medieval fabric), plus a small part of the earthworks immediately around the main conventual area are a Scheduled Ancient Monument, county number North Yorkshire 7 (English Heritage 1992; 1996, 40), while the abbey ruins and The Old Gatehouse are also Grade I listed buildings (DoE 1985, 4-5). The survey was primarily needed to assist in the conservation and management of these remains, but would also tie in with proposals to publish a monograph on the site containing the results of an on-going English Heritage programme to record and consolidate the ruins allied with research into the site's documentary history. Following delays caused by negotiations over the precise area and scale of survey, and by the closure of the RCHME's Newcastle office, the work was eventually carried out in stages between May 1998 and January 1999 by archaeology staff from the RCHME's York office.

The objectives and methodology of the survey were agreed by the RCHME and English Heritage in a project design drawn up before work started (Ainsworth 1998). This may be summarised as follows: first, all features within the area currently open to the public (*ie* the main conventual ruins) plus an additional area to the north around the remains of the alleged mill were to be surveyed at 1:500. However, although the RCHME would record and interpret earthworks in this area, the standing fabric of the ruins would be recorded in plan only with no attempt to re-analyse or comment upon the building sequence; second, the remainder of the western end of Jervaulx Park (which before work commenced was thought probably corresponded to the area of the original monastic precinct) was to be surveyed at the smaller scale of 1:1000. Once survey was underway, however, the RCHME expanded slightly the originally agreed area to north and east to include newly-recognised features which were important to a fuller understanding of the nature and history of the precinct area, whilst a small paddock in the south-east corner was excluded since it was found to belong to the owners of Abbey Hill House.

The results of the 1:500 survey have been reduced and where necessary simplified to produce a composite plan at 1:1000 of the whole area. The 1:500 survey exists as a digital file, but the 1:1000 plan is hand drawn and exists as hard copy only.

4. HISTORY OF RESEARCH

Before the present RCHME survey, archaeological investigation of Jervaulx Abbey has focused almost exclusively on the ruins of the conventual buildings, with very little attempt to examine the wider monastic precinct within which these ruins lie.

Jervaulx holds an important place in the history of monastic archaeology, for it was one of the first ruined abbeys to be cleared of fallen masonry and to have its conventual ground plan properly revealed. In 1804 John Claridge, steward to the then owner, the Earl of Ailesbury, persuaded his employer to convert the old hall at Jervaulx into an occasional residence and to make Jervaulx the administrative centre of the Ailesbury estates in western Yorkshire. The growing interest of Lord Ailesbury in his Jervaulx property led him to authorise the clearance of the ruins between 1805 and 1807. The work was carried out by Claridge, and although not up to the standards of modern archaeology, was nevertheless exceptional when judged against the standards of the day for the detail of the records that were made (Coppack 1990, 18-19; Davison 1998). These included a plan of the church showing the position of *in situ* floor tiles, a later copy of which survives in the Yorkshire Museum (Coppack 1990, colour plate 8).

A century later in 1905 further excavations were carried out, and a complete plan and account of the surviving masonry published (Hope and Brakspear 1911). However, monastic archaeology at this time was still primarily concerned with establishing the conventual ground plan: digging was only directed toward locating buried walls, and did not attempt to recover contextual or stratigraphic information relating to the use of buildings or economic functioning and development of the site. Fragmentary remains of additional buildings were unearthed along the southern and western sides of the ruins, cut through by the 19th-century ha-ha. Unsuccessful efforts were made to trace a continuation to one of these truncated buildings - a possible kitchen block discovered at a skew angle south of the monks' reredorter or latrines (*ibid*, 329) - but in the main investigation seems to have been confined to within the area of the ha-ha.

The published account deals in a very general way with other structures that might once have stood away from the conventual area, and mentions only in passing that there are fragments of two medieval buildings still standing within the presumed area of the precinct at Jervaulx. The authors offer no suggestion for the function of one of these whose ruins are incorporated within a later building then used as the estate office (alias The Monastery/Old Gatehouse), but relate the local tradition of the other set of ruins to the north of the conventual area being those of the abbey mill (*ibid*, 308-9). The former has subsequently been variously identified as a gatehouse, first by Pevsner (1966, 205) but followed in this by the Historic Buildings Register (DoE 1985, 5), or as a guesthouse (quoted dubiously by Coppack in Robinson 1998, 129). The tradition of the latter ruin being the remains of the abbey mill has been frequently repeated in print as if proven fact, but seemingly without any attempt to verify the ascription by actual examination of the physical evidence (*eg* Page 1914, 280-1; Luckhurst *nd*, 18; Coppack in Robinson 1998, 129).

Before the present survey, the precise boundaries of the precinct at Jervaulx were unknown. Hope and Brakspear stated that there was no surviving trace of the

boundary wall or bank which would normally be expected, but thought that the sharp right-angled turn in the course of the modern A6108 road at the south-west corner of the Park (Fig. 1) was caused by the former presence of such a feature. They further suggested that the outer gateway into the precinct originally stood at *c* SE 1693 8574 on the site of the modern western entrance into the Park (1911, 308). Later commentators have speculated that the area of the precinct more or less corresponds to the area of the later Jervaulx Park: Davison (1998) suggests it was as large as the precinct of Fountains Abbey - 2km by 1km - while Coppack (in Robinson 1998, 129) merely states that the 'whole of the precinct survives as earthworks in the parkland surrounding the abbey ruins.'

The standing fabric of the conventual ruins is currently being recorded by the Lancaster Archaeological Unit on behalf of English Heritage in advance of consolidation.

5. DOCUMENTARY EVIDENCE

Jervaulx Abbey was originally founded at Fors in Wensleydale in 1145 on land donated to a community of Savigniac monks by Acarius fitz Bardolph. The grant was confirmed by Acarius' overlord, Alan, Earl of Brittany and Richmond. However, the foundation seems to have been made without the approval of the abbot of Savigny, and by 1149 the fledgling community had transferred to the Cistercian order as a daughter house of Byland Abbey. The initial site, lying in the upper reaches of Wensleydale close to Askrigg at over 200m above OD, soon proved unsatisfactory, and in 1154 the failure of the harvest forced the monks to disperse temporarily to the abbeys of Byland and Furness. Two years later they were back in Wensleydale, but at a new site lower down the valley granted to them by Conan, son of Earl Alan. It is probable that in the intervening period the abbey's lay brothers had already begun the erection of buildings at the new site ready for the monks' return. The new site, which became known as Joreval or Jervaulx after its situation in the valley of the River Ure (formerly Jore), was to be home to the community for the next 381 years (Burton 1991; Hope and Brakspear 1911, 303-4; Coppack in Robinson 1998, 128).

Already by the mid- to late-12th century the Cistercian order had acquired a reputation as depopulators. This was on two counts: first, Cistercian statute required abbeys to be sited in remote areas away from the hustle and temptations of everyday life, sometimes necessitating the physical removal of existing settlements; while secondly, the Cistercians had a direct labour force of lay brothers to work their estates, thereby potentially displacing any original non-monastic population from their land and depriving them of their means of economic livelihood. However, there is no documentary evidence that any settlement was already in existence at Jervaulx in the mid-12th century, and it has been suggested that parts of Wensleydale were still lying uncultivated at this time as a result of William I's Harrowing of the North over 80 years earlier (Donkin 1960; 1978, 41 and 57).

Few of the abbey's own records survive, probably because its cartulary and other documents were amongst those transferred to the keeping of the Council of the North after the Dissolution. These were kept by the Council in a tower on the precinct wall of York Abbey, and subsequently perished along with the tower in the Parliamentary siege of York in 1644 (Coppack 1990, 15). However, something of the abbey's economic interests are known from a variety of other sources. By the second half of the 13th century it had acquired at least sixteen vaccaries (cattle ranches) spread through Wensleydale and the Forest of Richmond, and possessed several thousand sheep, up to 1800 of which could be pastured in Wensleydale 'south of the Ure' alone (Donkin 1978, 76 and 96); Davison (1998) has suggested that in the early-14th century the size of the sheep flock may even have been in excess of 10,000 animals. The abbey was famed for the quality of the horses it reared (Moorhouse 1989, 48), and by 1290 also had the right to the free warrening of rabbits within East Witton (Page 1914, 285). It also had interests in the mining and smelting of iron ore, and in salt production (Lekai 1977, 322-3). In 1307 it was granted the right to a weekly market and twice-yearly fair at East Witton (Page 1914, 285). The abbey is said to have possessed a watermill adjoining the precinct, and in 1535 is also recorded as possessing a fulling mill at East Witton (*ibid*, 281 and 285).

In 1380-1 sixteen monks and two lay brothers are recorded, but by the second half of the 14th century lay-brother numbers were in decline at all Cistercian abbeys for a variety of demographic, economic and cultural reasons and this figure must seriously under-represent the size of the lay-brother community in the first 200 years of Jervaulx's existence. In 1537 there were said to be 25 or 26 monks (Knowles and Hadcock 1971, 120). In 1535 the gross annual income of the house was £455 10s 5d, although its clear revenue was only £234 18s 5d (Page 1913, 141).

Jervaulx Abbey was suppressed in 1537 after Abbot Sedbergh's attainder for involvement in the Pilgrimage of Grace. The buildings were stripped of anything of value, particularly their roof lead, the church was blown up, and the site leased to one Lancelot Harrison, Yeoman of the Guard, for 21 years at £12 a year. In 1544 the estate was granted instead to Matthew, Earl of Lennox, and his wife, Margaret, who held it until the latter's death in 1577. Their son, Lord Darnley, had pre-deceased them, and Jervaulx reverted to the English Crown during the minority of Darnley's heir, the future James VI of Scotland, James I of England. James succeeded to his title before 1600, and in 1603 bestowed the estate on Sir Edward Bruce, first Lord Kinloss, Scots Ambassador to the Court of St James. Edward died in 1611, and was succeeded by his son, also Edward, second Lord Kinloss. Two years later Edward was killed in a duel, and was succeeded by his younger brother, Thomas, who in 1633 was created Earl of Elgin. In 1663, Thomas died, and was succeeded by his son, Robert, the second Earl of Elgin, first Earl of Ailesbury. The latter title became extinct in 1746-7 when the third Earl died without male issue, but was revived for descendants of his sister's marriage to George Brudenell, third Earl of Cardigan, who had adopted the family name Brudenell Bruce. In 1746, Thomas Brudenell Bruce, was created fourth Earl of Ailesbury, and succeeded to his uncle's estates (Hope and Brakspear 1911, 305-7; Page 1914, 284; Innes-Smith 1972, 23-4).

Jervaulx seems to have been one of the Bruce family's lesser estates at this time. Already in 1627 a map produced by William Senior for Thomas, Lord Bruce, before he was created Earl of Elgin, shows it subdivided into a number of closes and rented out (North Yorkshire County Records Office ZJX 10/1/4 - here partly reproduced as Fig. 7). A series of later estate maps (NYCRO, MIC 1930 ZJX 10/10 and MIC 1931 ZJX 10/73 and 76 - the latter two reproduced here as Fig. 8 and Fig. 9) show that this remained the case with minor alterations to close boundaries until the very early years of the 19th century. In 1804, however, John Claridge, Lord Ailesbury's agent, persuaded his employer to convert the old hall at Jervaulx into an occasional residence and also to make it the administrative centre of the west division of the Ailesbury Yorkshire estates. The following year the Earl authorised the clearance of the ruins, and in 1807 a park was laid out around the old hall to designs by Robert Menzies (NYCRO, MIC 1930 ZJX 4/31, reproduced here as Fig. 10) (Davison 1998, and *in litt*). Thomas, Earl of Ailesbury died in 1814. His son, the fifth Earl, was raised to the rank of Marquess of Ailesbury in 1821, and died in 1856. His son, the second Marquess, altered and modernised the existing Jervaulx Hall around 1857-8, with the western range relegated to form the service block. The third Marquess died in 1886, and the following year the estate was sold to Samuel Cunliffe-Lister, later first Lord Masham of Swinton (Page 1914, 284; Innes-Smith 1972, 24).

6. THE EARTHWORKS: CATALOGUE AND DESCRIPTION

The plan of the earthworks and other features in the western end of Jervaulx Park as recorded by the RCHME is shown in Fig. 12. For the purposes of analysis and description, the principal archaeological elements have been given feature numbers, and assigned to one of seven general periods. A catalogue of these features is given below, arranged in approximate chronological order starting with the earliest. Features assigned to each period are numbered and highlighted on the relevant phase diagram (Figs. 13 to 19), while features of an earlier or later period mentioned in passing are cross-referenced in both the text and figures.

Phasing is in the main based on stratigraphical relationships observed between earthwork features during the course of survey. However, while such observations provide firm evidence for the relative ages of features, they cannot in themselves date individual features to a precise period. In the absence of excavation to recover artefactual or other chronometric evidence, the ascription of earthworks to particular periods has been based on a combination of morphology and context in the wider landscape, aided by judicious use of available documentary and historical cartographic sources. Even so, with some features the phasing offered can only be a best guess, and where there is uncertainty over the age of a feature this is indicated in the text.

6.1 Period 1: The landscape pre c 1156 (Fig. 13)

6.1.1 The rectilinear field system (FS1)

The rising ground along the western and southern edges of Jervaulx Park has a somewhat stepped profile, although the riser to each step is now graded by cultivation. The risers run parallel to each other in a broadly west-north-west to east-south-east direction in line with the underlying topography, suggesting that they may be at least in part the product of the near-horizontal angle of bedding of the underlying solid geology (British Geological Survey 1985a). However, the risers are associated with a number of other scarps of similar form running almost at right angles to them so as to form an irregular chequerboard pattern which cannot be so readily explained away by reference to the geology. The evidence of these cross scarps supports an alternative interpretation for all the features as the remnants of plough lynchets which formed along the boundaries of an early field system, and which themselves have been graded by subsequent ploughing. In every case where there is an observable stratigraphical relationship between one of the putative boundaries and another earthwork feature, the former always underlies and is therefore demonstrably earlier. However, apart from the observation that the field system also pre-dates the pre-monastic road pattern (section 6.1.2 below), there is no firm evidence for its actual date which will be discussed further in section 7 below.

As expected the boundaries of the field system are most apparent on the rising ground - exactly where plough lynchets will develop most strongly - and fade out on the more level ground to the north behind the esker. It is impossible now to be certain how much

further the field system originally extended due to disturbance in later periods, but the likelihood is that it did not cover a much larger area behind the esker since, before the foundation of the abbey, this is likely to have been an area of impeded drainage (section 2 above).

6.1.2 The pre-monastic road pattern (TR1-TR5)

There is evidence for a number of roads or tracks within the area surveyed. Of these, five (TR1-TR5) appear to predate the establishment of the abbey at Jervaulx whilst at the same time being later than the rectilinear field system, FS1 (section 6.1.1 above).

TR1 would seem to represent an earlier course of the Middleham to Masham road (the modern A6108) before it was diverted into its present angular route around the outside of Jervaulx Park. Approaching from the west, the road's initial course is no longer traceable on the surface within the survey area, although it probably entered the Park in the vicinity of the present west entrance. It would then have swung sharply south to keep to the higher ground, and it is here that the line of the old road survives (Fig. 2)



*Figure 2.
View along track
TR1/lead WF2
looking north
towards The Old
Gatehouse (NMR
AA99/03556).*

reused by the monks as the route for an aqueduct or leat bringing water to the conventual buildings from the reservoir in the south-west corner of the monastic precinct (WF2 and WF1, section 6.2.4 below). The road bed re-emerges as a slight hollow-way from beneath the leat just north of the reservoir, and swings away east in front of the reservoir dam (DM1, section 6.2.4 below) where a stretch of it seems to have been reused at a later date as local access to a complex of buildings, BC10, situated on its north side (section 6.2.2 below). The road line is truncated at this point by a late field boundary, FB5 (section 6.4.3 below), but formerly continued to the east where its original course now lies buried beneath a large negative lynchet that developed on the downhill side of a furlong of ridge-and-furrow ploughing, PF3 (section 6.4.3 below). The existence of a flat terrace at the foot of the lynchet, raises the possibility that the road was still in use when the lynchet formed and was re-routed

to the north slightly to pass around the obstacle; alternatively this terrace is a product of ploughing within, or local access to, the field below the lynchet. East of another late field boundary, FB6 (section 6.4.3 below), however, the original line of the track re-emerges before being overlain by the modern wall separating Jervaulx Park from lands belonging to Abbey Hill House to the east, and passing out of the survey area.

Track TR2 runs south-west to north-east across the survey area. In the extreme south-west its course is poorly preserved, but there is some indication that it may have originally skirted the northern side and head of the small valley to connect with the present road to Low Newstead, which now terminates at the junction with the A6108 outside the south-west corner of the Park (Fig. 1): a hollow-way clearly emerges from beneath the east side of the tail of the dam DM1, and is therefore earlier than the dam, and continues north-eastwards across TR1 towards the gap in the glacial moraine between the esker and the Wind Hills. In this section of its course it is very clearly crossed by and buried beneath another road, TR6, which is probably a monastic replacement for TR1 (section 6.2.3 below). It is also overlain by the present metalled road through the Park and by a small embanked enclosure of 20th-century date (AS4, section 6.6.1 below). North-east of the metalled road, its course is very straight suggesting that at some time it has been realigned; if this is correct then the realignment pre-dates the mid-16th century for it is truncated by a post-Dissolution formal garden compartment, GC8 (section 6.3.2 below). Although there is now no evidence for the course of the road re-emerging beyond GC8, its projected line heads almost directly for the gap between the esker and the Wind Hills suggesting it originally provided access out onto the floodplain of the Ure.

Track TR3 is a poorly-surviving route running west to east just inside the southern edge of the survey area. It is best preserved in the west where a short length of shallow but definite hollow-way runs along the southern lip of the small valley which contains the monastic reservoir in the south-west corner of the Park. The hollow-way is truncated by a later field boundary, FB4 (section 6.4.3 below), and its original onward course is now uncertain; however, at the eastern limit of the survey area a short length of scarp parallel with the rear face of the monastic precinct bank, BF1 (section 6.2.1 below), is suggestive of a terrace-way continuing eastwards. If so, its route between these two points has been obscured by the construction of the monastic precinct boundary, and by later ridge-and-furrow ploughing, PF3 (section 6.4.3 below), between the precinct boundary and track TR1.

Track TR4 is a short length of hollow-way running south from TR1 and seemingly designed to connect with track TR3, although if so, the southern half of its course has been reused and recut by the later field boundary, FB4 (section 6.4.3 below). Track TR5 comprises a series of braided hollow-ways running between TR1 and TR4 via a possible house site, BC1 (section 6.1.3 below).

6.1.3 Building complexes (BC1)

BC1 is a small platform cut into a tongue of higher land projecting out over the rising ground along the south side of the survey area (Fig. 3). It is connected to TR1 to the north, and to TR4 and the springs along the side of the small valley to the west, by a series of small interlinked hollow-ways, TR5 (section 6.1.2 above). Although the



Figure 3. View across the monastic reservoir WFI, showing the dam DMI (centre left) and to its right garden feature GSI6 with building platform BC1 visible in the distance (NMR AA99/03571).

platform could be simply a small yard, perhaps for animals, the intensity of routes leading to it, especially connecting it with the adjacent water supply, suggests it is more likely to be the site of a domestic building contemporary with the period when TR1 and TR4 were in use.

6.1.4 Plough furlongs (PF1-PF2)

Two plough furlongs, PF1 and PF2, both appear to be much earlier than any of the other ridge-and-furrow recorded during the survey. PF1 consists of a series of scarps, each up to *c* 0.3m high, running broadly parallel to one another north to south across the rising ground in the south-west corner of the Park. The scarps are in fact the risers of incipient strip lynchets formed by ploughing across the slope rather than up and down - a style of ploughing widely practised in hilly areas in medieval times, and whose results are still visible all over Wensleydale today. The second plough furlong, PF2, lies on very gently-sloping ground below Mark Hill in the north-east. It comprises fragments of five ridges, spaced between 7m and 15m apart, although given the slight nature of the ridges and the fact that the area is today rough pasture, it is possible that intervening ridges were not recognised during survey. Such broadly-spaced ploughing is generally more typical of the medieval period, and a medieval date for PF2 is supported by the observation that the southernmost plough ridge seems truncated by a feature, GS2, here thought to be part of the 16th-century gardens (section 6.3.2 below). However, since PF1 and PF2 both lie within the area suggested below (section 6.2.1) as that of the monastic precinct (and it is a moot point whether monastic arable fields would be likely in such a location), both furlongs may well date to before the refoundation of Jervaulx Abbey in 1156.

6.2 Period 2: Jervaulx Abbey, *c* 1156-1537 (Fig. 14)

6.2.1 Boundary features (BF1)

A bank, BF1, traceable along almost the entire length of the western, southern and eastern sides of the survey area, but more discontinuously in the north, appears to represent the original boundary of the monastic precinct. It is heavily degraded, but enough survives to suggest that it was originally a substantial feature. Except possibly in the north, there is no suggestion that a wall ever surmounted the bank. In the east there is evidence for what may be an external ditch, or perhaps more likely, a perimeter road, TR9 (section 6.2.3 below).

The bank does not survive in the north-west corner of the survey area, but emerges in the parkland south of The Old Estate Yard as a ploughed-down swelling *c* 5m wide and up to 0.2m high running just inside and parallel to the present Park wall. It seems likely that a 60m length of bank, up to 10m wide and 0.5m high, which runs from west to east either side of the metalled road through the Park, is a better-preserved part of the same feature, but if so the connection between the two lengths of bank has been destroyed by ploughing. It is possible that this detached length of bank marks the south side of an entrance passage into the precinct, with gatehouses situated at either end. However, no earthwork evidence survives either for the north side of such a passage or for the foundations of a gatehouse.

South of The Old Gatehouse the precinct bank gradually gains more substance as it ascends the hillside, but is heavily planted with parkland trees and is in places scarred by tree holes and other damage. A slight fall-in towards the foot of the bank from the modern Park wall is more likely to relate to the latter's construction than be the outer lip of an external ditch contemporary with the bank. The course of the bank has been largely destroyed as it crosses the head of the small valley at the south-west corner of the Park, probably as a result of the construction of an embankment to carry the modern A6108. Its rear face picks up immediately beyond the head of the valley and turns sharply east, but the present Park wall now runs along the top of the bank rather than at its foot, and there is no corresponding drop-off down to the road outside the wall to mark the bank's outer face, suggesting that the surface of the modern road has been raised. The height of the inner face of the bank is frequently in excess of 1m.

Mid-way along the southern side of the survey area, the bank is crossed by the present wall dividing Jervaulx Park from Abbey Hill House and passes beyond the area of survey, although its course can be traced continuing through the grounds of Abbey Hill on aerial photographs (*eg* RAF 1945). It re-emerges within the eastern part of the survey area as a low, flat-topped bank, *c* 7m-8m wide and up to 0.5m high. A shallow, ploughed hollow is traceable along its eastern side, and while it might be an external ditch, is more likely to be a perimeter road (see TR9, section 6.2.3 below). Bank and perimeter road are cut through by a series of later tracks - TR19 (section 6.5.5 below) and the present metalled road through the Park - with the bank subsequently used as an embankment to carry the modern track that leaves the metalled road and heads northwards past the icehouse (BC21, section 6.5.2 below). Bank and perimeter road fade out on the ground as they approach the icehouse - the area was heavily altered by later activity connected with the layout of gardens in the 16th century (section 6.3.2 below) - but it is clear that the bank would originally have continued on to pass through a narrow gap between the end of the esker and start of the Wind Hills. This is an obvious place to site a gate giving access from the precinct to the Ure floodplain to the north. Although there is no earthwork evidence for the existence of such a gate, its former presence and indeed location is suggested by a track, TR8 (section 6.2.3 below), which approaches just this spot from the west although now overlain by the 16th-century gardens before it reaches the precinct bank (see section 6.3.2 below).

North of the icehouse the modern track follows a wide terrace cut into the side of the esker. After about 75m the terrace swings away uphill to the north-west, and the modern track drops down its outer face to pass out onto the floodplain of the Ure. A low, narrow bank at the rear of this terrace as it proceeds uphill would seem to represent the continuation of the precinct boundary, but the different earthwork form of this feature - when compared to BF1 elsewhere - suggests that in this stretch the precinct may have been delimited by a stone wall rather than earthen bank. Another bank, BF2, at the front of the terrace is more definitely a ruined wall but of a later period (section 6.3.3 below). The precinct boundary continues around the northern side of Mark Hill, after which its course is lost in later landscaping. A short stretch of broad, low bank at the foot of the esker may be part of the precinct boundary, and if so suggests that it veered north down onto the floodplain to include the alleged site of the abbey mill, BC3 (section 6.2.2 below), within its circuit. But the evidence of this short stretch of bank is inconclusive, and the precinct boundary may equally have continued back east along the top of the esker.

6.2.2 Building complexes (BC2-BC13)

The abbey church and conventual buildings of course date to this period. Although their ruins are highlighted as BC2 on Fig. 14, they will not be analysed or discussed in detail here except to say that the site of the refectory now only survives as two parallel robber trenches running away south from the centre of the (reconstructed) south wall of the cloister.

The ruins of a monastic outer court building, BC3, lie north of the esker and are alleged to be those of the abbey mill although on what grounds is unclear (section 4 above). No analysis of the standing fabric was undertaken as part of the present survey, although from a superficial examination what survives appears too fragmentary and undiagnostic to enable any firm idea of function to be formulated. It is also clear from the earthwork evidence that the ruins now lie in a landscape heavily altered in later periods (sections 6.3.2, 6.3.4, and 6.5.3 below). Nevertheless, the survey has identified two probable leats, WF2 and WF5 (section 6.2.4 below), which could have brought water to, and taken it away from, the site. This makes it at least plausible that this is the *site* of the abbey mill, although on current evidence it is impossible to say for certain whether the standing fabric represents the remains of the monastic mill rather than, say, a folly going with the later landscaping as suggested by features such as the blocked arch south of the main fragment of masonry (Fig. 4). Senior's map of 1627 depicts two buildings in this general area (Fig. 7), but because of the map's schematic nature it is unclear how they relate to what survives on the ground today: neither seems to be in quite the right location to correspond to the present ruins. Ruins are marked at this location, however, on both Ralph Burton's map of East Witton in 1792 (NYCRO, MIC 1930 ZJX 10/10) and a later map of *c* 1800 (Fig. 9). If the site is that of the monastic mill, then a series of small closes or paddocks immediately to the north-west beyond the modern boundary fence behind Jervaulx Hall, may well be associated with it. However, it is possible that they relate instead to the post-Dissolution buildings shown in this area on Senior's map (see also section 6.4.1 below).

The ruins of another alleged monastic outer court building, BC4, are incorporated within The Old Gatehouse at the western edge of the Park, and have been variously claimed to be those of the abbey gatehouse or guesthouse (section 4 above). The present survey has failed to find evidence of any medieval roadway leading to or from the building, and also suggests that the building sits well off the line of the precinct boundary, BF1 (section 6.2.1 above). These observations make the identification of it as a gatehouse inherently implausible, but do not enable any alternative function to be suggested. No building is depicted at this location on Senior's map of 1627 (Fig. 7), although 'Ruins' are shown on a later map of *c* 1800 (Fig. 9). No detailed analysis of the standing medieval fabric has been undertaken as part of the present survey, but casual inspection suggests that the ruins may be an amalgam of original medieval masonry derived from buildings that formerly stood elsewhere within the precinct. This raises the possibility that the ruins were constructed at some time shortly before 1800 as a folly or eye-catcher designed to be viewed from Jervaulx Hall to the north.

The remains of three large platforms, BC5-BC7, survive terraced into the rising ground in the western half of the precinct. Platforms BC5 and BC6 both lie at the foot



*Figure 4.
The ruins of the
alleged abbey mill
BC3 from the east
after heavy rain
(NMR AA99/03567).*

of the main slope. BC5 measures *c* 24m north to south by 10m across, and has much stone lying on and just beneath the grass. The sides of BC6 have been graded by later ridge-and-furrow ploughing, but still stand up to *c* 2.5m high in the north-west corner, while the platform area measures at least 35m by 20m. BC7 lies a little south and uphill of BC6, and is considerably smaller and slighter; it, too, has been degraded by ploughing which has smoothed and spread the sides, but seems originally to have had a platform area of *c* 20m square. Despite the size of the platforms, no building is shown at any of these locations on the maps consulted, suggesting that they are all the sites of monastic outer-court buildings demolished at the Dissolution in 1537 or shortly after. BC6 and BC7 certainly pre-date the early-19th century for they are slighted by ridge-and-furrow ploughing of this date (section 6.4.3 below).

Three small, rectangular, buildings, BC8-BC10, whose outlines are visible on the ground as low banks probably masking stone footings, are situated a little to the south-east of BC7. There is no firm evidence for their date, although all lie alongside track TR6 and must, therefore, date from a time when TR6 was in still use. It is argued below (section 6.2.3) that TR6 is monastic in origin, although continuing in use up until the creation of Jervaulx Park in the early-19th century. None of the buildings is shown on any of the maps from 1627 onwards, and while this cannot be taken as proof that BC8-BC10 are not post-medieval (see this section above), it is felt that on balance they are most likely to be monastic structures.

Scarps and very slight banks lying within a broad hollow immediately south-west of the conventual ruins are suggestive of the sites of up to three other small buildings or perhaps yards or closes, BC11-BC13. They lie either side of a track TR7 which branches off TR6, and which it is argued below (section 6.2.3) is likewise of monastic date. However, since Senior's and later maps (Figs. 7 and 8) show that TR6/TR7 remained in use as an access route until c 1800, it is possible that even though none of these structures is depicted on the maps, some or all may date to this post-medieval period instead.

6.2.3 Tracks (TR1 and TR6-TR11)

When the abbey was refounded at Jervaulx in 1156, the precinct was laid out over part of the old road between Middleham and Masham, track TR1 (section 6.1.2 above), and it must have been at this time that the public highway was re-routed along its present course around the outside of the monastic precinct and the later Jervaulx Park. Within the precinct, the old road seems to have been largely abandoned, for part of it was reused by the monks as the route for an aqueduct, WF2 (section 6.2.4 below), but further south part remained in use as local access to a group of buildings, BC10 (section 6.2.2 above). In addition, new roads would have been necessary to link the various parts of the precinct. TR6-TR8 are three such probable roads.

TR6 comprises a broad embankment running south from the south-west corner of the conventual buildings, which turns sharply east when it reaches rising ground and continues to the edge of the survey area as a terrace-way averaging 4m wide cut into the foot of the natural slope. The road existed by 1627 for it is shown on Senior's map (Fig. 7), but is likely to be monastic in origin since it is otherwise difficult to account for the obvious effort that has been expended in its engineering. The rationale for constructing an embankment may have been in order to raise it above the course of track TR2 which it crosses, which it is suggested below (section 6.2.4) may have been reused by the monks as an aqueduct, WF7. After the Dissolution the road presumably fell out of use, for part of it was overlain by a 16th-century garden structure, GS7 (section 6.3.2 below). But access was subsequently re-established along it as indicated by Senior's map, before it was ploughed over with the creation of Jervaulx Park in the 19th century (section 6.4.3 below).

Track TR7 is a shallow, intermittent, hollow-way branching off TR6 just south of the conventual buildings, and curving to the north-west. It runs off TR6 down into a broad, shallow, depression, in which lie indications of several small buildings and/or closes which may be contemporary (BC11-BC13, section 6.2.2 above). Although not

now traceable along the floor of the depression as a continuous earthwork, its general line is picked up further north-west by another length of hollow-way of very similar width and form which climbs the side of the depression and heads west. It is almost immediately overlain by a 20th-century enclosure, AS1 (section 6.6.1 below), and cannot now be traced further. TR7 is assigned to this period because at its junction with TR6 it is very clearly overlain by a small rectangular building, GS7, interpreted below (section 6.3.2) as part of the 16th-century formal gardens. It certainly existed by 1627 for William Senior shows the depression through which it runs as one wide road (Fig. 7).

TR8 comprises a terrace-way, some 4m to 5m wide, running along the south-west foot of Mark Hill. It is truncated at either end, and only some 130m of its course now survives. Senior's map (Fig. 7) shows that in 1627 it originated in the east at a point near what is now the icehouse, BC21 (section 6.5.2 below), and ran west along the top of the esker as far as Jervaulx Hall. The road is likely to have a much earlier origin, however, for in the east it is overlain by a feature, GS3, which seems best interpreted as part of the 16th-century formal gardens (section 6.3.2 below). This suggests that it was originally constructed to provide access to the north side of the monastic precinct - including perhaps the alleged mill, BC3 (section 6.2.2 above) - and may even have linked the abbey's east and west gates (see section 6.2.1 above for the position of the gates). Its course appears to have been re-established after the demise of the 16th-century gardens to provide access to a group of buildings, BC18, probably a tenanted farm, lying immediately west of Mark Hill (section 6.4.1 below), but both farm and the majority of the road were swept away with the laying out of Jervaulx Park in the 19th century.

A broad hollow visible along the outside of the eastern precinct boundary, BF1 (section 6.2.1 above), in the east has been spread by later ridge-and-furrow ploughing which makes its interpretation difficult. Whilst it could be the remains of a ditch, its replacement around the north-east corner of the precinct by a broad terrace suggest that both features are more likely parts of a perimeter road, TR9. Such a road would have provided access from the public highway in the south to the suggested east gate of the abbey, as well as giving the monks and lay brothers access to their lands immediately north of the precinct. The interpretation of it as a road is strengthened by the fact that two other tracks, TR10 and TR11, connect with it. TR10 is a hollow-way which runs down the steep side of the esker onto the floodplain of the Ure at the north-east corner of the precinct, while TR11 leaves TR9 at right angles close to where the modern metalled road through the Park crosses the latter, and heads into the Wind Hills beyond the survey area as a marked terrace-way. Although no road is shown at either location by Senior or later maps, both seem to correspond to the position of field boundaries depicted thereon, suggesting both were in existence by 1627 (Fig. 7). Such a date is in agreement with the observed earthwork stratigraphy because both are overlain by the boundary feature BF2, which is probably of 16th-century date (section 6.3.3 below). This evidence supports a monastic date for both roads, but if so they seem to have connected solely with TR9: there is no earthwork evidence that either ever continued on inside the precinct, or indeed that there is any kind of break in the course of the precinct boundary, BF1, which could be indicative of the site of a gate through which they might pass.

6.2.4 Water features (WF1-WF8) and dams (DM1)

The principal element in the monastic water supply is a large reservoir, WF1, in the south-west corner of the precinct, formed by damming the neck of a small valley into which flows water from a natural springline on the valley side. The dam, DM1 (Fig. 3), is a massive feature, with a basal width at the centre of some 15m, narrowing to 5m to 6m across at the top, and standing a maximum of *c* 2.6m high. Although grass-covered, squared and coursed masonry is visible in its make-up, particularly the rear face, suggesting a solid core. A slight bank along its top would seem to be a later field boundary, FB4 (section 6.4.3 below). It is uncertain how deep the water in the reservoir would originally have been: the floor is today underdrained, and whilst boggy lacks any real depth of standing water. However, the fact that the dam does not extend fully onto the south side of the valley means it can never have retained water to its full height. A cut scarp visible low down on both sides of the valley is probably the result of later cleaning-out, while a small delve, GS16, near its southern edge is possibly a later garden feature (section 6.3.2 below). There is no definite documentary evidence for the existence of either dam or reservoir before 1853 (Ordnance Survey 1856), but their presence from at least 1627 is implied by a field boundary visible on all earlier maps which seems to correspond to FB4.

A leat, WF2, leads north from the dam. In constructing it the monks seem to have largely reused the line of an earlier roadway, TR1 (section 6.1.2 above), although no doubt re-engineering it to establish a gentle but constant gradient. The leat runs due north as a broad terrace with a covered channel along its centre (Fig 2), before veering to the north-east through what is now a lawn in front of Jervaulx Hall to pass through the break in the esker north of the abbey church where it may have fed the abbey mill (BC3, section 6.2.2 above). The majority of this course is still followed today by a relatively modern water pipe supplying properties in the north-west corner of the Park, although the section through the lawn in front of Jervaulx Hall seems to have been robbed out. The leat also fed or still feeds a number of other channels and pipes taking water to different parts of the precinct: while some of these may be of fairly recent origin, at least four if not five, WF3-WF7, are likely to be of medieval date.

WF3 is the main stone-lined abbey drain which ran through the conventual area and would have flushed the latrines and taken away kitchen and other refuse. Its position within the conventual area has long been known through excavation, and sections have been left exposed and are open to public view. But the survey has shown that the majority of its course beyond the conventual buildings can be traced on the surface as a shallow trench, often with upcast to either side, presumably marking where attempts have been made since the Dissolution to rob the stone. This suggests it originally debouched its contents into the uncovered drainage channel, WF4, which starts north of the 19th-century icehouse, BC21 (section 6.5.2 below), and continues eastwards beyond the survey area for over 1km to join the Ure.

WF5 is a small open channel which originates in the north close to the site of the alleged mill, BC3 (section 6.2.2 above) and runs east and south around the north and north-east sides of the precinct where it formerly joined the outfall of the main abbey drain. It ranges in width from *c* 3m-5m, and, except in the north-east, survives today no more than 0.3m deep. It is also now mostly dry, although north of the esker where it

has been reused to form the ditch element of a 19th-century ha-ha, BF3 (section 6.5.1 below), it is noticeably boggy. It seems unconvincing as simply a drainage ditch, and given its location and relation with the main outfall may well be the tail race from the abbey mill.

It is suggested here that water was supplied to the monastic fishponds, WF8 (this section below), from either or both of two channels, WF6 and WF7. Although now piped underground and slightly re-routed from its original course, WF6 is shown as an open watercourse on maps of *c* 1800 (Figs. 8 and 9), and part of the channel still exists as an earthwork south of the conventual ruins. The other possibility is that the route of an earlier track, TR2 (section 6.1.2 above), was reused as a leat (WF7). The evidence for the latter suggestion is mostly circumstantial, and principally derives from the proximity of the track's east end to the fishponds and the way that another road, TR6, is embanked across it (there would seem little point, after all, in going to the effort of embanking TR6 without some very good cause such as the need to carry it over a watercourse). However, the suggestion is also supported by the apparent slight height difference between the ponds, with the two in the south seeming to be slightly higher than those further north.

A block of ponds, WF8, lying south-east of the conventual buildings are monastic fishponds. However, the northern three are on a slightly different alignment to the other two, suggesting they have been re-engineered at a later date, probably as ornamental water features within the 16th-century formal gardens (sections 6.3.2 and 6.3.4 below). A linear scarp south of the middle pond may mark the original southern edge of that pond's monastic predecessor before this re-engineering, but the area is confused by modern drains, and the whole block of ponds has been severely degraded by 19th-century ridge-and-furrow ploughing (section 6.4.3 below). The two original monastic ponds that survive complete at the southern end of the block now measure 60m long by up to 9m wide, and are *c* 0.4m deep. Although the orientation of the monastic fishponds is at a strange, slightly skew angle to that of the main conventual buildings and course of the precinct bank, BF1 (section 6.2.1 above), this is explicable if the layout was constrained by features that already existed on the ground, such as TR2 (section 6.1.2 above).

6.3 Period 3: Post-Dissolution house and gardens, *c* 1537-1627 (Fig. 15)

6.3.1 Building complexes (BC14-BC15)

A roughly rectangular area of amorphous mounds and hollows, BC14, measuring a maximum of 25m east to west by 30m, runs away south from the south-east corner of the conventual ruins, and would seem to represent the ruins of a large, robbed-out building. Its location at the centre of a series of formal-garden compartments and other ornamental features (sections 6.3.2 and 6.3.4 below) suggests very strongly that building and gardens are contemporary, and that BC14 is the site of a previously unrecognised post-Dissolution country house. Neither house nor gardens are shown on any known map of the last 370 years, indicating that both had a very short period of use and had been abandoned before William Senior's survey of the Jervaulx estate in 1627. However, the size of house suggested by the visible earthworks is too small to

be the entire house at the centre of such large and elaborate gardens, and it seems likely that although now separated from them, BC14 is but the end of a long southern range to a larger building which retained and incorporated elements of the medieval conventual buildings to the north. Although no detailed analysis of the standing fabric of the conventual ruins has been undertaken as part of the present survey, the number of blocked and altered windows visible in the monks' infirmary and adjacent buildings, might be evidence in support of this thesis, with the connection between the two parts of the house destroyed by 19th-century parkland landscaping (see GS28, section 6.5.3 below).

Another area of amorphous mounds and hollowing, BC15, lies a little north-east of BC14 just below Mark Hill, and may be a second area of robbed-out buildings. Whatever stood here should predate again 1627 for, as with BC14, nothing is shown at this location on later maps. Although there is no reason why BC15 could not be monastic, the fact that track TR13 (a branch of the approach road to the 16th-century grand house, section 6.3.5 below) appears to head towards it strongly suggests that BC15 belongs to this later period. Alternatively, it could be the site of a monastic building which survived the Dissolution for a short while - perhaps serving as the stables and/or coach house to BC14.

6.3.2 Garden compartments (GC1-GC14), garden structures (GS1-GS19) and garden paths (GP1-GP3)

The survey has identified up to fourteen separate compartments within the formal gardens, each with a number of internal features, plus a number of other structures and elements outside this core area which suggest that there may have been a fringe of less formal parkland or wilderness-type areas. The fourteen compartments are highlighted on Fig. 15, although it must be admitted that the identification of GC13 and GC14 in particular is by no means certain, and the precise location of the southern boundary to the formal area is uncertain (*cf* sections 6.3.3 and 6.4.3 below). At least three compartments - GC6, GC7 and GC9 - contain water features, and a number of other water features lie away from the formal area: these are all described in more detail in section 6.3.4 below. Individual compartments are variously delimited by terracing, watercourses, roads or paths, although the present scarp defining the northern edge of GC3, GC4 and GC5 is probably a later field boundary partly overlying these compartments (FB2, section 6.4.3 below). Whilst there is no standard size, most compartments are rectilinear, and where this is not the case as with GC2, the shape is readily explained by the constraints of the natural topography (Fig. 5). Most also have later ridge-and-furrow ploughing and/or drainage within them which has smoothed or destroyed any original internal detail and made surviving features very difficult now to survey and fully understand. Nevertheless, a certain amount of internal detail is recognisable and the relevant scarps are highlighted on Fig. 15. Whilst not a complete catalogue, the more distinctive of these features include: a platform or large terrace, GS1, in the north-west corner of compartment GC1 with possible raised walks leading south from it; a very slight but broad terrace-like feature, GS5, within compartment GC8, plus hints of a semi-circular feature, GS6, in its north-east corner; rectilinear platforms, GS10 and GS11, or sub-divisions, GS12, towards the southern ends of compartments GC10 and GC11 and between compartments GC11 and GC12; and various low mounds and suggestions of terracing, GS13, within compartment GC14.

Figure 5.
Garden compartment
GC2 viewed from the
esker (NMR
AA99/03562).



The survey has also identified the sites of a number of other features around the edge of the formal garden area or situated some distance away from it which, from their form and relationship to features of other periods, are nevertheless best interpreted as part of the 16th-century gardens.

The low, grassed-over, footings of two, small, rectangular buildings, GS7 and GS9, lie facing each other but some 410m apart at either end of an east to west line immediately south of the house, BC14. From the evidence of the earthworks around them, it seems that they are deliberately sited at the limits of the formal gardens, probably as pavilions from which the rest of the gardens could be viewed. GS7 in the west is sited on a former monastic roadline, TR6 (section 6.2.3 above), reused as a terrace delimiting one side of adjacent garden compartments GC3 and GC10, and was probably sited so as to look directly along a monastic leat retained as a stream (WF6, section 6.2.4 above) flowing east through the gardens; whilst GS9 in the east sits on the edge of the Wind Hills and is several metres higher than the general level of the gardens, and would have commanded fine views of the whole formal area laid out below it, as well as views north over the floodplain of the Ure and east over other possibly less formal parkland areas. The complete ground plan of GS7 survives indicating that the building measured *c* 15m by 8m externally, with a central doorway in its east wall. GS9 appears to have had similar dimensions with a central door facing west, but its northern end was destroyed in the 19th century by the construction of the icehouse, BC21 (section 6.5.2 below). It was approached from the west via a short length of path, GP2, leading up from a small platform, GS8 (Fig. 6), on which presumably stood a statue forming a focal point at one end of the gardens.

Two other features, GS2 and GS4, on the summit of the esker a little to the north of GS9 are also sited so as to command views of the gardens, and hence should date to this period too. GS4 is a penannular bank of *c* 6m internal diameter, with a raised centre approached from the south side by what appears to be a flight of steps, suggesting that some kind of gazebo may have stood within the bank; in addition there is what appears to be an embanked semi-circular annexe attached to the north-west side. A path, GP1, approaches it from the north-west and may be contemporary. GS2 is a roughly rectangular area, *c* 8m square, terraced into the top of the esker with some of the material pushed out to create an apron in front. The feature now appears

Figure 6.
Platform GS8 at the
east end of the
16th-century formal
gardens (NMR
AA99/03559).



degraded and/or slumped, but its overall regularity suggests it is more than simply quarrying. The site of another possible garden structure, GS3, is suggested by a rectangular platform set into the line of a former monastic road, TR8 (section 6.2.3 above), at the foot of the esker. From its position, it is possible that the road was reused as a garden terrace during this period; certainly east of GS3 its end seems to have been re-fashioned into a series of garden terraces overlooking GC9 to the south.

Other features some distance away from the core formal area but which nevertheless seem best interpreted as elements within the overall garden layout are: a small rectangular platform, GS14, toward the south-west corner of the former monastic precinct which is probably the site of a summer house or bower; a degraded platform, GS15, seemingly intended to accommodate a garden seat positioned to look out over the monastic reservoir, WF1 (section 6.2.4 above) toward a possible ornamental structure, GS16, set into the reservoir's southern edge (Fig. 3); a platform, GS17, for another summer house or bower above the kidney-shaped pond, WF13 (section 6.3.4 below) in the north-east corner of the survey area; and two otherwise unexplained, but ploughed-down and therefore pre-19th-century hollows, GS18 and GS19, south of the metalled road through the Park.

6.3.3 Boundary features (BF2)

A boundary feature, BF2, runs almost due north to south along the east side of the survey area just east of the monastic precinct boundary, BF1 (section 6.2.1 above). In the north BF2 exists as a narrow, grassy bank, but with evidence of stone within its make-up suggesting that it is a tumbled wall, whereas south of the 19th-century icehouse, BC21 (section 6.5.2 below) which has partly obliterated its course, it has a different earthwork form, and appears as two, slight, parallel, ditches separated by a narrow central spine, the whole flanked by equally slight banks. The spine and/or banks possibly once supported hedges. However, this latter section has been heavily damaged by later ridge-and-furrow ploughing running virtually parallel to it, and the feature is very difficult to record on the ground let alone interpret satisfactorily. A *terminus post quem* for the feature is provided by the perimeter road, TR9, around the outside of the monastic precinct (section 6.2.3 above) along whose outer edge in the north BF2 lies, whilst the southern bank-and-ditch section corresponds to a boundary

shown on Ralph Burton's survey and must therefore predate 1792 (NYCRO, MIC 1930 ZJX 10/10). The fact that the boundary does not appear on Senior's map (Fig. 7) might suggest that the dating bracket can be narrowed to after 1627. However, its absence from the map may simply be due to it already having passed out of use and thus not considered important to depict. Indeed it is suggested here that the most likely function and date for the feature is as a boundary separating the 16th-century house and gardens off from the rest of the Jervaulx estate to the east.

6.3.4 Water features (WF9-WF13) and dams (DM2)

After the Dissolution, it is highly likely that the principal elements of the monastic water supply (WF1-WF7, section 6.2.4 above) were retained, but adapted where necessary to serve new purposes such as supplying ornamental water features within the formal gardens. Thus the possible site of the monastic watermill, BC3 (section 6.2.2 above), seems to have been converted into a romantic ruin at the edge of a shallow pond, WF9 (Fig. 4), with small mounds and viewing platforms around it, while as has been already stated (section 6.2.4 above) the northernmost trio of the monastic fishponds, WF8, were re-worked so as to orientate them at right-angles to the south wing of the main house, BC14 (section 6.3.1 above), and parallel with the principal axis of other garden features. A number of other new water features also seem to have been created, all now dry: two shallow ponds, WF10, a little east of WF9; two more regular examples, WF11, parallel to the east front of the house; and two more, WF12, within garden compartment GC9 to the east, retained by a small dam, DM2. It is even possible that the kidney-shaped pond, WF13, at the north-east corner of the survey area (which was probably an unintentional creation of the monastic period when the mill tail race, WF5 (section 6.2.4 above), effectively dammed the mouth of a natural embayment in the side of the esker caused by an old meander of the Ure) was utilised as an ornamental water feature: a small platform, GS17 (section 6.3.2 above), has been cut into the side of the embayment above it and would have provided a fine situation for a summer house or bower. In similar vein, it seems that the monastic reservoir, WF1, was also made into an ornamental feature in its own right at this time, as suggested by the presence of three likely garden features, GS14-GS16, above it to the north and along its southern edge (section 6.3.2 above).

6.3.5 Tracks (TR12-TR13)

The main approach to the 16th-century house, BC14 (section 6.3.1 above), seems to have been from the south as represented by a hollow-way, TR12. At its southern end, TR12 branches off the monastic track TR6 (section 6.2.3 above) and runs north to link up with an earlier track, TR2 (section 6.1.2 above). At the junction with TR2, TR12 turns east along it for a short distance before turning north once again to run up the east side of the south wing of the house. Track TR13, a subsidiary branch of TR12, continues around the south and east sides of garden compartment GC7 and may have provided access to the stables and coach house (*cf* BC15, section 6.3.1 above). The dating evidence for TR12 comes from the fact that it is overploughed and must therefore pre-date the early-19th century. It also seemingly corresponds to the line of a field boundary, FB6 (section 6.4.3 below), for which there is map evidence as early as 1627 (Fig. 7). Whilst TR12/TR13 could therefore be monastic, its relationship to the 16th-century house and gardens points to a mid-16th-century date instead.



Figure 7. Extract from William Senior's estate map of 'Gervaux Abbaie' for Thomas, Lord Bruce, in 1627 (NYCRO ZJX 10/1/4, copyright reserved).

6.4 Period 4: Tenanted farms and fields, c 1627-1805 (Fig. 16)

6.4.1 Building complexes (BC16-BC20)

The sites of a number of buildings are clearly recognisable on William Senior's map of 1627, of which six (excluding for the time being the complex depicted in the north-west corner where Jervaulx Hall now stands) lie within the present survey area (Fig. 7). Two lie at the very northern limit of the survey at the foot of the esker north of the abbey church. Although this is the location of the alleged abbey mill, BC3 (section 6.2.2 above), it is unclear from the map whether either of the depicted buildings can be correlated with the standing ruins of that structure. Such a correspondence is unlikely anyway since it has been argued above that BC3 was already in ruins at this time and surrounded by garden features (sections 6.3.2 and 6.3.4 above). However, it is possible from the map that the westernmost of the two depicted buildings stood in the area of the small closes immediately west of BC3. This area is highlighted as BC16 on Fig. 16, although it must be emphasised that no trace of a building survives on the ground. Two other buildings are shown close together where a track (TR8, section 6.2.3 above) running east from Jervaulx Hall turns a sharp angle to pass down the south-west side of Mark Hill. Both were still standing in 1792 (NYCRO, MIC 1930 ZJX 10/10), probably comprising a small farm complex, but had disappeared by c



Figure 8.
Extract from Jervaulx
estate map of c 1800
(NYCRO MIC 1931
ZJX 10/73, copyright
reserved). Note north
is orientated towards
the bottom of the
page.

1800 (Fig. 8). This area has since been heavily landscaped, probably in the 19th century (TR8 is truncated), and more recently has been planted with trees. There is now no surface trace of either building, although again the general location has been highlighted on Fig. 16 (BC18). The remaining two buildings on Senior's map lie immediately west of the abbey ruins, and should correspond to a farm complex depicted on later maps down to the beginning of the 19th century. In *c* 1800 it is shown as a group of some seven or more buildings arranged in an L-shape around two sides of a series of small yards or closes, and was leased to John Thompson (Fig. 9). It is likely that these buildings were demolished shortly afterwards when the abbey ruins were cleared and Jervaulx Park laid out by Lord Ailesbury (section 4 above). Although the survey found no surface trace of any of these buildings, an L-shaped scarp west of the ruins may well represent the edges of the yard around which the buildings were ranged. The area is highlighted as BC19 on Fig. 16.

Jervaulx Hall, The Old Hall, and The Old Estate Yard in the north-west corner of Jervaulx Park are all Grade II listed buildings, and in the Historic Buildings Register are described as of 19th-century date (DoE 1985, 1 and 3-4). However, although it is not the purpose of this report to analyse the structural history of these buildings or to describe their architectural detail, it is worth pointing out that Senior's map (Fig. 7) shows a complex of buildings here. If the buildings shown in 1627 are substantially those that still stood in *c* 1800 (Figs. 8 and 9), then it would seem that both the present Jervaulx Hall and The Old Hall may incorporate earlier fabric - at the very least they stand on the sites of earlier buildings. They are accordingly labelled BC17 on Fig. 16.

In *c* 1800 another building also existed south of a set of ruins in the far west of the survey area, leased to one Christopher Thompson (Fig. 9). The ruins should be those subsequently incorporated within The Old Gatehouse (BC4, section 6.2.2 above), indicating that Christopher Thompson's building corresponds to a large platform or terrace, BC20, immediately to the south. Although no trace of walls now survive here above ground, a track (TR15, section 6.4.2 below) runs down its southern side.

6.4.2 Tracks (TR14-TR16)

A 45m length of track, TR15, running east to west lies approximately 25m south of The Old Gatehouse. In the west it is first visible as a hollow-way at the top of the high ground just inside the boundary wall of the Park, and continues in this form almost due east down the slope where it becomes a terrace-way along the south side of building platform, BC20 (section 6.4.1 above). Its onward course is not entirely clear, but may have been to the north along the eastern edge of BC20 where it disappears beneath the current property boundary. In the west, its course is now blocked near the summit of the high ground by dumping, itself probably of some antiquity, and also by a 19th-century hedge (BF7, section 6.5.1 below). It is not shown on any map, but its physical relationship to BC20 suggests it should be contemporary and to be 18th-century or earlier in date.

TR16 is a *c* 25m length of terrace-way cut into the foot of the esker behind Mark Hill. It appears to be later than a ditch, probably a field boundary, running a short distance up the side of the esker from the floodplain. Although not shown on any map, it may

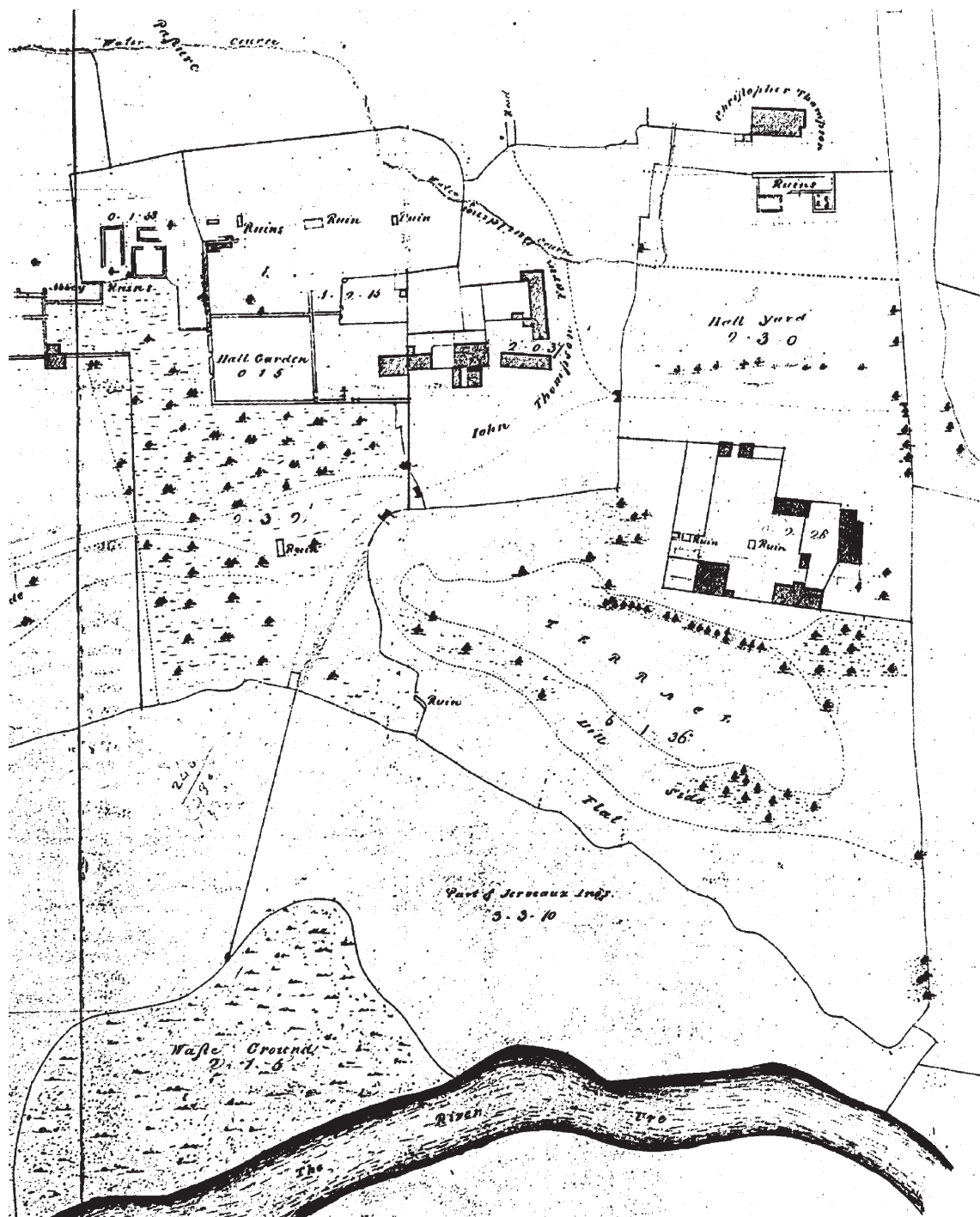


Figure 9.
 Extract from Jervaulx
 estate map of c 1800
 (NYCRO MIC 1931
 ZJX 10/76, copyright
 reserved). Note north is
 orientated towards the
 bottom of the page.

have provided access to a small field immediately to the north for which a later post-medieval date is likely (see PF8, section 6.4.3 below).

Map evidence (Figs. 7 and 8) shows that parts of a number of the roads from earlier periods - TR6, TR7 and TR8 (section 6.2.3 above) - remained in use through this period, while others were seemingly abandoned and were allowed to degenerate into field boundaries (eg TR12). The northern end of TR7 seems to have been re-routed in the 17th century (Fig. 7) to run up the west side of a building complex, BC19 (section

6.4.1 above), towards Jervaulx Hall although there is little earthwork evidence for this new route (TR14).

6.4.3 Plough furlongs (PF3-PF8) and field boundaries (FB1-FB6)

The ridge-and-furrow ploughing within the 16th-century formal garden compartments, GC1-GC14 (section 6.3.2 above), plus much of that in the western half of the survey area, is very slight in nature suggesting that these furlongs were not ploughed on a regular basis. The plough ridges are also clearly late in date, for they overlie and have severely degraded many earthwork features; indeed, they are only overlain by features dating to the last 200 or so years such as the metalled road through the Park. For these reasons it is suggested that this ploughing is not of an agricultural nature, but relates to a single deliberate attempt to reduce the size of earthworks and to smooth the landscape prior to the laying out of the Park at the start of the 19th century. Such a suggestion is certainly supported by the fact that traces of ridging overlie track TR6 and the area of John Thompson's farm, BC19 (section 6.4.1 above), both of which were still in use *c* 1800. The individual furlongs of this late ploughing are not highlighted on Fig. 16.

However, there are a number of plough furlongs which appear exceptions to the observed pattern. Two, PF1 and PF2, are in all likelihood pre-monastic, and are described in section 6.1.4 above. Three others, PF3-PF5, lie on the rising ground at the southern edge of the survey area; two more, PF6-PF7, intrude into the survey area but mostly lie outside it in the Wind Hills to the east, and will not be described in more detail here; while PF8 is a very small, late, furlong in the far north-east corner.

Of these, PF3 should be the earliest, probably being of early post-Dissolution date although it, too, could even be pre-monastic. The greater antiquity of this furlong is indicated by the sizeable headland that has had time to develop at its east end, and also by the fact that a considerable amount of soil has been pushed downhill creating a negative lynchet which has partly buried the former line of track TR1 (section 6.1.2 above). In addition, the furlong must have existed by 1792, for the ridges are overlain towards their centre by a field boundary, FB5 (this section below), shown on a map of this date (NYCRO, MIC 1930, ZJX 10/10). Within the furlong, individual ridges are best developed on the slope, but become more akin to very slight strip lynchets as the ground surface levels out just inside the boundary wall of the Park.

PF4 and PF5 both lie further east immediately north of the grounds of Abbey Hill House. Although PF4 is ploughed east to west across the slope and PF5 north to south down the slope, they are probably both part of the same field - called 'Backsides' in *c* 1800 (Fig. 8) - with the different orientation of the ploughing a consequence of the topography. This is further suggested by the fact that PF4 seems to use one of the ridges of PF5 as a headland. In the east the northern limit of PF5 is marked by a low, narrow bank or headland just south of track TR11 (section 6.2.3 above), but further west is much less well-defined although some of the ridges end on a very slight scarp. This has been taken above as defining the original southern limit of the 16th-century formal gardens, but may be a slight plough lynchet; if so, the edge of the gardens has been overploughed by PF5. The spacing of individual plough ridges in PF4 ranges from as little as *c* 3m to as much as 9m, but this is in part due to the fact that the ridges

are not all parallel but fan out somewhat towards the north; the ridges of PF4 on the other hand are all from *c* 2.5m to 4m apart. Such narrow spacing is consistent with a later post-Dissolution date (probably 18th century or later). In the west some of the ridges of PF4 are more akin to strip lynchets.

PF8 comprises a number of very slight ridges visible within a small, roughly rectangular, field measuring *c* 30m by a maximum of 25m, at the foot of the esker behind Mark Hill. The field is defined by slight lynchets, but from the evidence of its east side where two lynchets overlap at different angles and the fact that there seem to be ridges parallel to both, the field is likely to have at least two phases. The field is not shown on any map consulted, but the close-spacing of the ridging suggests it is of later post-medieval date, and may well belong to the Napoleonic era. It is probably contemporary with a short length of track, TR16 (section 6.4.2 above) which runs away south from it.

A number of what are obviously field boundaries were identified and planned during the course of the survey and are highlighted on Fig. 16. Most can be correlated to boundaries shown on the various 17th- and 18th-century estate maps consulted, and will not be individually described here. Where selected boundaries have been numbered (FB1-FB6) this is simply to aid identification of features mentioned in other parts of the text.

6.5 Period 5: Jervaulx Hall and Park, *c* 1805-1939 (Fig. 17)

Jervaulx Hall was converted into an occasional residence for the Earl of Ailesbury *c* 1805, with the Park laid out around it a few years later to a design by Robert Menzies (section 5 above). Menzies' design is reproduced here as Fig. 10. Several earthwork features recorded by the survey can be related to this plan, but it seems that other aspects of it, in particular the internal boundaries, were either never implemented or have been altered subsequently.

6.5.1 Boundary features (BF3-BF7)

Menzies' plan (Fig. 10) shows the conventual ruins surrounded by a fence or wall. In the south, that boundary is on a different alignment to the southern boundary of the small walled field to the east which is still extant. This suggests that the boundary shown on that plan is not the present ha-ha, BF4, separating the ruins of the conventual buildings from the rest of Jervaulx Park, but the scarp, FB2 (section 6.4.3 above), to the south. The original proposal was thus to reuse an existing boundary, the ha-ha only being dug in 1809 to prevent visitors taking away medieval floor tiles as souvenirs (Davison 1998). The original western boundary around the ruins also re-utilised an existing field boundary ditch, the northern end of which, FB1, in this case survived when the ha-ha was dug. The identification of FB2 as the original southern boundary of the ruins is strengthened by the observation that its line is at almost exactly 90° to the western arm of the later ha-ha, whereas the southern arm of the ha-ha is at a slightly oblique angle to the latter. Although no documentary evidence has been located, the dates of the other three lengths of ha-ha - BF4 across the esker behind Jervaulx Hall, BF6 dividing the Park from Abbey Hill House to the south, and BF3 along the northern foot of the esker - presumably date to 1809 also; the

former certainly existed by 1891 (Ordnance Survey 1892b). The latter incorporates an earlier ditch, namely the mill tail race, WF5 (section 6.2.4 above).

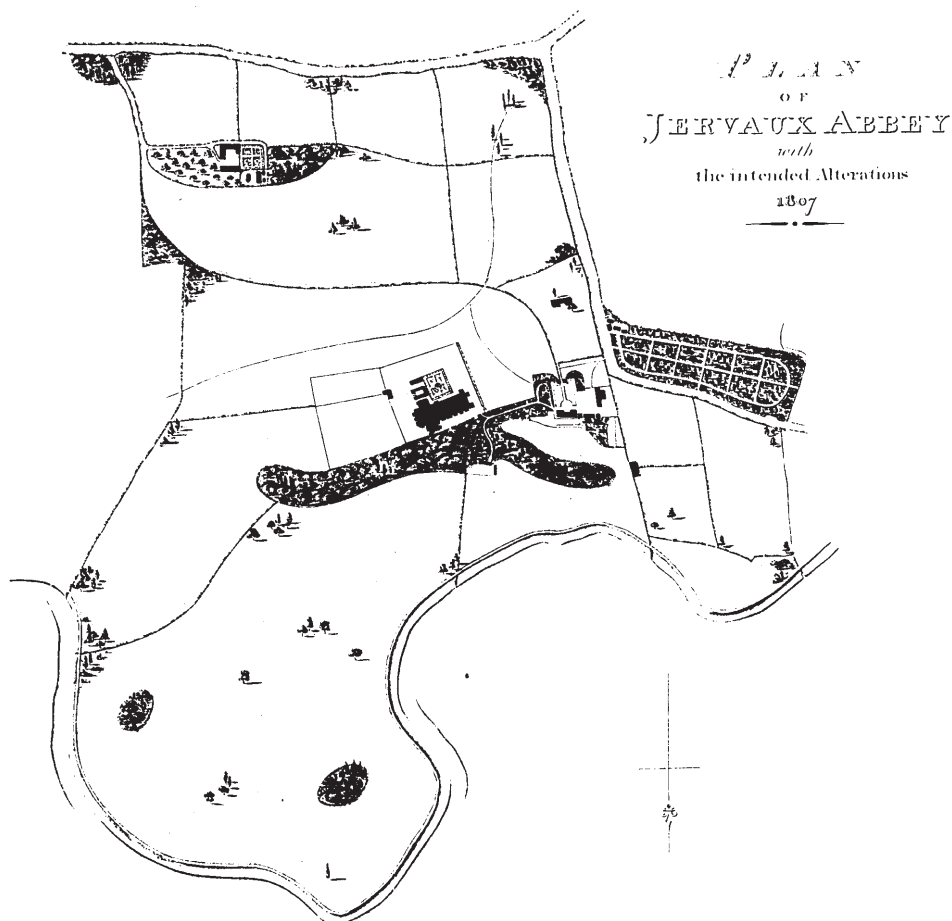


Figure 10.
Robert Menzies' design for Jervaulx Park, 1807 (NYCRO MIC 1930 ZJX 4/31, copyright reserved).
Note north is orientated towards the bottom of the page.

The fragmentary remains of an old, outgrown, hawthorn hedge, BF7, run just inside the Park's western boundary wall, and in places sit on top of a very slight bank; the bank is also traceable as a sinuous but discontinuous feature just north of the Park's southern boundary. Bank and hedge correspond very well to a vegetation edge shown on late-19th-century maps (Ordnance Survey 1892a; 1892b), and are probably the remains of an old hedge line planted to protect young saplings (which now form the present tree belt along the edge of the Park) from the depredations of grazing animals. A small section of this hedge bank in the south between FB4 in the west (section 6.4.3 above) and the sharp right-angled turn in its course some 50m to the east is possibly earlier than the rest, for it corresponds to the edge of a small plantation of trees shown in 1853 (Ordnance Survey 1856).

6.5.2 Building complexes (BC21)

BC21 is an icehouse lying at the very eastern edge of the survey area. It is a Grade II listed building, accurately described in the Historic Buildings Register as of brick-lined beehive form with barrel-vaulted access, and of mid-19th-century date, the whole covered by a mound (DoE 1985, 5). The entrance faces north, approached

via a flight of stone steps (Fig. 11) leading up from a short terrace-way, TR18, which is a spur from the modern track along the top of the monastic precinct bank, BF1



*Figure 11.
The entrance to the
19th-century icehouse
BC21 (NMR
AA99/03561).*

(section 6.2.1 above). Map evidence indicates that it was built between 1853 and 1891 (Ordnance Survey 1856; 1892b), suggesting it may well date to *c* 1857-8 when the second Marquess of Ailesbury was carrying out improvements to Jervaulx Hall (section 5 above).

6.5.3 Garden structures (GS20-GS28) and garden paths (GP4-GP5)

Three small structures along the northern edge of the survey area are all 19th-century parkland gazebos. The first, GS20, lies adjacent to the 'Back Walk' (GP4, this section below) which runs at the northern foot of the esker behind Jervaulx Hall, and probably dates to between 1853 and 1891 (Ordnance Survey 1856; 1892b). It has a rectangular plan measuring *c* 5m by 3m, and is open-sided towards the north. It is built of wood with a floor formed from what appear to be medieval floor tiles salvaged from the abbey church. The walls and roof have recently been restored by the current owners. GS21 lies at the south-east corner of the conventual ruins. It too, is built of wood, but this time it is almost square in plan measuring *c* 3m by 2.8m overall, but with the north-west and south-west corners angled off at 45° to create an irregular hexagon. It existed by 1853 (Ordnance Survey 1856). GS22 is no longer extant, but formerly stood on top of Mark Hill (the highest point of the esker) approached by the Back Walk. It is first depicted on maps in 1891 (Ordnance Survey 1892b), and appears to

have been octagonal in plan. It survived until at least 1945 (RAF 1945) but had disappeared before 1976 (Ordnance Survey 1977). Its site is now marked by an overgrown stony plinth.

A number of other garden or parkland features may be identified with this phase. Five, GS23-GS27, are tree mounds all situated in the north-west corner of Jervaulx Park close to the Hall, although only GS23 and GS24 still have trees on them. All seem to have been in existence by 1891, for although the Ordnance Survey map (1892b) does not show the mounds, it does depict mature trees at each of these locations; GS27 certainly existed by 1911 when the iron railings which today encircle it are first shown (Ordnance Survey 1912b). GS28 is a rectangular depression defined by a very slight C-shaped scarp no more than 0.1m high, visible in a patch of closely-mown grass at the south-east corner of the conventual ruins. Its form suggests that it is a small sunken garden compartment or parterre surrounded by terraces or paths, and although not depicted on any Ordnance Survey map its location adjacent to gazebo GS21 strongly suggests that it is part of the 19th-century ornamental setting of the abbey ruins. This act of landscaping would explain why there is no longer evidence for the south wing, BC14 (section 6.3.1 above), of the 16th-century country house connecting with parts of the monastic ranges further north.

A series of interlinking footpaths run through the gardens of Jervaulx Hall, and along the esker behind the Hall as far as Mark Hill in the east; they also occur amongst the conventual ruins. According to map evidence, all the paths highlighted on Fig. 17 were in existence at some time between 1853 and 1939 (Ordnance Survey 1856; 1892a; 1892b; 1912a; 1912b; 1929a; 1929b). Some are still in use today, others are overgrown and survive now purely as very slight earthworks. Other footpaths depicted on these maps have long been out of use and have left no discernible earthwork trace, and are not included on Fig. 17. Only two of these paths are numbered and described in more detail below:

GP4 running the length of the northern foot of the esker is probably one of the earliest of all the paths for it is depicted on the 1:10560 Ordnance Survey map surveyed in 1853. Although not named, it is shown running through 'Back Walk Plantation' and will here be referred to as the 'Back Walk'. In the east it had been extended to run up to the gazebo, GS22 (this section, above) on top of Mark Hill by 1891. It runs across and thus provides a *terminus ante quem* for two ponds, WF10, just east of the alleged abbey mill, and supports their being ascribed to the 16th century (section 6.3.4 above).

GP5 is a slight parchmark clearly visible in the mown grass within the abbey cloister on certain aerial photographs (eg RCHME 1995a); during survey it was also detectable at ground level as a combination of parchmark and very slight earthwork. It takes the form of a central open circle with four arms radiating from it at right angles to the claustral ranges. The most plausible explanation is that it represents a series of grassed-over garden paths. It is probably of 19th-century date since something akin to this layout is indicated in the area of the cloister on Menzies' 1807 design for Jervaulx Park (Fig. 10), although the fact that the cloister is labelled 'Hall Garden' on a map of c 1800 (Fig. 9) does raise the possibility of it being an earlier feature retained when the Park was laid out.

6.5.4 Footpaths (FP1-FP3)

The survey detected the earthwork remains of three other paths which can be dated to this period. They are all quite clearly footpaths unconnected to any garden layout. FP1 and FP2 both lie in the southern half of the survey area. FP1 exists on the ground as a slight ditch-like feature starting from a gate in the boundary wall around Abbey Hill House and heading north-west down the hill to join the modern metalled road; FP2 exists as a narrow terrace across the natural hillslope which diverges from the metalled road a little further east than FP1 and runs south-east towards the north-east corner of Abbey Hill House. Both cut across ridge-and-furrow, and were in existence by 1853 (Ordnance Survey 1856). FP3 lies close to the west edge of the Park and runs south from the metalled road towards The Old Gatehouse. It existed by 1891 (Ordnance Survey 1892b); although now disused, the path is still traceable on the ground as a low causeway.

6.5.5 Tracks (TR17-TR19)

A very shallow hollow-way, TR17, up to 4m wide, curves away south and west from the south-west corner of the ha-ha around the conventual ruins (BF4, section 6.5.1 above). It descends into a broad hollow where it crosses the line of another track, TR7, of probable monastic origin, and as it rises up the other side of the hollow passes between two small buildings and/or closes, BC11 and BC12, lying along TR7 (sections 6.2.2 and 6.2.3 above). It is overlain by the modern metalled road through the Park, and continues beyond as a depression up to *c* 0.4m deep as far as track TR1 (section 6.1.2 above), although it is hard to know whether this depression is a road or simply a field ditch and part of FB3 (section 6.4.3 above). In the east the course of the feature corresponds to a short length of track which in 1891 is shown branching off the main metalled road through the Park and giving access to the ruins (Ordnance Survey 1892b), although subsequent County Series editions downgrade its status to a footpath (Ordnance Survey 1912b; 1929b). However, the fact that TR17 appears to respect BC11 and BC12 rather than cutting through them, and also that its line is continued west of the modern metalled road by the ditch element of field boundary FB3, raises the possibility that the track shown on the maps reused the line of an pre-existing, possibly monastic, feature. TR17 had ceased to be used as the main approach to the ruins by 1976, and had been superseded by a footpath, FP4 (section 6.7.1 below), approaching from the west.

TR18 is a short length of terrace-way which branches off the modern track along the top of the monastic precinct bank, BF1 (section 6.2.1 above), and gives vehicular access to the entrance to the icehouse, BC21 (section 6.5.2 above). It is integral with the icehouse, and must date from the same time.

In the south-east corner of the survey area a low, curving embankment, up to 4m wide but no more than *c* 0.2m high, marks an old road line, TR19. It clearly cuts through the bank, BF1, marking the monastic precinct (section 6.2.1 above), and also overlies the ridge-and-furrow in this part of the Park; it is itself overlain by a small embanked enclosure, AS10 (section 6.6.1 below). It corresponds to the eastern end of a sinuous boundary running north-west to south-east across Menzies' plan (Fig. 10). Although not immediately apparent from that plan, it would seem that this was intended as the

route of a carriage drive. A track following this line certainly existed by 1853 (Ordnance Survey 1856). The western part of the drive is still in use today as a metalled road, but further east the route down the east side of Abbey Hill House has been abandoned and the drive now continues the length of the Park to join Kilgram Lane at the East Lodge. This change had happened before 1891 (Ordnance Survey 1892b).

6.5.6 Water features (WF14)

A brick- or stone-lined cistern, WF14, on the top of the esker behind Jervaulx Hall is now dry, but is marked as 'Reservoir' on County Series maps (Ordnance Survey 1892b; 1912b; 1929b). It would have functioned as a storage reservoir supplying the service areas of the Hall below such as the laundry. The line of a metal pipe which approaches it from the west across ha-ha BF4 (section 6.5.1 above) is traceable on the end of the esker as a low bank.

6.6 Period 6: The Second World War, 1939-1945 (Fig. 18)

The survey has recorded thirteen features which are likely to have a military function and to date from the Second World War. Ten are small embanked enclosures, probably ammunition stands (AS1-AS10), while the other three are building complexes (BC22-BC24).

6.6.1 Ammunition stands (AS1-AS10)

The ten enclosures, AS1-AS10, are all of very similar form, and occupy identical locations adjacent to the present metalled road through the Park. Each is defined by a slight, sometimes discontinuous, bank no more than a few decimetres high, while AS1-AS9 also have an equally slight ditch on the inside of the bank. They are all square to rectangular in plan, ranging in size from *c* 15m to 30m across. None has an obvious formal entrance, although the majority are incomplete and have only three sides: where this is the case the missing side is always that facing the metalled road. Slight scarps visible in the interior of some of the enclosures - particularly AS3, AS5, AS7 and AS9 - are probably contemporary and hint at internal structures, but earthworks visible within others continue the line of features outside and are clearly earlier. This indicates that the enclosures are all comparatively late: AS7 overlies plough ridging for example, while AS10 must postdate 1853 for it overlies track TR19 (section 6.5.5 above) which maps show as still in use at that date (Ordnance Survey 1856). Some of the enclosures have mature trees at their centre, whilst disturbed ground and shallow holes within others suggests that old trees have been removed. This might suggest a function as ornamental tree enclosures within parkland, but the present scale of the earthworks is insufficient to keep out grazing animals, and even if the bank formerly supported a hedge an internal ditch would be unusual in such situations. None of the enclosures is visible on the earliest available aerial photographic coverage of the Park dating to 1940, although this is admittedly rather poor quality (RAF 1940). However, AS4-AS10 are all visible as parch- or scorchmarks on photographs taken five years later (RAF 1945). A more credible explanation for them therefore is as some form of wartime ammunition dump using

the mature trees within Jervaulx Park as camouflage from the air; the bank may have been built higher with sandbags, while the ditch served as both quarry for the bank and as internal drainage.

6.6.2 Military buildings (BC22-BC24)

The three other likely military sites are all buildings or the sites of buildings in the south-east corner of the survey area. BC22 comprises what appear to be two parallel beam slots -probably the foundations for a temporary wooden hut or similar structure. The slots lie in a shallow hollow surrounded by amorphous small mounds which may be no more than upcast debris. A little to the south, the monastic precinct bank, BF1 (section 6.2.1 above) has been lowered and flattened to create a small building platform, BC23, approached from the west via a ramp. Since in 1853 the modern track, which runs along the top of the precinct bank to the north, then connected with TR19 to the south (Ordnance Survey 1856), BC23 must be later than this date (section 6.5.5 above). The third military hut is a small brick-built affair, BC24, standing beneath trees adjacent to the fence separating Jervaulx Park from Abbey Hill House to the south. It is still roofed although now disused. Although no buildings are shown on Ordnance Survey mapping at any of these three locations and nothing is visible on aerial photographs either, a wartime context nevertheless seems the most likely, perhaps as guardrooms or restrooms for the soldiers guarding the munitions.

6.7 Period 7: Modern developments, c 1946-1998 (Fig. 19)

6.7.1 Footpaths (FP4)

Whereas in Periods 5 and 6 public access to the conventual ruins was from the south via the modern metalled road through the Park and track TR17 (section 6.5.5 above), in Period 7 this route was abandoned in favour of a new, direct approach from the west. The new path originally ran in a straight line from a gate, now blocked, in the Park's western wall to another at the very west end of the south side of the fence around the ruins. This route existed as recently as 1976 (Ordnance Survey 1977), but has since been re-routed. In the west it now enters the Park via a gate closer to The Old Gatehouse, and leads to a gate re-sited at the southern end of the fence along the western side of the ruins. The former course of the path survives on the ground as a low earthwork embankment, FP4.

6.7.2 Garden structures (GS29)

At the east end of the lawn in front of Jervaulx Hall is a grassed-over flower bed or parterre, GS29, visible as an extremely slight series of depressions; its design mirrors that of an extant parterre at the west end of the lawn. Although it is unclear when the beds were laid out, aerial photographic evidence shows that GS29 was in active use until fairly recently (Anon 1996).

6.7.3 Tracks (TR20)

North of the icehouse, BC21, a short length of track, TR20, branches off the modern track which follows the line of the monastic precinct boundary, BF1, and leads towards a couple of small walled animal pens. The pens do not appear on Ordnance Survey County Series maps, although they are shown on the most recent National Grid Series (Ordnance Survey 1977), suggesting that TR20 is of recent date.

6.7.4 Modern disturbance

The many areas of disturbance highlighted in dark pink on Fig. 19 will not be described in detail. Suffice to say that many of the smaller hollows are tree holes or animal scrapes; the three larger areas of disturbance close to the junction of tracks TR2 and TR6 are due to rabbits; while the various areas of disturbance highlighted within garden compartments GC7-GC9 are mostly to do with drainage works. The age of these various acts of damage is uncertain: most are probably modern (*ie* post 1945), although some of the drainage works in particular may well be earlier. The dense network of land drains identified by the survey, especially in several of the 16th-century formal garden compartments in the eastern half of the survey area, will in themselves also have seriously damaged any sub-surface archaeological deposits. The age of the land drains is uncertain, but the evidence suggests that they belong to more than just a single phase; some if not the majority are likely to be 19th-century in origin.

7. DISCUSSION

The survey has shown that the earthworks which survive at the western end of Jervaulx Park represent an exceptionally dense and complex palimpsest of occupation and use of this part of Wensleydale by various human populations over at least the last 1000 years, and probably considerably longer.

As would be expected given the sheer intensity of later land-use, the earliest features on site are not well preserved. The survey has identified, however, a number of very degraded lynchets which seem to be part of a field system (FS1, section 6.1.1 above) of fairly regular, rectilinear form, although the precise layout was no doubt influenced by and adapted to the constraints of the underlying geology and topography. There is no indication of the date of the fields other than that they pre-date the medieval period, but rectilinear systems of this type would not be out of place in a late prehistoric or Romano-British context. Indeed, such a date has already been suggested for a number of similar systems recorded from higher up Wensleydale above Askrigg, and also from the upper reaches of other valleys in the Yorkshire Dales (*eg* RCHME 1995b, 31-40, 116-19, fig. 4.1.1.6a), but until now good evidence for their presence this far down any of the Dales has been missing due to the destructive nature and masking effect of medieval and later agricultural regimes.

The survey has also identified a number of features which post-date the rectilinear fields but nevertheless pre-date the refoundation of the abbey at Jervaulx, and which in all likelihood were in use right up to 1156. These include a small incipient flight of strip lynchets (PF1, section 6.1.4 above). Strip lynchets are common in the Dales, although largely undated by excavation. Raistrick (1968, 85-6) has claimed that they originate in the Anglian period, but they are most likely to date to after 1066 since they are the almost inevitable result of the operation of the medieval open-field system of strip ploughing in steeper terrains (Taylor 1975, 88-92). It has been suggested above (section 6.1.4) that the Jervaulx strip lynchets pre-date 1156 because arable cultivation is unlikely to have taken place within the area of a monastic precinct, and the same argument has been used to date a second plough furlong (PF2) identified by the survey. If such an early date is accepted for this agricultural activity, then, together with the evidence the survey has produced for quite a dense pre-monastic road network (section 6.1.2 above), the inference to be drawn must be that this part of Wensleydale was not completely 'waste' in the decades before the foundation of the abbey here as has been previously supposed (Donkin 1960; section 5 above). In fact, the survey has identified with some confidence the site of at least one building as pre-monastic (BC1, section 6.1.3 above); it must be a distinct possibility that the sites of other equally early dwellings lie as yet unrecognised elsewhere within Jervaulx Park.

Although, as at Jervaulx, it is usually only the ruins of the church and claustral ranges which today survive above ground on monastic sites, these are far from the only buildings that would have originally stood here. Medieval monasteries were for the most part self-sufficient economic communities, growing and processing their own food, and even possessing their own bloomery and/or smithy to manufacture and repair iron fixtures and fittings and tools. All these activities needed servants and labourers, and buildings to accommodate them. Thus the religious structures formed

the heart of the monastery, but stood within an enclosed precinct containing a multiplicity of associated buildings often divided between an inner and outer court. The inner court would have housed buildings such as the guesthouse, bakehouse and principal granaries, and often had its own gatehouse; while the noisier and dirtier processing and industrial functions were relegated to the outer court. Most if not all abbeys would even have possessed within the precinct or very closeby, their own corn mill. As with many monasteries, past research at Jervaulx has almost exclusively focused on the conventual ruins and the surrounding precinct has been largely ignored. However, the present survey has produced evidence for the first time of the likely size and shape of the precinct, together with something of the layout of buildings, water supply and other features within it.

Normally a monastic precinct was defined by a stone wall. Unusually at Jervaulx the available evidence indicates that the majority of the circuit was marked not by a wall but by an earthen bank (BF1, section 6.2.1 above), although it is a moot point whether a wall formerly ran along on top of it. Part of this bank had been recognised before the present survey, but had been mistaken for the original eastern boundary of the 19th-century Jervaulx Park (Davison, *in litt*). The south-east corner of the precinct lies outside the area surveyed, while the northern side and north-west corner of the boundary no longer survive above ground (below-ground survival, perhaps as wall foundations or a robber trench, cannot be ruled out). But in the south-east the course of the boundary can be followed on aerial photographs (*eg* RAF 1945) which show a bank running through the grounds of Abbey Hill House at a *c* 45° angle to the southern and eastern sides of the precinct within the Park, and if it is assumed that the northern edge originally ran along the top of the esker rather than veering north to include the possible mill site (*cf* section 6.2.1 above), this gives a minimum size for the precinct of *c* 27.75ha (68.5 acres), and a minimum length for the perimeter of just over 2km (1.25 miles). Whilst this is a sizeable area, it is by no means exceptional amongst Cistercian houses: for instance, the precinct of Waverley Abbey in Surrey is said to have measured 24.3ha (60 acres), while more locally in Yorkshire Jervaulx's well-known sister abbeys at Fountains and Rievaulx had precincts encompassing 29.5ha (73 acres) and 40.5ha (100 acres) respectively (all data from Robinson 1998, chapter 3).

Although the survey has produced no direct evidence of gates or gatehouses, the approximate sites of at least three may be inferred from earthwork evidence. Contrary to the most recent opinion, the survey has shown that the most likely position for the main abbey gatehouse is in the west where the present metalled road enters the Park, and not the building further south now known as The Old Gatehouse. The former site was in fact first suggested at the beginning of this century by Hope and Brakspear (1911, 308; section 4 above), but has been ignored following Pevsner's more recent claim (1966, 205; section 4 above) for the southern building. The survey has demonstrated (section 6.2.2 above) quite conclusively, however, that The Old Gatehouse cannot be the abbey gatehouse, at least not *in situ*, although more work is needed (which is beyond the remit of the present survey) to determine whether it is a post-medieval folly incorporating fabric taken from the true gatehouse site, or a genuine medieval building of different function. The site of a second, minor, gate should lie in the vicinity of SE 1751 8574 close to the 19th-century icehouse, as evidenced by the track TR8 (section 6.2.3 above), which heads towards this point in the precinct boundary. The location is an obvious choice for a gate, since it lies in the low saddle between the esker and the start of the Wind Hills, and would have given

ready access out onto the floodplain of the Ure, as well as being close to the confluence of the tail race from the mill and the outfall of the main abbey drain in case maintenance was needed. The position of the third gate is outside the area of survey within the grounds of Abbey Hill House, but may be predicted again from the evidence of roads within the precinct, in this case track TR6 which also formed part of the main approach to the post-Dissolution grand house which occupied the site of the abbey in the 16th century (sections 6.2.3 and 6.3.5 above).

The precise position of the precinct boundary is likely to have been at least partly dictated by the need to guarantee a reliable supply of water for the abbey. As stipulated by Cistercian statute, water was required not simply for drinking and washing (which might be served by the digging of a well) but also to flush the drains and drive a mill (Bond 1989). Although in theory the monks could have harnessed the force of the Ure for the latter, it seems that they chose instead to use water issuing from the springs in the south-west corner of the precinct for all their needs. Since it is unlikely that a reservoir the size of that which exists below the springs (WF1, section 6.2.4 above) would have been strictly necessary if its sole purpose was to supply water to buildings and fishponds within the precinct, this suggests that it may have doubled as a mill pond. This is further suggested by evidence for a leat (WF2, section 6.2.4 above) leading from the reservoir towards what are traditionally said to be the ruins of the abbey mill (BC3, section 6.2.2 above) immediately below the esker. However, given the heavy garden landscaping identified by the survey in the vicinity of these ruins, the evidence for the identification of the reservoir as a mill pond, and conversely for the ruins to be those of the abbey mill, risks becoming circular without additional investigation.

Although there would seem to be no surviving documentary mention of fisheries or fishponds in connection with the abbey, sea- and river-fishing together with inland fish farming were important elements in the medieval monastic economy on account of religious restrictions (at least in the earlier period) on the consumption of meat. Most monasteries had their own fishponds, and the survey has now found evidence for five previously unsuspected examples (WF8, section 6.2.4 above) located within the precinct at Jervaulx.

In addition to The Old Gatehouse and alleged mill, the sites of up to nine previously unrecognised monastic outer court buildings have also been located (BC5-BC13, section 6.2.2 above). It must be a strong possibility that some if not all of the buildings marked on Senior's map of 1627 were also monastic structures that survived the Dissolution. Of the newly-identified sites, it is likely that the three largest earthwork platforms, BC5-BC7, are the sites of barns or other storage buildings, but it is otherwise impossible to suggest functions for the rest. In any case, as Moorhouse (1989) has pointed out, the function of individual buildings is likely to have changed over time - as indeed would the range of buildings needed - since by the mid-14th century Cistercian monasteries increasingly rented out their granges in return for a money income rather than farming them directly themselves via the lay brothers; this would have had the consequence that a number of agricultural or manufacturing activities previously conducted on outlying estates would now have been performed within the precinct instead. During the survey, lumps of tap slag were evident on the surface in the vicinity of *c* SE 175 855 north of AS10, where the ground has been disturbed by the insertion of wooden uprights for a horse jump. The slag has not been

dated, but the findspot lies just outside the boundary of the monastic precinct and may mark the location of the abbey bloomery and/or smithy.

No mention has so far been made of one finding of the survey - largely because it is not really an earthwork feature which could be readily classified and catalogued in section 6 above, rather the absence of it. But the survey has found good evidence to suggest that north of the conventual buildings a considerable length of the esker has been cut through and lowered to a level flush with that of the ground surface to the south. The evidence for this comes from two observations: first, the way in which in the west the top of the esker drops off in height very abruptly and most unnaturally immediately north of the west end of the abbey church (this drop in height is in fact a massive cut scarp); and secondly, from the very level and even nature of the ground surface between this point and the commencement of the extra bulk of Mark Hill over 200m further east. There is limited evidence for the date of this act of destruction - which must have been a major undertaking - but the fact that the leat WF2 passes through the gap strongly suggests it is monastic rather than later. However, the gap created is too large to have been simply for the passage of the leat, and other reasons must be sought. It seems too massive an undertaking to have been for purely aesthetic considerations such as to open up views of the church from the north. Instead a more practical but plausible explanation is that the esker served as a quarry, either to provide spoil to raise the general level of the ground in the vicinity of the conventual buildings since this area is likely to have been bog before the foundation of the abbey (section 2 above), and/or possibly given the apparent absence of a ditch outside the precinct bank, to provide material for the construction of the bank also.

However, without doubt the major finding of the survey has been the recognition that after the Dissolution of Jervaulx Abbey, the site was converted into a grand country house and associated formal garden (sections 6.3.1 to 6.3.4 above). Since William Senior's survey of 1627 shows neither house or garden but the estate broken up into a series of tenanted farms and closes, it is likely that both were the work of the Earl of Lennox and his wife, possibly enhanced by their heir the future James VI of Scotland/James I of England (section 5 above). The size of the formal elements of the garden - in excess of 400m east to west by perhaps 250m north to south - and the degree of elaboration involved certainly suggest that whoever was responsible for them was both rich and of high status. However, no reference to either house or garden has ever been located by historians from the documentary record, and the existence of both was in consequence completely unsuspected before the present survey. It is unclear if this is because the relevant family papers no longer survive, or simply that they have not been fully researched. The estate probably remained intact into the early years of the 17th century by which time it had passed to the Bruce family, but was probably a burden to maintain and becoming increasingly dilapidated. Matters may have worsened after 1611 when the family's fortunes seem to have gone into decline with the death of Sir Edward Bruce, Scots Ambassador to the Court of St James. By the time they picked up again towards the middle of the century, house and gardens had already disappeared and the Jervaulx estate had lost its former importance. However, more research into the family's history and fortunes would be necessary to establish precise reasons and dates for the demise of the property. In the meantime the remains are an important addition to the corpus of well-dated, late-16th-century garden earthworks.

The survey has also produced unsuspected evidence of the archaeology of more recent times in the identification of ten earthwork enclosures (AS1-AS10, section 6.6 above), which are almost certainly munitions stores of the Second World War. That Jervaulx Park was being used in this way by the end of the war is shown by contemporary aerial photographs (*eg* RAF 1945) which show tarpaulin-covered stacks spaced at regular intervals not just along the tracks within the Park but along the minor roads outside. Such roadside storage was authorised by the RAF from 1943 onwards as a last resort to try and overcome the desperate shortage of more conventional Forward Ammunition Depots; the approved method was to place 40 tons of bombs in groups of eight bays or stacks - ideally along class B roads with wide verges - each bay being 65 feet (19.81m) wide and spaced 60 feet (18.29m) apart, with 375 feet (114.3m) between groups (Crisp 1989). However, it is clear both from their form and from the aerial photographic evidence that the Jervaulx earthwork enclosures must pre-date the introduction of this policy. The fact that the survey suggests that they were constructed beneath trees - presumably to camouflage them from enemy reconnaissance - is further evidence that they should date from the earlier stages of the conflict when the Luftwaffe was still a major threat. In the absence of precise documentation for them, it may be that they were part of trials to evaluate methods of ammunition storage.

8. SURVEY METHODOLOGY

The survey was carried out as a divorced survey (*ie* not tied in directly to Ordnance Survey National Grid co-ordinates), using Leica electronic theodolite and electromagnetic distance measurement (EDM) equipment. The control scheme consisted of a primary ring traverse plus a network of subsidiary link traverses. In total 49 stations were observed, most marked only temporarily by wooden pegs or nails (or within the scheduled area by golf tees), but within the open parkland south of the scheduled area two were permanently marked using ground anchors; the survey also reused six of eight pre-existing ground anchors installed around the abbey ruins. These stations were used to record hard detail and to set out a network of temporary control points marked by plastic pegs and degradable chalk and paint marks. Fibron tapes were then laid between the control points and archaeological detail scaled off and plotted by hand onto the emerging plan on site using standard graphical techniques of baseline and offset.

A full description of the survey methodology is included in the survey archive in the NMR, together with guides to relocating the permanently marked survey stations on site.

9. ACKNOWLEDGMENTS

Field survey was carried out by Christopher Dunn, Marcus Jecock and Amy Lax, with occasional assistance from Philip Sinton, all of the RCHME York Office. Other RCHME staff, particularly Stewart Ainsworth and Mark Bowden - who were responsible for setting up the survey and writing the project design - and also Paul Barnwell and Paul Everson, have willingly shared their collected experience, discussed ideas and commented on various aspects of the survey's findings. The report was researched and written by Marcus Jecock and edited by Christopher Dunn, while the final survey drawing (Fig. 12) was prepared by Philip Sinton who was also responsible for Fig. 1; Marcus Jecock produced the interpretative diagrams (Figs. 13 to 19). Site photography was undertaken by Bob Skingle.

Witness diagrams showing the position of existing permanent survey markers around the conventual buildings were supplied by Paul Bryan of English Heritage, while Andrew Davison kindly provided background information and copies of historical maps located during his own researches on the history of Jervaulx Abbey in the North Yorkshire County Records Office. A colour print of Senior's estate map of 1627 was kindly supplied by the NYCRO, and the RCHME would like to thank Mr M Y Ashcroft, County Archivist, for permission to reproduce it and copies of the other maps held on microfilm (NYCRO copyright reserved).

Last but by no means least the RCHME would like to thank all the land owners involved, namely Mr Ian Burdon, Mr and Mrs Allen, Mr and Mrs Coke, Mr and Mrs Odena and Mr and Mrs Woodward - together with Mr Burdon's tenant, Mr G Chapman - for their willing co-operation and for permitting access to the various parts of the site at all times and over such a prolonged period.

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10. BIBLIOGRAPHY

- Ainsworth, S, 1998, *External Request Survey - RCHME Project Design. Site Name: Jervaulx Abbey* (York: RCHME unpublished document)
- Anon, 1996, *Yorkshire from the air* (London: Aerofilms)
- Bond, C J, 1989, 'Water management in the rural monastery', in R Gilchrist and H Mytum (ed), *The Archaeology of Rural Monasteries*, 83-111 (Oxford: British Archaeological Reports, British Series 203)
- British Geological Survey, 1985a *1:50000 Series, England and Wales sheet 51 Masham. Solid edition*
- British Geological Survey, 1985b *1:50000 Series, England and Wales sheet 51 Masham. Drift edition*
- Burton, J E, 1991, 'The Abbeys of Byland and Jervaulx, and the problems of the English Savigniacs, 1134-1156', in J Loades (ed), *Monastic Studies II*, 119-31 (Bangor: Headstart History)
- Coppack, G, 1990, *Abbeys and Priors* (London: Batsford/English Heritage)
- Crisp, G, 1989, 'The supply of explosives and ammunition to the RAF during the Second World War, part two', *Airfield Review*, **10/2**, 10-14
- Davison, A, 1998, 'The Fairest Church: Jervaulx in its monastic and post-monastic landscape', *Soc Landscape Studies Newsletter*, **Spring/Summer 1998**
- DoE, 1985, *List of buildings of special architectural or historic interest: District of Richmondshire (parishes of East Witton Outparish, East Witton Town, Harmby, Hutton Hang, Spennithorne, Thornton Steward and the Town of Middleham)* (London: Department of the Environment)
- Donkin, R A, 1960, 'Settlement and depopulation on Cistercian estates during the twelfth and thirteenth centuries, especially in Yorkshire', *Bull Inst Historical Res*, **33**, 141-65
- Donkin, R A, 1978, *The Cistercians: studies in the geography of medieval England and Wales* (Toronto: Pontifical Institute of Medieval Studies)
- English Heritage, 1992, Scheduling maplet, Monument No. NY7
- , 1996, *County List of Scheduled Monuments: North Yorkshire* (London: English Heritage)
- Hope, W H St J, and Brakspear, H, 1911, 'Jervaulx Abbey', *Yorkshire Archaeol J*, **21**, 303-44

- Innes-Smith, R, 1972, *Jervaulx Abbey* (English Life Publications)
- Knowles, D, and Hadcock, R N, 1971, *Medieval Religious Houses in England and Wales* (London: Longman)
- Lekai, L J, 1977, *The Cistercians. Ideals and Reality* (Kent State University Press)
- Luckhurst, D, nd [1964], *Monastic Watermills: a study of the mills within English monastic precincts* (London: Society for the Protection of Ancient Buildings, The Wind and Watermill Section, booklet 8)
- Moorhouse, S, 1989, 'Monastic estates: their composition and development', in R Gilchrist and H Mytum (ed), *The Archaeology of Rural Monasteries*, 29-81 (Oxford: British Archaeological Reports, British Series 203)
- Ordnance Survey, 1856, *County Series 1:10560, Yorkshire Sheet 85*. Surveyed 1853 (Southampton)
- Ordnance Survey, 1892a, *County Series 1:2500, Yorkshire (North Riding) Sheet LXXXIV.4*. Surveyed 1891 (Southampton)
- Ordnance Survey, 1892b, *County Series 1:2500, Yorkshire (North Riding) Sheet LXXXV.1*. Surveyed 1891 (Southampton)
- Ordnance Survey, 1912a, *County Series 1:2500, Edition of 1912, Yorkshire (North Riding) Sheet LXXXIV.4*. Revised 1911 (Southampton)
- Ordnance Survey, 1912b, *County Series 1:2500, Edition of 1912, Yorkshire (North Riding) Sheet LXXXV.1*. Revised 1911 (Southampton)
- Ordnance Survey, 1929a, *County Series 1:2500, Edition of 1929, Yorkshire (North Riding) Sheet LXXXIV.4*. Revised 1927 (Southampton)
- Ordnance Survey, 1929b, *County Series 1:2500, Edition of 1929, Yorkshire (North Riding) Sheet LXXXV.1*. Revised 1927 (Southampton)
- Ordnance Survey, 1977, *National Grid Series 1:2500, Plan SE1685-1785*. Reconstituted from former County Series plans and revised 1976 (Southampton)
- Page, W (ed), 1913, *The Victoria History of the County of York: North Riding*, **3** (London: Constable)
- Page, W (ed), 1914, *The Victoria History of the County of York: North Riding*, **1** (London: Institute of Historical Research)
- Pevsner, N, 1966, *The Buildings of England. Yorkshire: the North Riding* (Middlesex: Penguin)
- RAF, 1940, Vertical aerial photograph, *4F/UK679:VA5 28-NOV-1940* (NMR Library no. 6337)

RAF, 1945, Vertical aerial photographs, *HAV/101:3043-5 03-APR-1945* (NMR Library no. 2801)

Raistrick, A, 1968, *The Pennine Dales* (London: Eyre and Spottiswoode)

RCHME, 1995a, Oblique aerial photograph, *SE 1785/75 NMR 12683/35 10-JUL-1995*

RCHME, 1995b, *The Yorkshire Dales Mapping Project: a report for the National Mapping Programme* (Swindon: RCHME archive report)

Robinson, D (ed), 1998, *The Cistercian Abbeys of Britain* (London: Batsford/English Heritage/Historic Scotland/Cadw)

Taylor, C C, 1975, *Fields in the English Landscape* (London: Dent)

APPENDIX 1: Table of NMR numbers linked to this site

SITE NAME	COUNTY	DISTRICT	PARISH
Jervaulx Abbey	North Yorkshire	Richmondshire	East Witton Out

NMR No.	CATALOGUE No.	NGR	SITE NAME/DESCRIPTION
SE 18 NE 1	BC2	SE 1722 8558	Jervaulx Abbey
SE 18 NE 5	BC4	SE 1697 8567	The Old Gatehouse
SE 18 NE 122	GS21	SE 1725 8571	19th-century gazebo
SE 18 NE 123	WF1/DM1	SE 1705 8537	Monastic reservoir/mill pond
SE 18 NE 139	FS1	SE 171 855	Probable pre-medieval field system
SE 18 NE 140	TR1	SE 1710 8542	Medieval (pre-monastic) road
SE 18 NE 141	TR2/WF7	SE 1720 8555	Medieval (pre-monastic) road, possibly reused as a monastic leat
SE 18 NE 142	TR3	SE 1718 8532	Medieval (pre-monastic) road
SE 18 NE 143	TR4	SE 1711 8538	Medieval (pre-monastic) road
SE 18 NE 144	TR5	SE 1713 8537	Medieval (pre-monastic) road
SE 18 NE 145	BC1	SE 1713 8535	Medieval (pre-monastic) building platform

SE 18 NE 146	PF1	SE 1702 8547	Medieval (pre-monastic) strip lynchets
SE 18 NE 147	PF2	SE 1744 8582	Medieval (pre-monastic) ridge-and-furrow
SE 18 NE 148	BF1	SE 172 856	Jervaulx Abbey precinct bank/wall
SE 18 NE 149	—	SE 1693 8574	Probable site of Abbey gatehouse
SE 18 NE 150	—	SE 1751 8573	Possible site of gate in precinct wall
SE 18 NE 151	BC3	SE 1709 8586	Probable site of abbey mill
SE 18 NE 152	BC5	SE 1699 8561	Building platform, probably monastic
SE 18 NE 153	BC6	SE 1708 8557	Building platform, probably monastic
SE 18 NE 154	BC7	SE 1708 8552	Building platform, probably monastic
SE 18 NE 155	BC8	SE 1714 8549	Rectangular building, probably monastic
SE 18 NE 156	BC9	SE 1716 8543	Rectangular building, probably monastic
SE 18 NE 157	BC10	SE 1720 8540	Complex of two or more rectangular buildings; probably monastic
SE 18 NE 158	BC11	SE 1710 8562	Complex of small rectangular buildings and/or yards; probably monastic.
SE 18 NE 159	BC12	SE 1709 8565	Complex of small rectangular buildings and/or yards; probably monastic

SE 18 NE 160	BC13	SE 1709 8567	Small rectangular building or yard; probably monastic
SE 18 NE 161	—	SE 175 855	Finds of slag indicating possible site of monastic bloomery
SE 18 NE 162	TR6	SE 1716 8542	Monastic/ post-Dissolution road
SE 18 NE 163	TR7	SE 1709 8566	Monastic road
SE 18 NE 164	TR8	SE 1740 8579	Monastic/ post-Dissolution road
SE 18 NE 165	TR9	SE 1751 8565	Monastic road
SE 18 NE 166	TR10	SE 1749 8586	Monastic road
SE 18 NE 167	TR11	SE 1755 8556	Monastic road
SE 18 NE 168	WF2	SE 1702 8562	Abbey leat/mill race
SE 18 NE 169	WF3	SE 1726 8574	Abbey drain
SE 18 NE 170	WF4	SE 1795 8586	Abbey outfall drain
SE 18 NE 171	WF5	SE 1730 8589	Abbey mill tail race
SE 18 NE 172	WF6	SE 1726 8565	Abbey leat, later part of the post-Dissolution formal gardens
SE 18 NE 173	WF8	SE 1731 8565	Abbey fishponds/ post-Dissolution ornamental ponds
SE 18 NE 174	BC14	SE 1725 8568	Post-Dissolution great house
SE 18 NE 175	BC15	SE 1735 8578	Possible post-Dissolution coach house/stable block

SE 18 NE 176	GC1-14; GP1-3 GS1-19; WF8-13	SE 1733 8569	Post-Dissolution formal gardens
SE 18 NE 177	GS7	SE 1712 8563	16th-century garden pavilion
SE 18 NE 178	GS9	SE 1753 8570	16th-century garden pavilion
SE 18 NE 179	GS4	SE 1748 8576	16th-century garden gazebo
SE 18 NE 180	GS14	SE 1704 8542	Probable site of 16th-century garden summer house
SE 18 NE 181	GS17	SE 1744 8591	Probable site of 16th-century garden summer house
SE 18 NE 182	BF2	SE 1755 8566	Probable 16th-century garden boundary
SE 18 NE 183	TR12	SE 1726 8555	Approach road to post-Dissolution great house
SE 18 NE 184	TR13	SE 1735 8563	Probable approach road to post-Dissolution coach house
SE 18 NE 185	BC16	SE 1708 8587	Close or field - possible site of a building shown in 1627
SE 18 NE 186	BC18	SE 1730 8585	Post-medieval farmstead
SE 18 NE 187	BC19	SE 1706 8572	Post-medieval farmstead
SE 18 NE 188	BC20	SE 1699 8564	Post-medieval building
SE 18 NE 189	BC17	SE 1698 8581	Jervaulx Hall
SE 18 NE 190	BC17	SE 1695 8580	The Old Hall

SE 18 NE 191	PF3	SE 1722 8535	Ridge-and-furrow ploughing, probably post-medieval
SE 18 NE 192	—	SE 176 856	Jervaulx Park
SE 18 NE 193	TR19	SE 1765 8558	19th-century road
SE 18 NE 194	BC21	SE 1753 8572	19th-century icehouse
SE 18 NE 195	GS20	SE 1703 8587	19th-century gazebo
SE 18 NE 196	GS22	SE 1737 8584	Site of 19th-century gazebo
SE 18 NE 197	WF14	SE 1698 8584	19th-century reservoir
SE 18 NE 198	AS1-AS10	SE 1728 8556 (GCE)	WW2 ammunition stands
SE 18 NE 199	BC22	SE 1752 8558	Site of WW2 hut
SE 18 NE 200	BC23	SE 1749 8556	Building platform; probably of WW2 date
SE 18 NE 201	BC24	SE 1748 8545	WW2 hut

APPENDIX 2: List of RCHME site photography

List of RCHME ground photography of Jervaulx Abbey. Job number 99/00607, taken 21 January 1999

NMR Frame Reference	Subject
AA99/03550	THE MONASTIC FISHPONDS FROM THE W
AA99/03551	THE MONASTIC FISHPONDS FROM THE NW
AA99/03552	THE MONASTIC FISHPONDS FROM THE NW
AA99/03553	THE MONASTIC FISHPONDS FROM THE NW
AA99/03554	THE ABBEY RUINS AND 16TH CENTURY FORMAL GARDENS FROM THE S
AA99/03555	THE DAM TO THE MONASTIC RESERVOIR FROM THE E
AA99/03556	LOOKING N TOWARDS THE OLD GATEHOUSE ALONG THE PRE MONASTIC ROAD REUSED AS A LATER LEAT
AA99/03557	LOOKING SE ALONG THE TOP OF THE DAM TO THE MONASTIC RESERVOIR
AA99/03558	THE NORTH WALL OF THE NAVE OF THE ABBEY CHURCH SHOWING STACKED MASONRY
AA99/03559	VIEWING PLATFORM GS8 AT THE EAST END OF THE 16TH CENTURY FORMAL GARDENS WITH THE LATER ICEHOUSE TO THE N
AA99/03560	MARK HILL FROM THE EAST
AA99/03561	THE ENTRANCE TO THE 19TH CENTURY ICEHOUSE FROM THE N
AA99/03562	THE 16TH CENTURY FORMAL GARDEN COMPARTMENT GC2 LOOKING SW FROM THE ESKER
AA99/03563	LOOKING E TOWARDS MARK HILL FROM THE CHANCEL OF THE ABBEY CHURCH
AA99/03564	THE WEST SIDE OF THE CUT THROUGH THE ESKER NORTH OF THE ABBEY CHURCH LOOKING NW
AA99/03565	THE RUINS OF THE ALLEGED ABBEY MILL WITH ADJACENT PONDS AND LEATS FROM THE SE AFTER HEAVY RAIN
AA99/03566	THE RUINS OF THE ALLEGED ABBEY MILL WITH ADJACENT PONDS AND LEATS FROM THE S AFTER HEAVY RAIN
AA99/03567	THE RUINS OF THE ALLEGED ABBEY MILL AND ADJACENT GARDEN FEATURES FROM THE E AFTER HEAVY RAIN
AA99/03568	THE ABBEY RUINS AND 16TH CENTURY FORMAL GARDENS FROM THE SOUTH

AA99/03569	LOOKING NORTH WEST ACROSS THE MONASTIC RESERVOIR AND DAM TOWARDS THE ABBEY RUINS AND 16TH CENTURY FORMAL GARDENS
AA99/03570	THE MONASTIC RESERVOIR AND DAM FROM THE W
AA99/03571	MONASTIC RESERVOIR AND DAM PLUS EARTHWORKS TO THE S FROM THE N
AA99/03572	THE RUINS OF THE CONVENTUAL BUILDINGS OF JERVAULX ABBEY AND FORMAL GARDEN EARTHWORKS FROM THE SW
AA99/03573	THE OLD GATEHOUSE FROM THE S
AA99/03574	THE OLD GATEHOUSE FROM THE NE
AA99/03575	MARK HILL FROM THE EAST
AA99/03577	LOOKING SE ALONG THE TOP OF THE DAM TO THE MONASTIC RESERVOIR
AA99/03578	LOOKING NORTH TOWARDS THE OLD GATEHOUSE ALONG THE PRE MONASTIC ROAD REUSED AS A LATER LEAT
AA99/03579	MONASTIC RESERVOIR AND DAM PLUS EARTHWORKS TO THE S FROM THE N
AA99/03580	THE ABBEY RUINS AND 16TH CENTURY FORMAL GARDENS FROM THE S
AA99/03581	THE ABBEY RUINS AND 16TH CENTURY FORMAL GARDENS FROM THE S
AA99/03582	LOOKING EAST TOWARDS MARK HILL FROM THE CHANCEL OF THE ABBEY CHURCH
AA99/03583	LOOKING NW ACROSS THE MONASTIC RESERVOIR AND DAM TOWARDS THE ABBEY RUINS AND 16TH CENTURY FORMAL GARDENS
AA99/03584	THE RUINS OF THE CONVENTUAL BUILDINGS OF JERVAULX ABBEY AND FORMAL GARDEN EARTHWORKS FROM THE SW



Figure 12.
 RCHME earthwork plan of the west end of
 Jervaux Park (surveyed at 1:1000 scale,
 reproduced here at 1:2500).



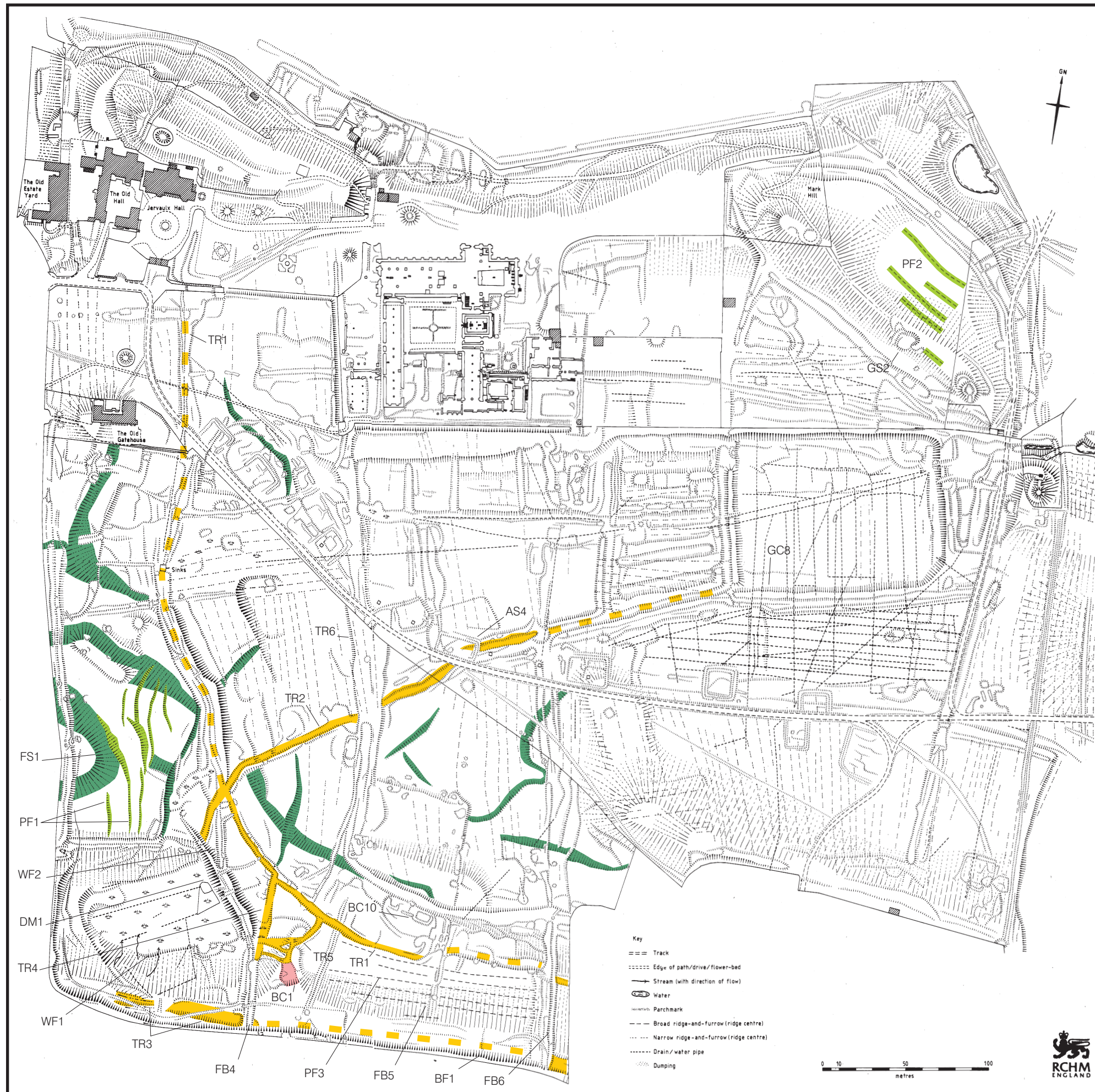


Figure 13.
Interpretative diagram of Period 1 features
described in the text: The landscape pre c 1156

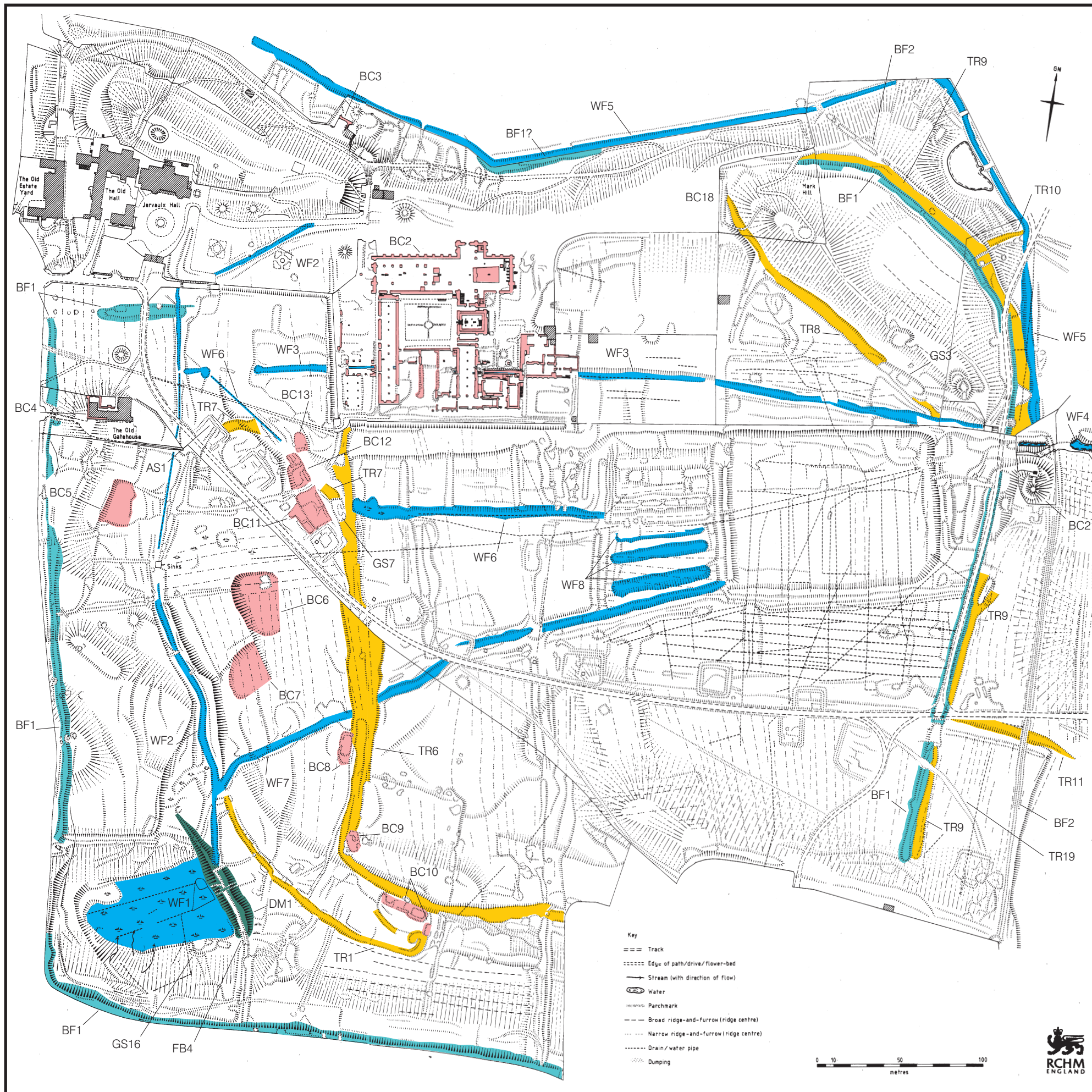


Figure 14.
 Interpretative diagram of Period 2 features
 described in the text:
 Jervaulx Abbey, c 1156-1537

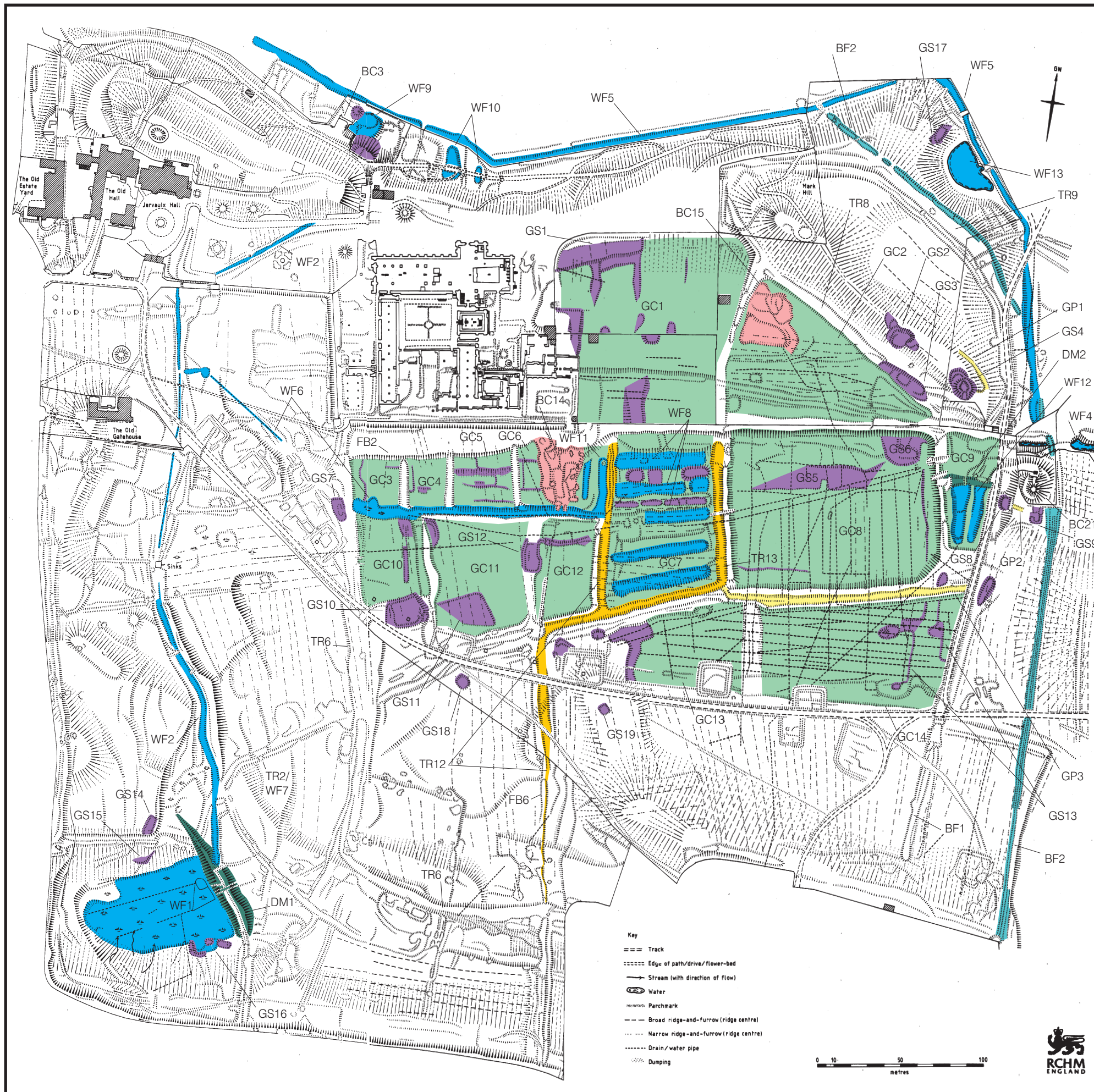


Figure 15.
 Interpretative diagram of Period 3 features
 described in the text:
 Post-Dissolution house and gardens, 1537-1627

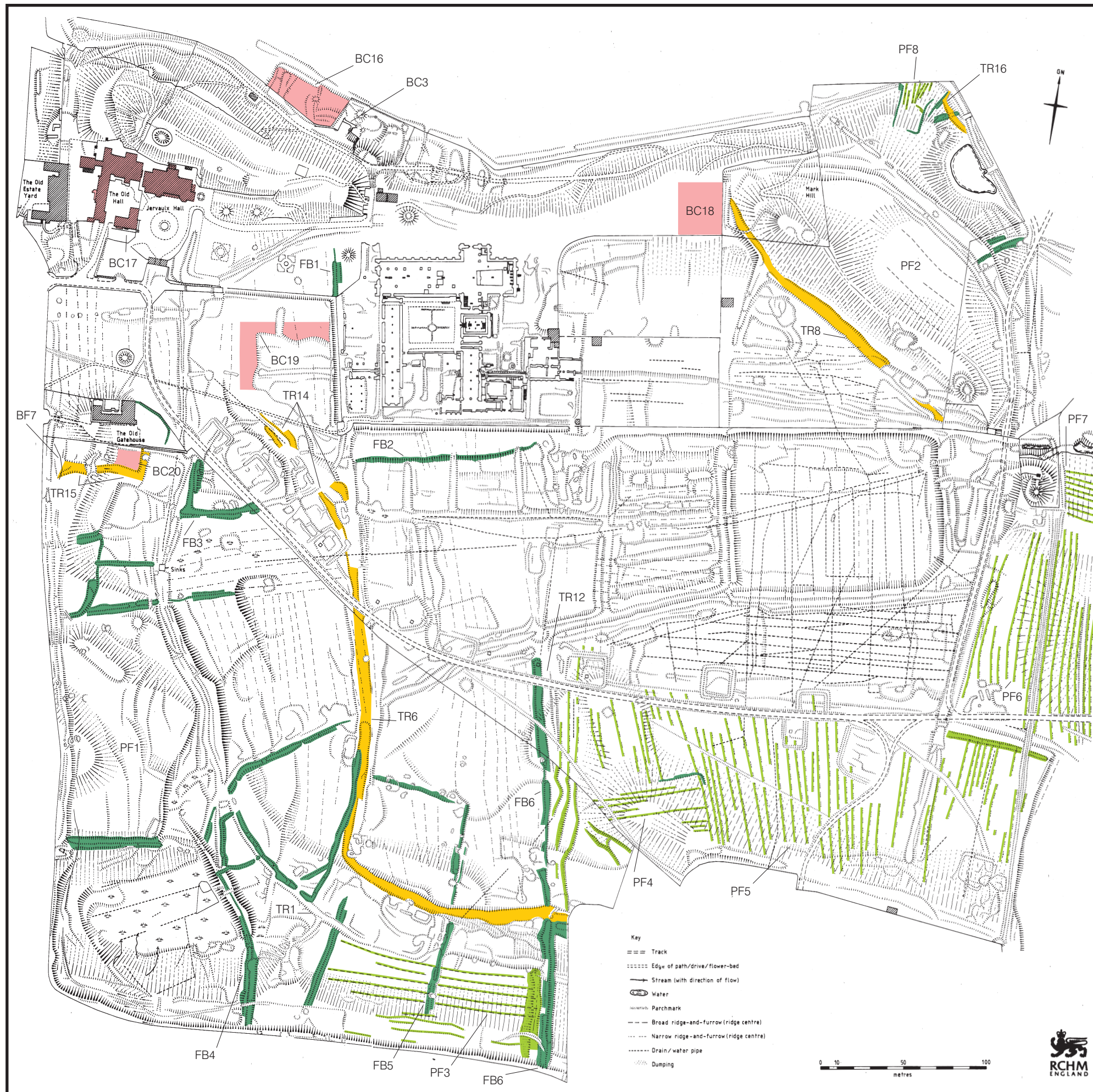


Figure 16.
 Interpretative diagram of Period 4 features
 described in the text:
 Tenanted farms and fields, c 1627-1805



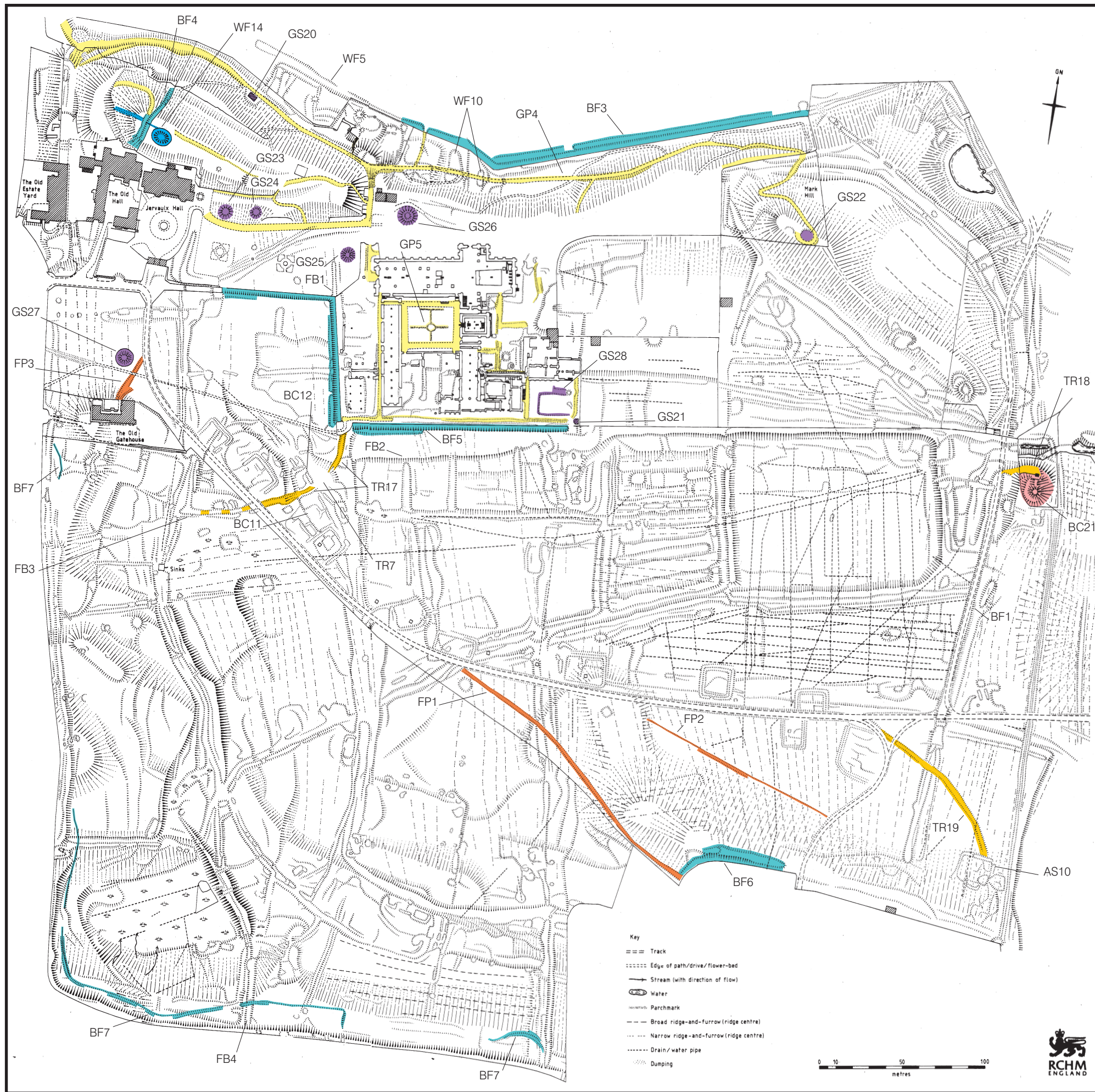


Figure 17.
 Interpretative diagram of Period 5 features
 described in the text:
 Jervaulx Hall and Park, c 1805-1939

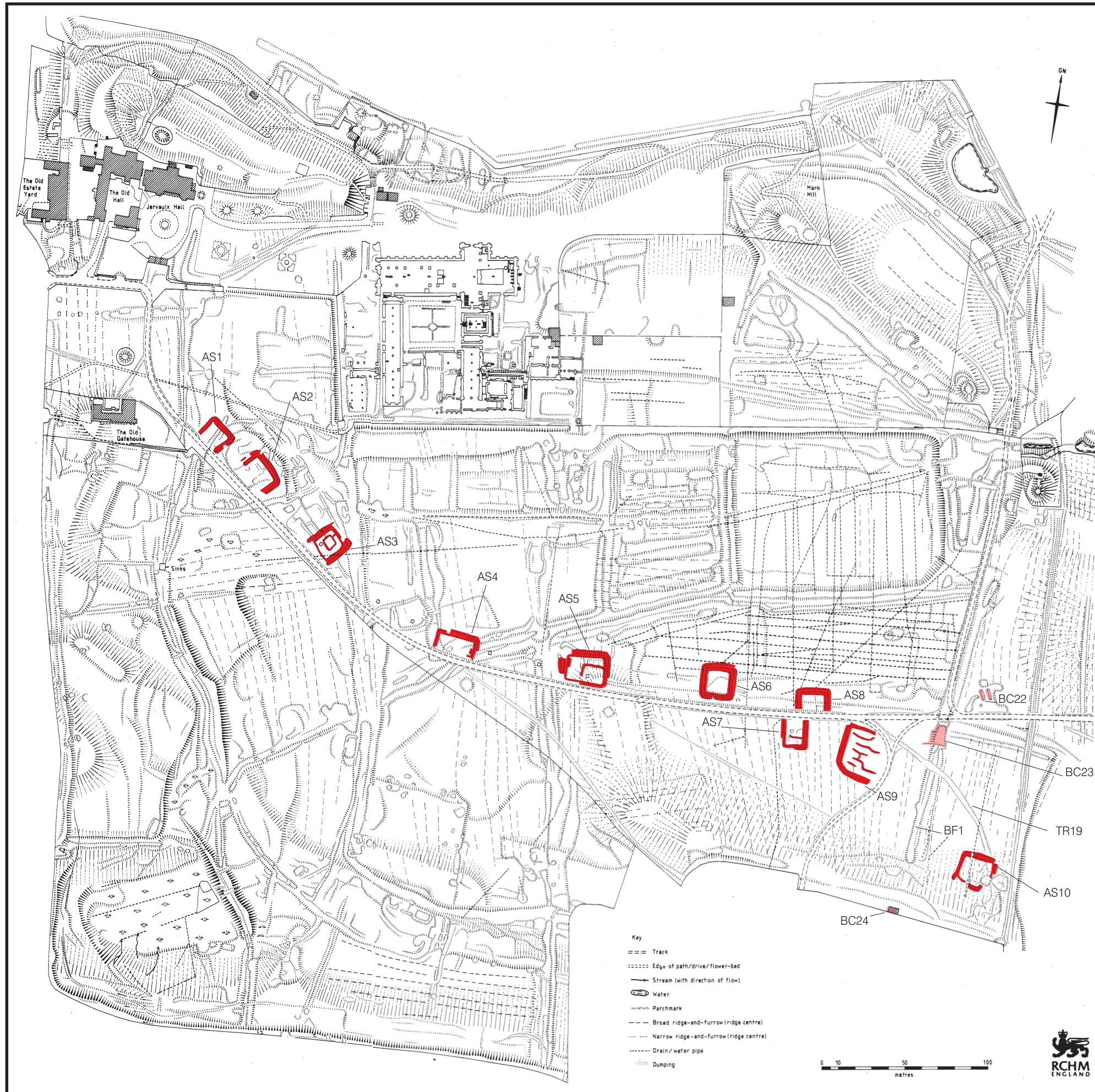


Figure 18.
 Interpretative diagram of Period 6 features
 described in the text:
 Second World War, 1939-1945



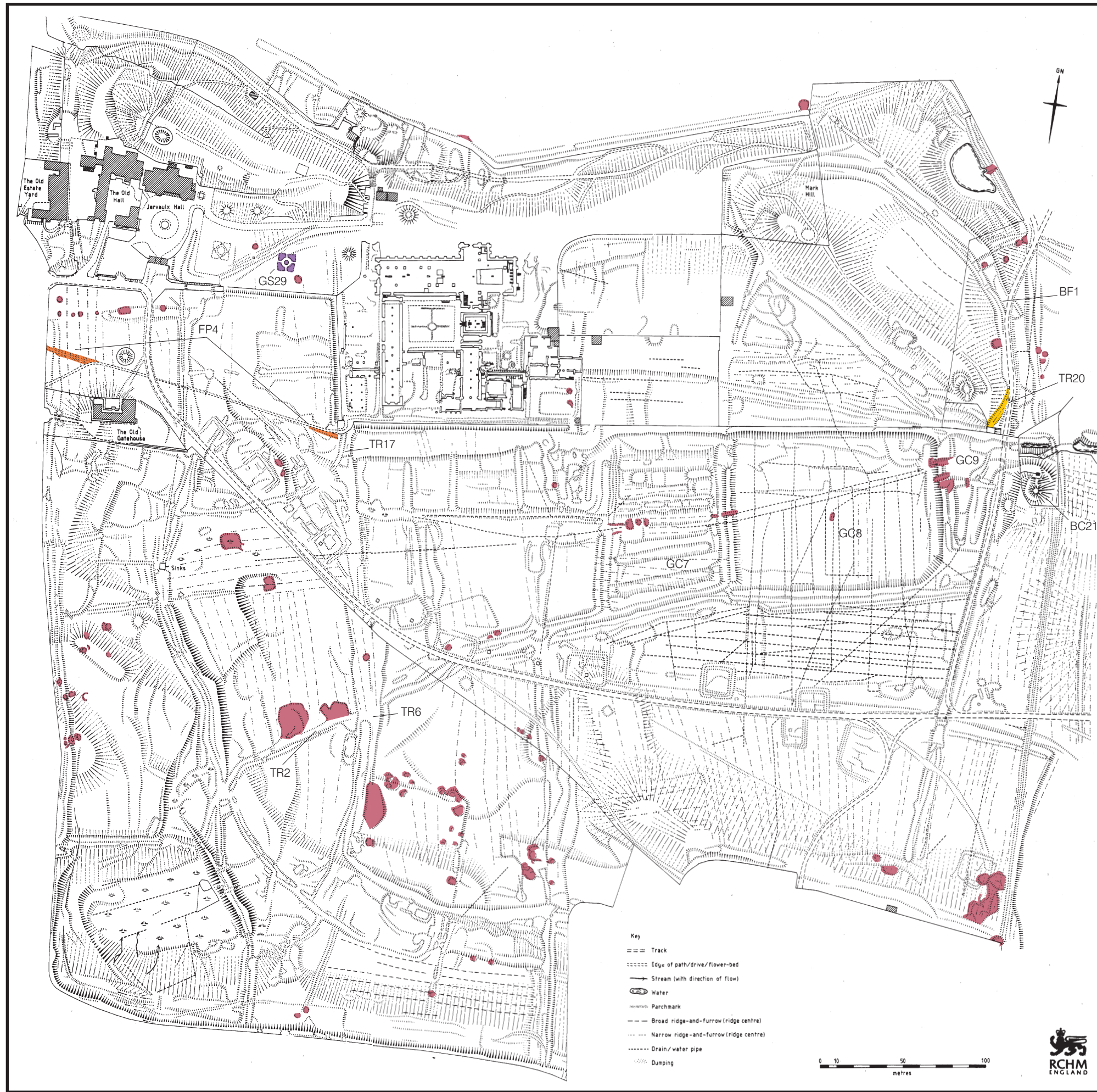


Figure 19.
 Interpretative diagram of Period 7 features
 described in the text:
 Modern developments, c 1946-1998