

RIEVAULX ABBEY PRECINCT BOUNDARY
(NORTH-WEST SECTION),
RIEVAULX, NORTH YORKSHIRE

ARCHAEOLOGICAL WALKOVER SURVEY
AND MANAGEMENT RECOMMENDATIONS



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1 EDAS Photographic Record

EXECUTIVE SUMMARY

In January 2013, Ed Dennison Archaeological Services Ltd (EDAS) were commissioned by Mr Fred Fairburn of Harriet Air Farm to undertake an archaeological walkover survey of a c.400m length of the precinct boundary of Rievaulx Abbey, near Helmsley, North Yorkshire (NGR SE 57095 85435 to SE 57454 85383). The work was required to inform proposed conservation/management measures for this part of the boundary under a Natural England Historical and Archaeological Feature Protection Scheme.

Within the survey area, the precinct wall was built of coursed and squared sandstone, and had an average width of c.1.2m across the base. It survives to a maximum height of 1m in places, but was generally much lower and in places only footings were evident.

The route and placement of the wall was adapted to suit the local topography. At its very lowest western end, it was set on a spread bank, possibly as a defence against flooding (Section A). Aside from this, much of the western half of the alignment (Sections B to E) was formed by a free-standing structure, with evidence for at least one episode of probable post-Dissolution repair (Section D2). As the wall ascended the sloping ground to the east, it appears to have partly formed a revetment wall, now collapsing, retaining the higher ground to the north. To the east again, only intermittent footings are visible on the crest of a substantial south-facing scarp (Sections H to I). The probable alignment and a scarp continues further to the south-east (Section K), although this differs slightly from the published accounts. At the east end of this section is one well-preserved but isolated c.10m length surviving as a c.1m high revetment wall. There are also two other sections of wall, a cross-wall at the west end forming part of a post-Dissolution boundary, and one near Arden Lane Gate which might be associated with an entrance into the precinct.

Many of the stones are now covered with a thick coating of moss, and there are also a number of large mature, potentially veteran, trees growing directly on the wall line, many of which exhibit evidence of historic management, such as coppicing. Both may be of ecological significance, and they contribute to the visual aspects of the wall and its setting. The coppiced trees may be associated with the post-Dissolution industrial processes that took place within the former precinct. Other earthworks on the north side of the wall may represent a holloway and agricultural terraces.

A series of management recommendations are proposed for the continued protection, preservation and enhancement of the wall alignment.

1 INTRODUCTION

Reasons and Circumstances for the Project

- 1.1 In January 2013, Ed Dennison Archaeological Services Ltd (EDAS) were commissioned by Mr Fred Fairburn of Harriet Air Farm (tenant farmer) to undertake an archaeological walkover survey and inspection of a c.400m length of the precinct boundary of Rievaulx Abbey, near Helmsley, North Yorkshire (NGR SE 57095 85435 to SE 57454 85383).
- 1.2 The work was required to inform proposed conservation/management measures for this part of the monastic precinct boundary under a Natural England Historical and Archaeological Feature Protection Scheme. The scope of the work was not defined by an EDAS methods statement, but a methodology was agreed following discussions with EDAS, Mags Waughman (Monument Management Scheme Officer of the North York Moors National Park Authority (NYMNP)) and Dr Margaret Nieke (Historic Environment Lead Adviser for Natural England), after initial advice from English Heritage.

Site Location and Summary Description

- 1.3 The c.400m long section of the precinct boundary forming the subject of this report is located some 600m to the north-west of the main monastic claustral complex; it represents the northern edge of the large precinct area (see figure 1). The west end commences immediately adjacent to an angle in the River Rye and it runs almost due east, before reaching the south side of Arden Lane just to the east of Arden Lane Gate (see figure 2). There are substantial earthworks both above (north) and below (south) of the precinct boundary within this area. The boundary then runs south-east along the south side of Arden Lane before meeting the property known as Abbots Cottage, and leaving the survey area. The boundary is set entirely within pasture, and has varying degrees of tree and scrub cover both on and immediately adjacent to its line.
- 1.4 The boundary forms the northern edge of a large area, roughly corresponding to the precinct and monastic context, which is protected as a Scheduled Monument (National Heritage List for England site 1012065); this scheduled area was most recently amended in June 1992. The section of boundary subject to this current survey is also registered on the North York Moors Historic Environment Record (site 4898), and is included in the general entry for Rievaulx Abbey on English Heritage's National Monuments Record (site SE 58 NE 6).

Aim of the Project

- 1.5 The aim of the project was to:
 - provide a condition survey of part of the precinct boundary;
 - identify threats to the archaeological integrity and significance of the monument;
 - identify and produce a series of recommendations for proposed conservation and/or management measures.

Survey Methodologies

Desk-top Assessment

- 1.6 No new research or collation of existing historical and archaeological information relevant to the survey area was required to be undertaken as part of the project. However, reference has been made to some existing information, such as the English Heritage Rievaulx Abbey Conservation Plan (Caroe & Partners 2000), the current English Heritage property guidebook (Fergusson *et al* 2006), and other general works.

Condition Survey

- 1.7 A general walkover survey was undertaken of the precinct boundary, within the survey area as defined above. A modern 1:1250 scale Ordnance Survey map was then used as a base for a more detailed examination, and detailed notes were made on the boundary's condition and form, and extent of vegetation cover and stock erosion. In order to aid the location of individual features, a series of 100m tapes were laid out parallel to the boundary, from west to east; however, the lie of the land means that specific features can only be generally located in this way, and the results of the walkover should not be taken to be a metrically accurate survey of this part of the precinct boundary.
- 1.8 The written field observations were supplemented by a detailed photographic record. Where possible, each identified feature or component within the survey area was photographically recorded using a digital camera with 10 megapixel resolution. English Heritage photographic guidelines were followed (English Heritage 2007, 14), and each photograph was normally provided with a scale. More general digital photographs were also taken showing the landscape context of the area and of specific features. A total of 78 photographs were taken. All photographs were clearly numbered and labelled with the subject, orientation, date taken and photographer's name, and were cross referenced to digital files etc (see Appendix 1).
- 1.9 The walkover and photographic survey was undertaken on 8th February 2013, in dry and bright conditions with a light dusting of snow.

Survey Products

Archaeological Survey Report

- 1.10 An EDAS archive survey report has been produced, based on the results of the information obtained during the field visit. The report assembles and summarises the available evidence for the survey area in an ordered form, synthesises the data, comments on the quality and reliability of the evidence, and how it might need to be supplemented by further archaeological work. The report also contains illustrative plans and photographs as appropriate; the main plan showing the results of the condition survey was produced from an enlargement of the 1:1250 scale field base, which was then subsequently reduced to A3 size.
- 1.11 The survey report also contains a number of recommendations for proposed conservation and/or management measures, based on a combination of the field observations and site photographs; these recommendations would lead to the 'ideal management' of the monument. These recommendations were discussed with all relevant parties, including Mr Fairburn (tenant farmer), the NYMNPA,

Natural England and English Heritage prior to the production of the final survey report.

Archaeological Survey Archive

- 1.12 A properly ordered and indexed project archive (composed of paper, magnetic and plastic media) was deposited with the NYMNP at the end of the project (EDAS site code RPB 13). Digital copies of the report (pdf) and photographs (jpegs) were also distributed to the relevant parties listed above.

2 HISTORICAL BACKGROUND

Rievaulx Abbey

- 2.1 Rievaulx Abbey was founded in 1132 as the first monastery of the Cistercian order in the north of England. An initial colony of 12 monks from Clairvaux in Burgundy (France) established what was to become one of the most powerful and spiritually renowned centres of monasticism in Britain. At its peak in the 1160s the abbey was home to 650 men, who passed their lives in an ordered daily sequence of religious services, reading and manual work. Many of the buildings which survive today were constructed by the third abbot, Aelred (1147-67), who became the most prominent religious figure of his day in England (Fergusson *et al* 2006, 3).
- 2.2 The abbey's initial patron was Walter Espec, lord of Helmsley, who gifted the monks some 405ha (1,000 acres) of land on the east side of the River Rye. This provided a valley location, and additional land was subsequently obtained on the west side of the river from Old Byland abbey. The Cistercians insisted that their abbeys should be self-sufficient, rather than living off rents, tithes and feudal services as other monastic orders did. As a result, the monks engaged in milling, tanning, shoe and cloth making, and brewing within the monastic precinct, while outside they controlled fisheries, worked mines and stone quarries, bred horses and cattle, and farmed. The monks also earned a reputation for water control and management, and they diverted the course of the river in several places and constructed canals to the north and south of the abbey to provide a water supply to various mills and other industrial processes, and to enable building stone to be brought to the site. Central to the monastic economy was the creation of the grange or estate farm, and at its height Rievaulx had about 20 granges, varying in size between 150ha and 200ha (370-500 acres), scattered about the North York Moors with some further afield in West Yorkshire; these farms produced cereal crops and farmed sheep and cattle on an industrial scale (Fergusson *et al* 2006, 35-38; McDonnell 1963, 105-109).
- 2.3 The abbey declined in the latter part of the 13th century, particularly when disease decimated the large sheep flocks. The abbey was also attacked by the Scots in 1322, and the resident population was reduced by the Black Death - by the 1370s the community numbered only 15 monks and three lay brothers. Many of the outlying granges were sold or rented out, and some of the monastic buildings were demolished or reduced in size. Some improvement followed, and increased rents from tenanted lands and industrial activity provided funds for renovations and adaptations (Fergusson *et al* 2006, 40-41; McDonnell 1963, 109-110).
- 2.4 The abbey was finally suppressed in December 1538, as part of the nation-wide 'Dissolution of the Monasteries' carried out by order of Henry VIII, and 406 years of monastic life at Rievaulx were brought to a close. The site and estates were subsequently sold to Thomas Manners, 1st Earl of Rutland, and he oversaw the

demolition or partial dismantling of most of the monastic buildings. The various foundries, forges and mill were however expanded (as they made a profit), although a shortage of fuel and raw materials meant that all activity had ceased by the 1650s. The valley and estates were then sold to Charles Duncombe in 1695 for an unprecedented £90,000, and the family established themselves at nearby Helmsley. In the 1750s Thomas Duncombe created a picturesque landscape garden overlooking the ruins, and from the late 18th century the abbey became an increasingly popular destination for travellers (Fergusson *et al* 2006, 42-45).

The Precinct

- 2.5 The core of the monastic abbey lay at the centre of a walled precinct some 37ha (92 acres) within which the monks cleared the trees and created closes for livestock, agricultural buildings, industrial areas, meadows, orchards and gardens (see figure 3). A considerable amount of information about the disposition of buildings and use of the precinct can be obtained from the 1538 Dissolution documents, and the whole precinct was the subject of an archaeological earthwork survey by Caroline Atkins in 1995-96 (Coppack 1986; Fergusson & Harrison 1999, 175-186) (see figure 4).
- 2.6 The large precinct was divided into an inner and outer court, each with access controlled by a gatehouse. The main entrance into the complex lay on the north-east side, on the present Rievaulx Bank road. All the buildings of the inner court, which included the guest hall, bakehouse, brewhouse, kiln house, stables etc, lie under the present Rievaulx village (Fergusson *et al* 2006, 31).
- 2.7 The outer court, used for agricultural and industrial work, fell into three areas. In the north-west part lay the great swinehouse, corn mill, and common stable. To the south was the tannery, with an associated bark mill, lime house and tanners' house. South-west of these was the abbey's fulling mill, where woollen cloth was bleached and wool stored for export. Further south was a water-powered forge and mill pond. Other parts of the precinct, mainly bordering the river, were drained to create water meadows (Fergusson *et al* 2006, 31; see figure 3).
- 2.8 Apart from the great swinehouse and corn mill, much of the north-west part of the outer precinct would have been dominated by meadow and pasture, especially the low-lying ground on the south-west side of the canal which represents the former course of the River Rye; part of this area belonged to the Griff and Newlass grange estates rather than the abbey *per se*, and some of the earthworks may relate to post-monastic activity (Caroe & Partners 2000 vol 2, 22). Some of the 1538 enclosure names in the steeply sloping ground between the precinct wall and the canal are significant, for example 'Common Stable Garth' (no. 59 on figure 4), 'Suppyrer Close' (no. 58), 'Clypping Garth' (no. 61) and 'Shyer Close', providing an indication of the agricultural activity here. One further name, 'Old Walls' (no. 60 on figure 4) presumably relates to the precinct boundary which passes along its north side (Coppack 1986, 129).
- 2.9 The walled boundary of the precinct, now only survives in a few sections up to 1m high, primarily that c.400m section subject to the current survey and a longer length to the north-east, east and south-east of the Abbey church. The wall itself probably dates to before the end of the 12th century. It would have been maintained throughout the medieval period, and it does not appear to have been subject to major alteration since being laid out, although it fell into disrepair after the Dissolution (Caroe & Partners 2000 vol 2, 21-22). It is not known how high the precinct wall would have been originally, but it is likely to have been a substantial

and impressive boundary - parts of the original precinct wall at Fountains Abbey, for example, are still 1.1m wide and up to 4.0m high, topped with coping stones (English Heritage Archive site SE 26 NE 40).

3 DESCRIPTION OF THE PRECINCT BOUNDARY

Introduction

- 3.1 The length of the precinct boundary which was surveyed as part of the current work is described in detail below, from west to east. For ease of description, the boundary has been sub-divided into a number of different sections, based on characteristics such as form and extent of survival; each section has been given a letter identifier e.g. **(A)**. It should be noted that these sub-divisions are for descriptive purposes only, and do not infer any relative dating or sequence of construction along the precinct boundary. Within each section, individual trees or features specifically referred to in the text have also been given identifiers, e.g. **(A1)** etc.
- 3.2 Throughout the following description, reference is also made to the digital photographic record (see Appendix 1). These photographs are referenced in the following text in italic type using square brackets, the numbers before the stroke representing the film number and the number after indicating the frame e.g. [2/1]. Reference should also be made to figure 5 which depicts the location of the letter identifiers. Finally, in the following text, 'modern' is taken to mean dating to after c.1945.

Section A (West End) - Earthwork and Cross-Wall

- 3.3 Within the survey area, the very western c.5m end of the precinct boundary appears to run as a spread bank alongside, above and parallel to the northern side of the straight valley-bottom watercourse sometimes known as the 'canal'. Traditionally suggested to have been used to transport stone from quarries to the claustral complex, this canal could also have supplied water to the Abbey's mills and internal water supply system (Caroe & Partners 2000, vol 2, 20). The published plan of the precinct boundary (Fergusson *et al* 2006, 30; see figure 3) suggests that the canal extended further to the west, just beyond the junction with the boundary. However, the precise relationship between the end of the canal, any channel/sluice arrangement adjacent to the river, and the end of the precinct boundary is difficult to determine without a detailed survey, partly because of an eroding footpath which crosses the very western end of the canal [1/816]; some stone in the south side of the canal may be associated with the precinct wall, but it is difficult to be sure [1/815].
- 3.4 The precinct boundary then angles to the north-east, diverging from the watercourse, to run east for a distance of c.20m, before its line is lost amongst an area of modern disturbance, including minor vehicle rutting [1/813; 1/814]. However, to the east of this disturbance, the boundary line is again visible as a spread, flat-topped bank - the bank measures 1.80m wide across the top and c.4.30m across the base, and stands up to 0.80m in height, the southern scarp being more prominent than the northern scarp [1/801; 8/812]. A line of flat stones is visible intermittently along the centre line of the flattened top, indicating that this section of the boundary was almost certainly also once surmounted by a wall [1/800]. The bank can be traced for c.24m to the east of the vehicle rutting, before it meets a north-east/south-west aligned field boundary (hereafter referred to as

the 'cross-wall') [1/799]. This bank is shown as a field boundary on an 1806 estate plan (Caroe & Partners 2000 vol 2, fig. 5).

- 3.5 To the south of the precinct bank, the cross-wall is largely marked by an intermittent line of hawthorn trees [1/798], but across the bank and to the north, it is evident that the precinct boundary wall was demolished, and stone taken from it to build the cross-wall [1/795]. This section of cross-wall is crudely faced immediately adjacent to the precinct boundary, the facing standing up to two courses in height [1/796] but it deteriorates into little more than a west-facing rubble scarp as it moves northwards [1/797].

Sections B to F - Predominantly Upstanding Wall

- 3.6 Beyond (east of) the cross-wall, the precinct boundary is marked by a decayed wall line (**Section B**), once a free-standing structure. Here, the wall has a total width of c.1m, and is faced on both sides with coursed squared blocks of sandstone, regularly formed, and measuring up to 0.50m long by 0.35m wide by 0.20m deep. The wall, as elsewhere along the length of the precinct boundary that was surveyed, preserves little evidence for mortar. The north face is the better preserved, and stands up to two courses or 0.60m in height [1/793]. There appears to be either a stone outcrop or perhaps a roughly revetted edge to the immediate north of the north wall face, but its relationship to the precinct boundary is unclear.
- 3.7 The most prominent feature to the north of the precinct boundary here is a linear depression or gully, averaging 4.5m wide across the flattened base and defined by a steep south-facing scarp along the north side. This depression can be traced for some distance to the east, and has a spring along its line. However, water flowing from the spring is clearly not wholly responsible for creating the depression, as it continues well beyond the point where the spring is first visible. To the immediate south of the precinct boundary, there is another steep south-facing scarp, natural in origin, which diverges from the boundary line to run south-east.
- 3.8 Some c.10m to the east of the cross-wall, there is a large mature oak tree growing on the line of the precinct wall (**B1**) [1/791; 1/792]. The bole of the oak tree measures over 2m across, but the trunk has an average diameter of 0.8m [1/789]. To the east of this oak tree, at a point c.35m east of the cross-wall, the precinct boundary is again marked by a decayed wall [1/790]. Here the wall has an average face to face width of c.1m, and stands up to 0.6m in height; at one point near the east end of the section, the north face appears to survive up to four courses in height for a very short distance, although the upper courses may have been stacked back on top of the wall here subsequent to its collapse/demolition [1/784]. The south face is generally better defined and more regularly constructed within this part of the boundary [1/787; 1/788]. There is relatively little vegetation growing on the line of this section of the precinct boundary to the east or west of the oak tree [1/785]. However, there are two young hazel(?) saplings, either side of an old stock path across the wall [1/786].
- 3.9 Between c.35m and c.45m to the east of the cross-wall, there are five coppiced hazel/alder trees (**Section C**) directly on the line of the precinct boundary [1/780; 1/811]. The stools measures up to 0.80m across the base [1/781]. Between the coppiced trees, the wall is less well structurally preserved than to the west [1/779; 1/782]. It has an average face to face width of c.1 m, but the majority comprises a bank with a high rubble content standing up to 1m in height. Some of the rubble is scattered up to c.2m away from the north side of the alignment. As to the west,

some fallen material appears to have been piled back on top of the wall line at a date subsequent to its collapse/demolition. All the stones are heavily vegetated with moss. The linear depression/gully containing the watercourse continues parallel to the north side of this section.

- 3.10 Between c.45m and c.80m to the east of the cross-wall, the precinct boundary is again formed by a decayed wall (**Section D**), once a free-standing structure and the best preserved part within the whole of the survey area. Here, the wall has an average face to face width of 1.20m, and stands up to c.1m in height; it is set on a slight bank, probably largely formed by fallen stone. It is built of large, well coursed and squared blocks of stone, surviving generally up to two courses in height, but sometimes three, to the north face [1/775]; the south face is generally lower [1/778], but both faces have a thick covering of moss. A section of the north face (**D2**), c.7m in length, is set back 0.3m from the general wall line. Within this set back section, the wall face is well built, suggesting that it may be a later post-Dissolution, but perhaps still historic, episode of rebuilding or repair [1/776; 1/777]; this c.7m length does not have any fallen stone in front of the north face, unlike the adjoining lengths. Generally, within this section, the precinct boundary is intermittently covered with a scrub composed of young elders, hawthorns, brambles and rosehips [1/773]; there is a single large dead stump (**D1**) on the alignment. The linear depression/gully continues parallel to the north side of this section, and the spring in the base of the depression is first visible c.80m east of the cross-wall.
- 3.11 Between c.80m and c.100m east of the cross-wall, close to the spring, there are four mature hazels/alders on the line of the precinct boundary (**Section E**). Described from west to east, the westernmost pair is not coppiced, and both are growing on or very close to the line of the precinct wall [1/771; 1/772]. Both trees measure 0.80m in diameter towards the base, and are formed by tall stumps which have either been cut down or broken off, and have partly grown again from this reduced height. The eastern more widely spaced pair is coppiced, and both are growing directly on the precinct boundary [1/766; 1/767]; the western tree of the pair stands on a two to three course high part of the wall [1/769; 1/770]. Both coppiced trees have a stool measuring up to 0.90m across. There are two smaller coppiced trees between them, again on the boundary line, but both apparently largely dead [1/768]. Within this section, the wall was again once a free-standing structure, and has an average face to face width of 1.10m; a slight south-facing scarp to the south side was probably created by fallen stone. The north face survives up to 0.65m or three courses high, and is built of large, well coursed and squared blocks of stone with a thick covering of moss. The linear depression/gully continues parallel to the north side of this section, beyond the point where the spring is first visible. At the east end of this section, a prominent bank curves away from the line of the boundary (but is not joined to it) and runs on a south-west line towards the valley bottom watercourse.
- 3.12 Between c.100m to c.130m east of the cross-wall, only the north face of the precinct boundary wall is clearly visible (**Section F**). The central core and southern side have fallen away into a south-facing scarp to the immediate south of the wall line, which first starts to become visible here. There are some dead or fallen hawthorns and elders along this section of the boundary, but they are relatively few. There is a single active stock-erosion track (**F1**) at the east end of this section [1/758]. In addition, the linear depression/gully on the north side of the boundary fades out at the east end of this section [1/765], apparently running into a more prominent south-facing scarp, which curves around first to the north-west and then runs west; the scarp soon rises to over 2m in height and 4m in width to resemble a

holloway [1/763; 1/764]. Above this large scarp, there is at least one other less prominent parallel scarp, and together these features give the area to the north of the boundary a terraced or stepped appearance.

Sections G to J - Intermittent Wall Line

- 3.13 To the east of the stock-erosion track (F1), as far as c.145m east of the cross-wall, the precinct boundary wall is in very poor condition (**Section G**). The north face is visible only intermittently [1/759; 1/761; 1/762], but much of the main body of the wall appears to have collapsed/eroded down the scarp to the south side [1/760], which increases in height as it moves east; some of the rubble has tumbled up to 4m south away from the main alignment. The vegetation on the boundary line also gradually increases as it moves east, with a mixture of elder, hawthorn and rose-hip scrub [1/757]. At the east end of this section, two stock-erosion tracks (**G1**) cross the boundary line; the eastern of the pair is the more substantial, being up to 0.70m across [1/754; 1/755].
- 3.14 Beyond these stock-erosion tracks, as far as c.182m east of the cross-wall and c.60m west of a right-angle bend (see below), the precinct boundary wall is again in poor condition (**Section H**). Rather than once being a free-standing structure, as observed further to the west, it appears to have partly retained or revetted the ground to the north, effectively creating a lynchet - there is a difference of at least 1m in height between the ground to the north and the ground to the south. Subsequent collapse or demolition of the wall has created a south-facing scarp with a high rubble/stone content, placed at the top of the more substantial scarp to the south of the boundary line. The north face of the wall is visible only intermittently here, but as it moves east the wall becomes slightly better preserved. Occasionally both faces are visible (largely in plan only), set c. 1m apart [1/746]. In very limited stretches, the south face of the wall survives up to two courses (0.70m) in height [1/749; 1/750]. There are many small hawthorn trees with exposed roots on or very close to the wall line within this section of the boundary [1/752; 1/753]. At least one larger example of these trees has recently blown over, dislodging some of the stone blocks in the process, and the gap has allowed a minor but active stock-erosion path to become established (**H3**) [1/747]. The same vegetation continues down the c.2.50m high scarp to the south of the wall line, which is also burrowed by rabbits in several places. Approximately half way along this section, the precinct boundary is crossed by a minor stock-erosion track (**H1**) [1/751], and there is another more recent track adjacent to the wind-blown tree noted above. The east end of this section is marked by a leaning coppiced hazel/alder (**H2**), growing on the wall, and with a stool measuring 0.70m across [1/745].
- 3.15 To the east of the stock-erosion track (H1), as far as the base of a steep west-facing scarp (**Section I**), the precinct boundary wall is largely lost, the line being marked only by an intermittent stone rubble spread [1/744]. There is a minor active stock-erosion track (**I1**) at the western end of this section [1/743]. The wall is only clearly visible where it is crossed by a c.1m wide stock-erosion track (**I2**), erosion creating a terrace in the south-facing scarp on the south side of the precinct boundary [1/741]. Here, the wall is visible in plan only for a length of 3m, but has a clear face-to-face width of c.1m [1/742] - this visible part is located on the top of the main scarp but at the base of the steep west-facing scarp.
- 3.16 As the boundary climbs the scarp (**Section J**), the wall line is lost altogether, perhaps with the exception of several stones visible within the scarp itself [1/739], close to a wind-thrown coppiced hazel/elder (**J1**) [1/738]. After this, the scarp

curves around to become south-facing, and runs to the east. There are several mature hawthorn trees along the top of the scarp here, together with much hawthorn/elder scrub, some of which has been blown over or collapsed. The scrub continues down the scarp, which is again burrowed by rabbits in several places. However, for a c.10m length along the top of the scarp the wall cannot be seen [1/737].

- 3.17 After a distance of c.10m, the precinct boundary appears to turn through a near right-angle to run to the north-east (**J2**). Here, a very shallow, very spread bank can be followed for c.12m along this return [1/734; 1/735], until it reaches the base of a south-facing scarp, 3.8m to the south of the modern post-and-rail fence on the south side of Arden Lane. This scarp contains a high proportion of stone rubble, and a single low hawthorn bush [1/730; 1/731]. Just to the north of the bush, at the top of the scarp, a wall can again be seen in plan, running east, albeit only for a short length of 0.70m; here, it has a face to face width of c.1.30m [1/733]. The form of the wall footings at their southern end suggest that they have been cut away or dug out, and may once have continued south at a higher level. The published plans of the precinct boundary (Fergusson *et al* 2006, 30; Fergusson & Harrison 1999, 176; see figures 3 and 4) does not include this c.12m long north-east return, but instead shows the alignment continuing for a short distance along the main course to the east before meeting with the south side of Arden Lane. A gate through the precinct boundary is suggested to have been present in this general area (Caroe & Partners 2000 vol 2, 23), and is presumably the origin of the name 'Arden Lane Gate', and so the c.12m long return and the adjacent short eastern wall line may be connected with this, rather than the actual precinct boundary wall (see discussion below). The c.12m long return is depicted as a field boundary on an 1806 estate plan (Caroe & Partners 2000 vol 2, fig. 5).

Section K - Intermittent Wall

- 3.18 The surviving remains described above immediately adjacent to Arden Lane Gate suggest that a substantial wall ran for a short distance along the south side of the lane. However, if the precinct boundary did continue wholly along the lane, there is little clear trace of any footings or other earthworks to suggest its former presence beyond a c.1m high south-facing scarp.
- 3.19 However, there is evidence for a wall alignment slightly further to the south of the lane (**Section K**). The south-facing scarp noted at the east end of Section J above continues east, and can be traced for a further c.100m before it meets with the south side of the lane. Towards its western end, the scarp is crossed by a c.1m wide stock-erosion track (**K1**), slightly terraced into the scarp itself. This scarp is substantial, standing over 3m in height, and with a covering of hawthorn and elder scrub. There is some stone eroding out of the top of the scarp, but little that resembles a definite wall line.
- 3.20 As the scarp runs south-east, it maintains its steepness but gradually reduces in height to c.1.50m. Here, a decayed wall line becomes more apparent, with a south face at least one course in height and a possible face to face width of c.1.20m visible near the base of the scarp [1/802]. Further to the south-east, the wall survives intermittently up to 1.10m in height, and has a width of c.1m. At a point c.12m from the junction with the lane, it forms a proper revetment or retaining wall (**K2**) [1/804]. Here, a c.10m long section of wall has been protected by a tree, with the eastern c.3m being particularly well preserved - either side of the tree, the wall has collapsed although some base facing stones are evident [1/806]. The surviving section is built of roughly coursed and squared stone, and stands up to

c.1m high [1/805]. Overall, this length of wall is perhaps generally slightly less well-built than that described within the better preserved sections of the precinct boundary wall further to the west, and it has noticeably smaller blocks of stone - it may well represent a later monastic, or even post-Dissolution rebuilding. Close to where the wall line would have met Arden Lane, there are three mature trees (K3) which have disturbed the alignment [1/807]. From this point for a distance of c.50m, south-east as far as the boundary of the property known as Abbots Cottage, there is a steeply sloping south-facing scarp on the southern side of Arden Lane, which has a high proportion of stone rubble eroding out of it [1/809; 1/810].

Discussion

- 3.21 The condition survey has confirmed previous assertions that the precinct boundary was formed by a substantial wall. Within that part of the boundary falling within the survey area, the wall was built of coursed and squared sandstone, and had a width of c.1.2m across the base; it survives to a maximum height of 1m, but is generally much lower with only footings evident in some sections. The height of the original wall is unknown, but it may have been as much as 3m-4m - parts of the original precinct wall at Fountains Abbey, for example, are still 1.1m wide and up to 4.0m high, topped with coping stones. The wall probably originated in the 12th century, although it is likely to have been rebuilt and repaired several times during its use.
- 3.22 The route and placement of the wall was adapted to suit the local topography. At its very lowest, western, end, close to the 'canal', it was set on a spread bank, possibly as a defence against flooding (Section A). Aside from this length, much of the western half of the alignment (Sections B to E) was formed by a free-standing structure, with evidence for at least one episode of probable post-Dissolution repair (Section D2). As the wall ascended the sloping ground to the east, it appears to have partly formed (at least to the lower part - Sections F and G) a revetment wall, now collapsing, but still retaining the higher ground to the north. To the east of this, the remains of the alignment can be seen on the crest of a substantial south-facing scarp (Sections H to I), although only intermittent footings are visible. The possible alignment and a scarp is continued further to the east (Section K), and one well-preserved but isolated c.10m length survives as a c.1m high revetment wall near the junction with Arden Lane.
- 3.23 The western end of the stone wall is marked by a north-east/south-west cross-wall, while the course of the precinct boundary continues to the west towards the river as a wide flat-topped bank with evidence for footings in the top (Section A). Only that part of the cross-wall running across the precinct boundary and extending to the north is of stone, presumably a post-Dissolution field boundary which has utilised stone from the precinct wall.
- 3.24 There is also a c.12m long right-angled return in Section J, running north towards Arden Lane. This return (J2) may be associated with an entrance into the outer precinct here (at Arden Lane Gate), or it may be a post-Dissolution field boundary, perhaps utilising some of the original precinct walling stone; the return is shown on an 1806 estate plan. However, the precise alignment of the precinct wall to the east of this return is problematic. It is possible that the boundary ran along the south side of Arden Lane, as evidenced by the very short section of surviving wall, although the published alignment shows it continuing east for a short distance before meeting the lane for which there is little surface evidence (Fergusson *et al* 2006, 30; see figure 3). However, the presence of an intermittent wall footing and steep scarp (Section K) suggests that the line continues in a more south-easterly

direction for c.100m before it meets the south side of the lane, where the alignment is again identified by the published sources (see figures 3 and 4); there is a definite change of angle in the south side of Arden Lane at this junction. Alternatively, Section K may represent the north side of an outer court enclosure significantly named as 'Old Walls' in the 1538 Dissolution documents (no. 60 on figure 4). Only further archaeological investigation would confirm the precise alignment of the precinct wall here.

- 3.25 Many of the walling stones, whether part of the free-standing sections or fallen, are now covered with a thick coating of moss. There are also a number of large mature, potentially veteran, trees growing directly on the wall line, many of which exhibit evidence of historic management, such as coppicing. Both trees and moss may be of ecological significance, and they greatly contribute to the visual aspects of the wall and its setting. The coppiced trees in particular form part of the history of the precinct boundary, and they may well be associated with the post-Dissolution industrial processes that took place within the former precinct, such as iron-working and the production of charcoal for a blast furnace; the wall is unlikely to have had trees on it during the monastic period.
- 3.26 There are a number of other earthworks within the sloping ground to the north of the boundary wall, which were mapped by Atkins in 1995-96 (see figure 3). Most prominent of these is a 4.5m wide linear depression running parallel to the western half of the wall (Sections B to F). This depression now contains a spring and watercourse running downslope to the west, and it might be significant that the cross-wall noted above closes off this depression. To the north there are several other agricultural terraces and a probable holloway running parallel to the precinct boundary. This holloway may be associated with a small quarry located in the sloping ground just to the north of Section A, which is known as 'Penny Piece' - this quarry was the source of a fine-grained yellow-brown Kellaways Sandstone which was used as a rubble fill during the construction of many of the abbey buildings (Fergusson *et al* 2006, 35; Fergusson & Harrison 1999, 216). It may be that the possible short return in the precinct wall (Section J2) towards Arden Lane is associated with the control of this routeway or, as noted above, it could be a post-Dissolution creation.

4 MANAGEMENT RECOMMENDATIONS

- 4.1 One of the main aims of the new archaeological walkover survey was to produce recommendations for proposed conservation and/or management measures, which would help to protect, conserve and enhance the remains of the precinct boundary within this particular land parcel. The various factors worthy of consideration can be grouped under the following headings, as set out below. These recommendations have been discussed and agreed with Mr Fairburn (tenant farmer), and the relevant officers at English Heritage, Natural England and the NYMNP.

General Decay

- 4.2 The differences in topography noted above have influenced how the wall has survived to the present day. It generally being better preserved where it was a free-standing structure rather than where positioned on a scarp. Although there may continue to be further localised collapse through weathering, it is unlikely that the former free-standing parts (Sections B to E) will decay much further, having reached such a low-level that they have acquired relative stability. However, those other lengths (Sections F to J, and also Section K) which act partly as retaining

walls are likely to continue to decay though weathering, as although the scarp to their immediate south is partly stabilised principally through hawthorn and elder scrub, much of the soil surface forming it is bare and in places additionally disturbed by rabbits. The surviving parts of wall facing recorded in Section K [1/804] are particularly vulnerable to collapse.

- 4.3 When faced with degrading or potentially collapsing historic fabric, it would be usual practice to rebuild and/or consolidate, according to the degree of damage and importance/significance of the structure. There is no doubt that the potentially 12th century remains of the precinct wall are significant, a fact emphasised in the Rievaulx Abbey Conservation Plan (Caroe & Partners 2000 vol 2, 21), and recognised by virtue of the alignment demarking the edge of the protected Scheduled Monument.
- 4.4 Many lengths of the free-standing wall alignment (Sections B to E) are associated with collapsed stonework, with large blocks of stone now lying adjacent to or obscuring the wall faces [1/784]. In one of two cases, these blocks have tumbled some distance away from the wall [1/779], especially on the south side where there is a marked bank [1/778]. On the less steep sections of bank, it might therefore be appropriate to gather this fallen material, and replace it closer to the wall alignment, adjacent to where it may well have originated. However, it is not recommended that any stonework is replaced directly onto the alignment, so as to rebuild the wall; as it cannot be certain precisely where the stonework fell from, any such rebuilding would be subjective (however well informed) and potentially historically damaging. Nevertheless, banking stone against free-standing lengths would help to stabilise those three or four courses that remain and prevent further collapse. It might also deter stock from crossing the alignment (see below).
- 4.5 It could be recommended that some sections of the free-standing wall alignment, particularly those in Sections B and D, and the cross-wall in Section A, would benefit from some limited and localised consolidation [1/775; 1/793]. If so, any such consolidation should be restricted to tamping lime-based mortar and small stones for strength into the large joints and voids between the stones, taking care to ensure minimal disturbance to the mossy vegetation etc. The inserted mortar should also be slightly recessed from the wall face, so that it does not stain and detract from the overall visual appearance of the fabric. However, it could equally be argued that such consolidation work would have only a limited value - to be really effective, the stones would have to be lifted and re-bedded (effectively a rebuilding operation), and this is not considered to be appropriate or cost-effective in this case. In addition, any decision for consolidation may be outweighed, or influenced, by other considerations such as ecology.
- 4.6 Nevertheless, it would be appropriate to consolidate that c.3m length of c.1m high revetment walling visible under a tree in Section K [1/804]. Here, mortar should be well tamped into the gaps with some larger voids being infilled with small stones, and the sides rebuilt slightly to help stabilise the wall.

Vegetation

- 4.7 There is relatively little evidence for former damage caused by vegetation, such as tree-pulls resulting from wind-throw, apart from one hawthorn in Section H [1/747]. There are however several locations in Sections B (specifically B1), C and E where there is the potential for such damage to occur. Many of the walling stones, whether part of the free-standing sections or fallen, are also covered with a thick coating of moss [1/762; 1/770]; this may have ecological importance as well as a

visual significance, and so should be considered in any management proposals; it is not suggested that the moss is removed.

- 4.8 There are a number of large mature, potentially veteran, trees growing directly on the wall line. Many exhibit evidence for historic management, such as coppicing, which may also be of historic interest [1/780]. Most of the trees on and immediately adjacent to the alignment appear stable [1/766], and their size means that removal may well cause damage to the stonework contained within their root systems. It is always possible that some of these trees will be susceptible to windthrow, but the same could be said for all the trees in the vicinity. There is evidence of at least one tree in Section E having been cut/snapped off in the past [1/768], and one having blown over in Section H [1/747].
- 4.9 Nevertheless, there are a number of dead or dying trees along the whole alignment which could be cut down, and any young trees and elder/hawthorn scrub should be cut and removed before they become established and begin to cause problems in the future. The former can be seen in Sections D and E [1/768; 1/772], while the latter is visible in Sections B, D and F [1/762; 1/773; 1/784; 1/786; 1/793]. The single hawthorn tree at the north end of Section J should also be cut down [1/731], as should the leaning tree over the revetment in Section K [1/806], although this will need some care. Scrub located just off the alignment, for example in Section H [1/751], is not considered to be a problem, and this may in fact deter stock from trying to cross the boundary (see below). It is recommended that a qualified tree surgeon or forestry officer, perhaps from the NYMNP, be asked to look at the various trees to decide which are at most risk from potential windthrow and what management action would be appropriate; it might, for example, be possible to re-coppice some of the older coppiced trees to preserve their historic interest and reduce the canopies to let in more light and increase stability.

Stock

- 4.10 It is noticeable that stock-erosion tracks are primarily limited to those areas where the precinct wall is in the poorest condition (Sections F to I) i.e. the stock are taking advantage of areas where the wall no longer forms an effective barrier to movement, rather than creating new routes through the former wall alignment. Some of the stock-erosion tracks are simply paths across a lower section of walling (probably used by sheep), although others are more significant and are likely to have been created and used by cattle. However, this erosion is generally fairly localised, and there are only two direct points where stock movement seems to be appreciably affecting the precinct wall remains, and in these locations the wall is less well preserved. These are within Section I, where erosion and poaching (probably by cattle) has created two narrow terraces across the scarp and exposed the formerly buried wall footings (I1 and I2) [1/743; 1/741] which presumably exist beneath much of the rest of Sections F to I. There are other stock-erosion tracks in Sections F (F1) [1/758], G (G1) [1/754; 1/755], H (H1) [1/751] and K (K1). A now abandoned or infrequently used stock route might also be identified in Section B [1/786].
- 4.11 Liaison with the tenant farmer has established that sheep are generally kept in the field during the winter, and cattle in the summer months. It is accepted that stock need to be kept in the field, and the present regime and stocking rates appear to be sympathetic to the monument. There will always be erosion and poaching on these valley-sloping sites in especially wet months (particularly by heavier stock such as cattle) and, as noted above, the erosion appears to be relatively localised; the two stock-erosion tracks in Section I might be associated with some scrub

which provides the cattle with some shelter in inclement weather, as evidenced by wider areas of poaching [1/741]. The evidence from the walkover survey suggested that it was cattle that were primarily responsible for the active erosion paths - sheep would probably be agile enough to cross the low wall footings at more-or-less any point and would not cause any significant erosion whereas the cattle seemed to be keeping to specific tracks.

- 4.12 It also needs to be remembered that the archaeological walkover survey was undertaken in February 2013, directly after a heavy snowfall and a longer period of very wet weather - as evidenced by the amount of water emerging from the spring and flowing down the north side of the wall [1/785; 1/786]. Any erosion will be exacerbated in these conditions, and it may be that stock erosion is generally less visible and damaging in drier parts of the year.
- 4.13 The most obvious way to prevent stock erosion across the wall alignment would be to permanently fence the boundary (as has been done at the canal along the southern side of the land parcel). However, one of the main attractions of the monument is its visual appearance as a low moss-covered wall, and any fencing would significantly detract from this. A fence would also be expensive and, more importantly, hinder farming operations. This option is therefore not considered appropriate. The solution would therefore seem to involve low-key methods to involve repair and avoidance, and four possible options can be presented. One option to encourage stock to avoid the boundary would be to place cut scrub and young trees against (but not on) those parts of the alignment which are currently being crossed where the wall is currently well preserved. Stone collected as part of any repair works and placed against the boundary would have the same effect. Another option would be to temporarily fence specific parts of the alignment (e.g. Sections H and I - c.40m), using plastic poles and tapes. A further option would be to place old gates or hurdles (or even lengths of wood) on the ground across the tracks, to act as temporary cattle grids. Protecting the tracks in this way would also help the existing erosion scars to heal and re-grass. Yet another option would be to add a sacrificial layer of turf and/or soil on the affected areas, to effectively increase the height of the wall slightly and to protect the underlying deposits. It is accepted that whatever temporary method or option is used, it is likely to force stock to cross elsewhere along the alignment, and so any such regime would need periodic monitoring to assess any impacts on other lengths.
- 4.14 Temporarily protecting other vulnerable stretches of the wall alignment using the low-key methods outlined above would be useful in allowing grass and other vegetation to regenerate over areas of erosion or bare soil, for example where the footings are exposed in Section I [1/742].

Other Issues

- 4.15 In Section A, near the river, it was noted that one part of the earthwork bank on which the wall was set had been slightly damaged/disturbed by rutting caused by vehicles [1/813; 1/814]. This is due to agricultural vehicles having to cross the alignment to gain access into the pasture on the south side of the boundary. Discussion with the tenant farmer established that the wet ground in this part of the site is partly due to a broken or blocked drain on the north side of the bank.
- 4.16 It is accepted that such vehicular movement is a requirement of any agricultural regime, and there is little specific action that can be taken to prevent this. However, it might be possible to minimise damage by spreading movement across a broader zone, rather than keeping to one or two routes, and trying to avoid

movement in periods of exceptionally wet weather. Alternatively, another sacrificial layer of soil and/or turf could be used to afford some protection to the underlying deposits. The repair or renewal of any broken/blocked field drains would be an obvious benefit to the area, and this should be investigated with the relevant authorities without delay.

Summary of Recommendations

4.17 The above proposals and recommendations can be summarised as follows:

- Undertake limited and localised consolidation (but not rebuilding);
- Collect tumbled stone and place next to alignment;
- Cut dead and dying trees from the alignment;
- Cut young trees and scrub and place next to alignment;
- Temporarily fence or otherwise protect selected lengths and tracks to deter stock crossing the alignment;
- Temporarily fence or otherwise protect selected areas to encourage vegetation re-growth;
- Repair and replace broken field drains.

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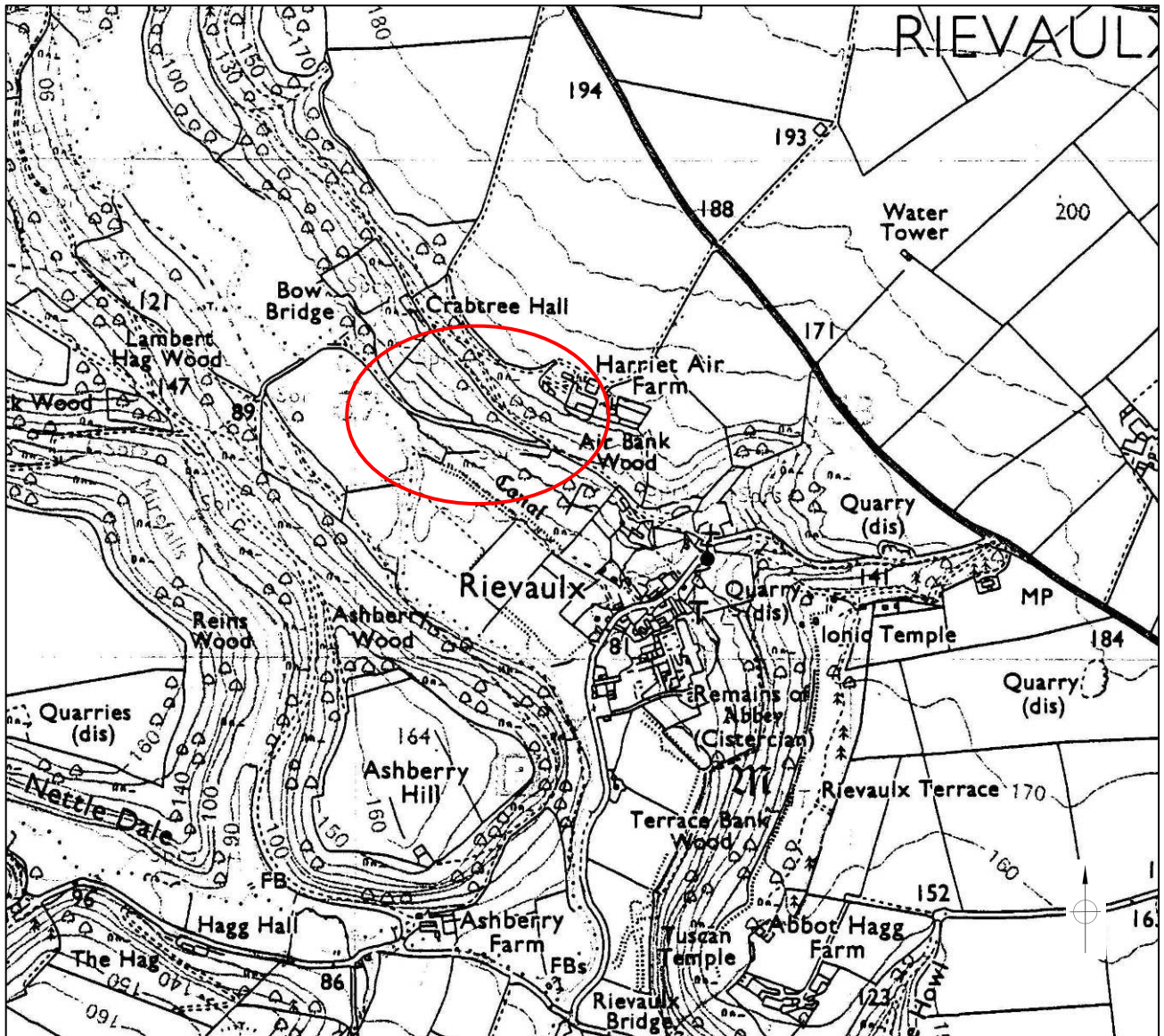
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6 ACKNOWLEDGEMENTS

6.1 The archaeological walkover survey was commissioned by the tenant farmer, Mr Fred Fairburn of Harriet Air Farm. Ed Dennison Archaeological Services (EDAS) would like to thank him, Mags Waughman (Monument Management Scheme Officer of the North York Moors National Park Authority) and Dr Margaret Nieke (Historic Environment Lead Adviser for Natural England) for their help and assistance during the project.

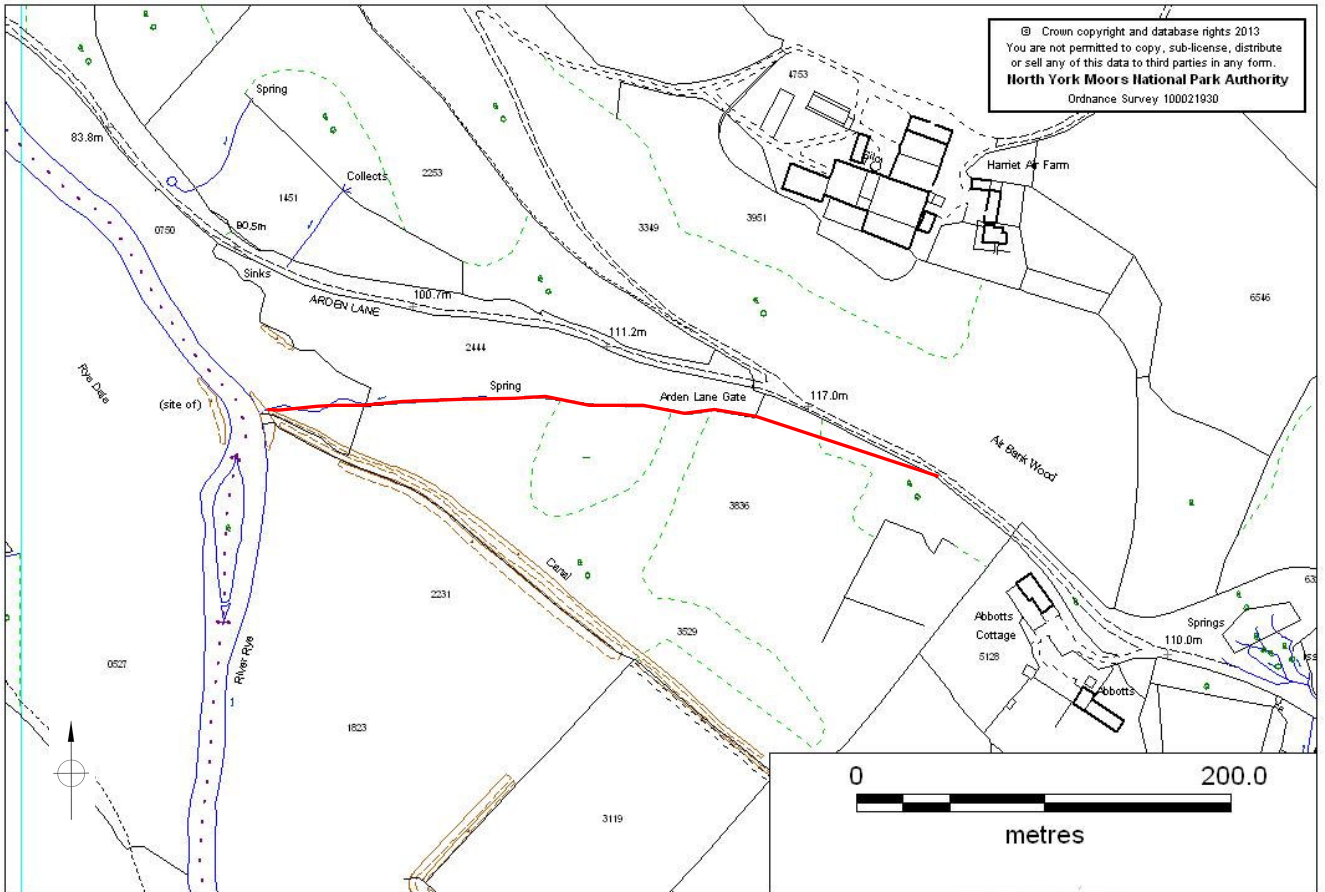
6.2 The walkover survey (drawn and photographic) survey was undertaken by Shaun Richardson of EDAS, and management recommendations were produced by Ed Dennison. Comments on the draft report were kindly provided by Mr Fred Fairburn, Mags Waughman (NYMNP), Dr Margaret Nieke (Natural England) and

Dr Keith Emerick (English Heritage). The final report was produced by Ed Dennison, with whom the responsibility for any errors remains.



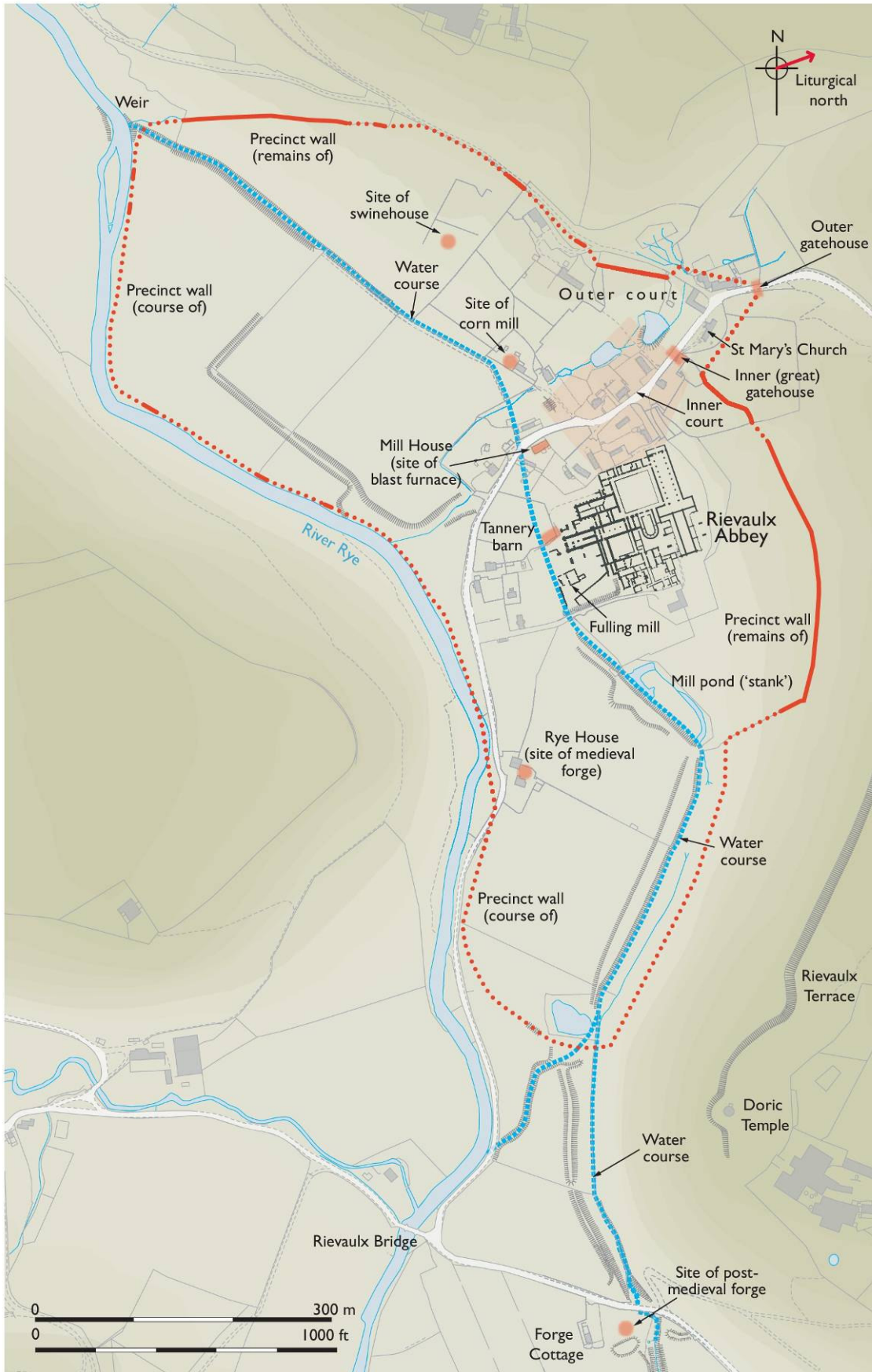
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PROJECT		RIEVAULX ABBEY PRECINCT WALL	
TITLE		GENERAL LOCATION	
SCALE	NTS	DATE	MAR 2013
EDAS		FIGURE	1



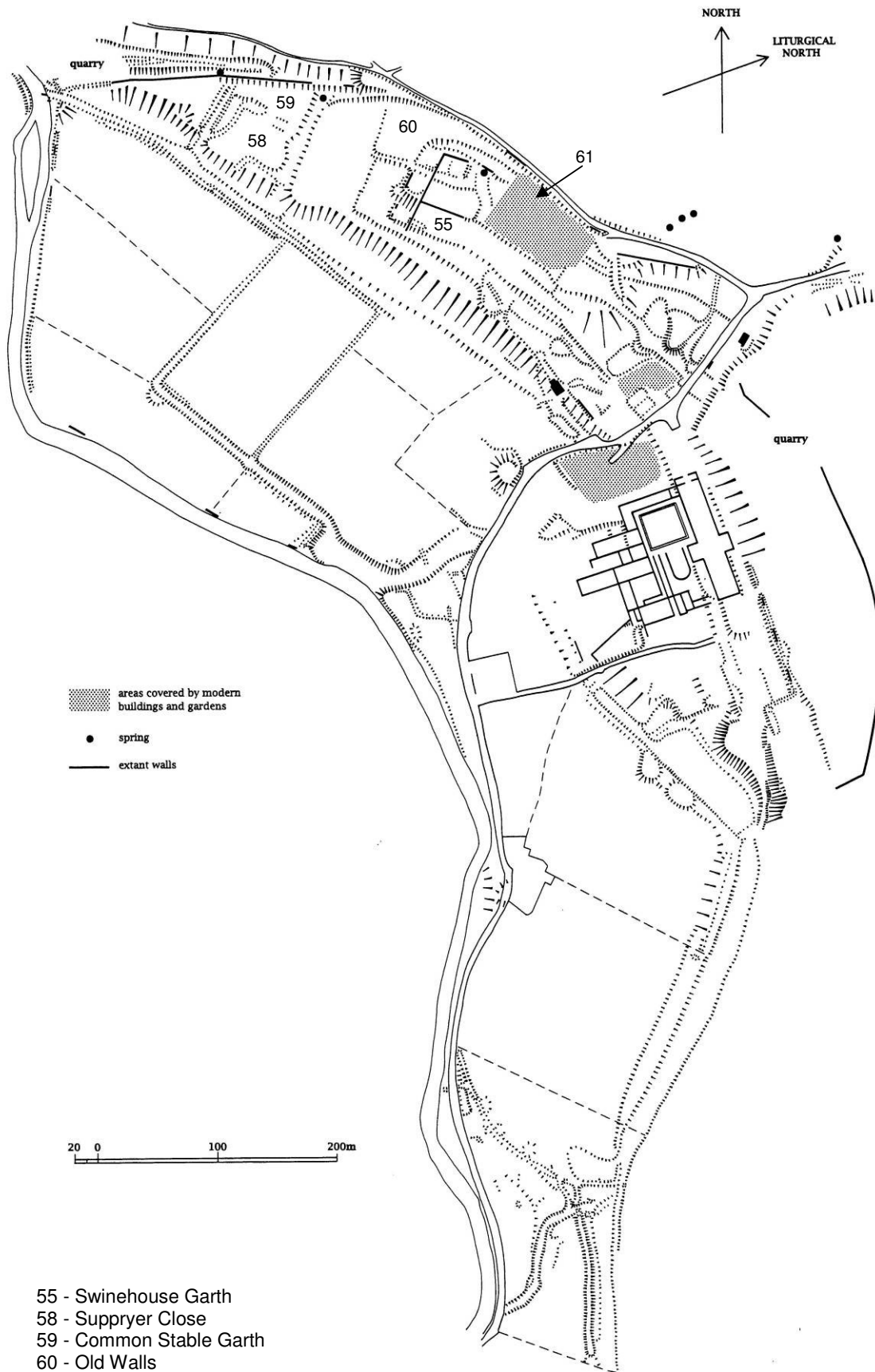
Base plan provided by NYMNP.

PROJECT	
RIEVAULX ABBEY PRECINCT WALL	
TITLE	
SITE LOCATION	
SCALE	DATE
AS SHOWN	MAR 2013
EDAS	FIGURE
	2



Source: Fergusson, P, Coppack, G & Harrison, S 2006 *Rievaulx Abbey*, p30 (English Heritage Guidebook).

PROJECT		RIEVAULX ABBEY PRECINCT WALL	
TITLE		PLAN OF ABBEY	
SCALE	AS SHOWN	DATE	MAR 2013
EDAS		FIGURE	3

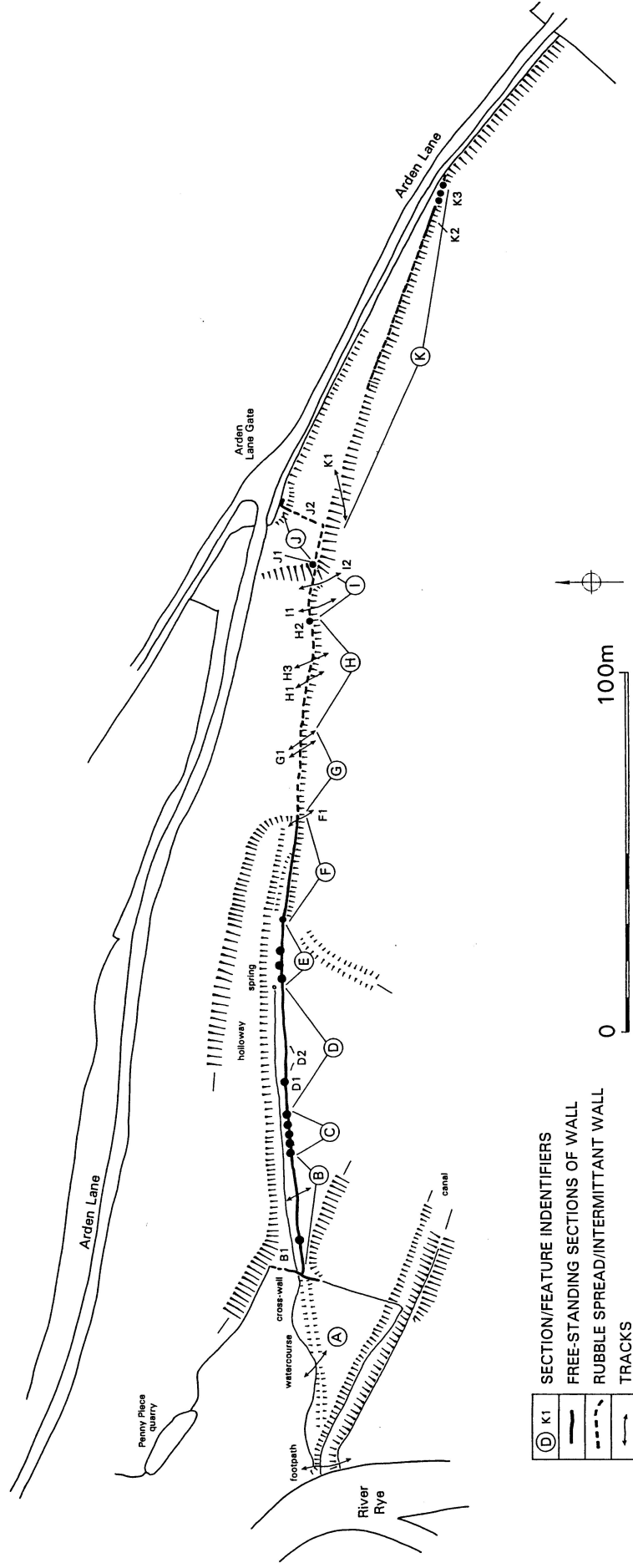


- 55 - Swinehouse Garth
- 58 - Suppyer Close
- 59 - Common Stable Garth
- 60 - Old Walls
- 61 - Clypping Garth



Source: Fergusson, P & Harrison, S 1999
Rievaulx Abbey, p176, fig 148.

PROJECT		RIEVAULX ABBEY PRECINCT WALL	
TITLE		PLAN OF PRECINCT	
SCALE	AS SHOWN	DATE	MAR 2013
EDAS		FIGURE	4

PROJECT	RIEVAULX ABBEY PRECINCT WALL		
TITLE	WALKOVER SURVEY PLAN		
SCALE	AS SHOWN	DATE	MAR 2013
	EDAS	FIGURE	5



(D) K1	SECTION/FEATURE IDENTIFIERS
—	FREE-STANDING SECTIONS OF WALL
- - -	RUBBLE SPREAD/INTERMITTANT WALL
→	TRACKS

APPENDIX 1

APPENDIX 1: PHOTOGRAPHIC RECORD

Photographic Catalogue

Film 1: Colour digital photographs taken 7th February 2013

<i>Film</i>	<i>Frame</i>	<i>Subject</i>	<i>Scale</i>
1	728	General view of area north of precinct boundary, looking W from Arden Lane Gate	-
1	730	Section J (J2), adjacent to Arden Lane, looking E	1m
1	731	Section J (J2), adjacent to Arden Lane, looking NE	1m
1	733	Section J, wall footings (J2) adjacent to Arden Lane, looking E	1m
1	734	Section J, spread bank (J2) running north to Arden Lane, looking E	1m
1	735	Section J, spread bank (J2) running north to Arden Lane, looking W	1m
1	737	Section J, scarp top, looking W	1m
1	738	Section J, fallen tree (J1), looking E	1m
1	739	Section J, possible wall stones, looking E	1m
1	741	Section I, stock-erosion track (I2), looking SE	1m
1	742	Section I, wall footings on top of scarp, looking W	1m
1	743	Section I, stock-erosion path (I1), looking SE	1m
1	744	Section I, looking E	1m
1	745	Section H, coppiced tree (H2), looking SE	1m
1	746	Section H, looking W	1m
1	747	Section H, wind-blown tree and stock erosion track (H3), looking SE	1m
1	749	Section H, south wall face, looking NW	1m
1	750	Section H, south wall face, looking NW	1m
1	751	Section H, stock-erosion track (H1), looking SE	1m
1	752	Section H, hawthorn trees, looking SW	1m
1	753	Section H, hawthorn trees, looking SW	1m
1	754	Section G, stock-erosion track (G1), looking SE	1m
1	755	Section G, stock-erosion track (G1), looking SE	1m
1	757	Section G, looking SW	1m
1	758	Section F, stock-erosion track (F1), looking SE	1m
1	759	Section G, looking W	1m
1	760	Section G, S face, looking NW	1m
1	761	Section F, looking W	1m
1	762	Section F, N face, looking W	1m
1	763	Earthworks to north of Section F, looking E	1m
1	764	Earthworks to north of Section F, looking W	-
1	765	Earthworks to north of Section F, looking W	1m
1	766	Section E, easternmost coppiced tree, looking S	1m
1	767	Section E, coppiced trees, looking W	1m
1	768	Section E, coppiced trees, looking W	1m
1	769	Section E, coppiced tree, looking SE	1m
1	770	Section E, coppiced tree, looking SE	1m
1	771	Section E, west pair of trees, looking SW	1m
1	772	Section E, west pair of trees, looking SE	1m
1	773	Section D, east end, looking SW	1m
1	775	Section D, N face, looking S	1m
1	776	Section D, rebuilt section (D2), looking SW	1m
1	777	Section D, rebuilt section (D2), looking S	1m
1	778	Section D, S face of wall at east end, looking NW	1m
1	779	Section C, coppiced trees, looking SW	1m
1	780	Section C, coppiced trees, looking SW	1m
1	781	Section C, coppiced tree, looking S	1m
1	782	Section C, coppiced trees, looking SE	1m
1	784	Section B, north face of wall at east end, looking S	1m
1	785	Section B, looking SW	1m
1	786	Section B, north face with old stock-erosion path, looking S	1m
1	787	Section B, south face, looking NE	1m
1	788	Section B, south face, looking NE	1m
1	789	Section B, tree B1, looking SE	1m
1	790	Section B, north face adjacent to tree B1, looking SE	1m

1	791	Section B, tree B1, looking SW	1m
1	792	Section B, tree B1, looking SW	1m
1	793	Section B, north face at west end, looking SW	1m
1	795	Section A, cross-wall at west end, looking NE	1m
1	796	Section A, cross-wall at west end, looking NE	1m
1	797	Section A, north part of cross-wall, looking NE	1m
1	798	Section A, south part of cross-wall, looking S	1m
1	799	Section A, bank , looking E	1m
1	800	Section A, footings in top of bank, looking E	1m
1	801	Section A, bank, looking W	1m
1	802	Section K, wall footings (K2), looking NW	1m
1	804	Section K, revetment wall (K2), looking NW	1m
1	805	Section K, revetment wall (K2), looking NW	1m
1	806	Section K, revetment wall (K2), looking NW	1m
1	807	Section K, trees (K3), looking NW	1m
1	809	Section K, scarp to Abbots Cottage, looking SE	1m
1	810	Section K, scarp to Abbots Cottage, looking SE	1m
1	811	Section C, coppiced trees, looking SE	-
1	812	Section A, bank, looking E	-
1	813	Section A, vehicular rutting across bank, looking E	-
1	814	Section A, vehicular rutting across bank, looking E	-
1	815	West end of canal, looking SE	-
1	816	Footpath crossing west end of canal, looking N	-



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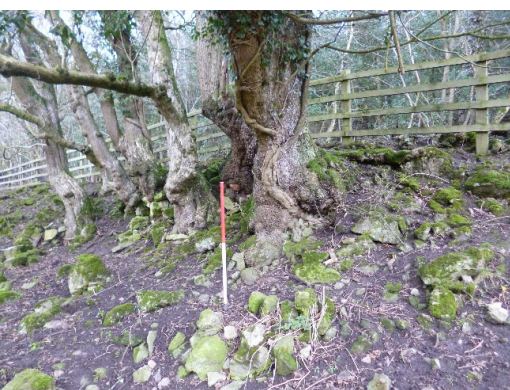
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