JOHN MOORE HERITAGE SERVICES

AN ARCHAEOLOGICAL DESK-BASED ASSESSMENT

OF

THE NEWCOURT AREA – LOWER RNSD SITE AND LAND ALONGSIDE OLD RYDON LANE AND THE A379, TOPSHAM

NGR SX 955 901 centred

Volume I

On behalf of

Davies Light Associates

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REPORT FOR

Davies Light Associates
The Old Bakehouse
21 The Street
Lydiard Millicent
Near Swindon
Wiltshire
SN5 3LU

PREPARED BY

Frances Raymond

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ENQUIRIES TO

John Moore Heritage Services
Hill View
Woodperry Road
Beckley
Oxfordshire
OX3 9UZ

Tel. 01865 358300
Email: info@jmheritageservices

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1 INTRODUCTION

1.1 Origins of the Report

This archaeological desk-based assessment was commissioned by Davies Light Associates. It has been prepared in support of an outline planning application for residential development on six land holdings and a full planning application for an integrated spine road. These sites form part of the Newcourt Area identified in the Exeter Local Plan as a preferred development area covered by Key Proposal 8 (1995-2011).

The Archaeological Officer for Exeter City Council has advised that a desk-based assessment should be compiled as part of an initial programme of archaeological investigation, which is also to include a geophysical survey where site conditions permit. This desk-based assessment represents the first stage of this work, providing an appraisal of the archaeological potential of the site. This will allow for the formulation of a more informed and appropriate field evaluation and mitigation strategy.

1.2 Planning Guidelines and Policies

This report has been prepared in accordance with *Planning Policy Guidance Note 16: Archaeology and Planning* (PPG 16) issued by the Department of the Environment (1990); and with the policies relevant to archaeology in the *Devon Structure Plan* (October 2004) and the *Exeter City Local Plan First Review* (1995-2011). It also follows the advice given by the Exeter City Council Planning Services in *Archaeology and Development: Draft Supplementary Planning Guidance* (February 2004). In format and contents this report conforms to the standards outlined in the Institute of Field Archaeologists' guidance paper for desk-based assessments (IFA September 2001).

1.2.1 Government Planning Policy Guidance

PPG 16 (DOE 1990) provides Government guidance for the investigation, protection and preservation of archaeological remains affected by development. The document emphasises the importance of archaeology (Section A, Paragraph 6) and states that:

> "Archaeological remains should be seen as a finite, and non-renewable resource, in many cases highly fragile and vulnerable to damage and destruction. Appropriate management is therefore essential to ensure that they survive in good condition. In particular, care must be taken to ensure that archaeological remains are not needlessly or thoughtlessly destroyed. They can contain irreplaceable information about our past and the potential for an increase in future knowledge. They are part of our sense of national identity and are valuable both for their own sake and for their role in education, leisure and tourism."

PPG 16 additionally stresses the importance of addressing archaeological issues at an early stage in the planning process (Paragraph 12):

> "The key to informed and reasonable planning decisions, as emphasized in paragraphs 19 and 20, is for consideration to be given early, before formal planning applications are made, to the question of whether archaeological remains exist on a site where development is planned and the implications for the development proposal."

The advice given recommends early consultation between developers and the planning authority to determine "whether the site is known or likely to contain archaeological remains" (Paragraph 19). As an initial stage, such consultations may lead to the developer commissioning an archaeological assessment, defined in the following manner in PPG 16 (Paragraph 20):

> "Assessment normally involves desk-based evaluation of existing information: it can make effective use of records of previous discoveries, including any historic maps held by the County archive and local museums and record offices, or of geophysical survey techniques."

If the desk-based assessment should indicate a high probability of the existence of important archaeological remains within the development area, then further stages of archaeological work are likely to be required. PPG 16 states that in such cases (Paragraph 21):

> "it is reasonable for the planning authority to request the prospective developer to arrange for an archaeological field evaluation to be carried out before any decision on the planning application is taken. This sort of evaluation is quite distinct from full archaeological excavation. It is normally a rapid and inexpensive operation, involving ground survey and small-scale trial trenching, but it should be carried out by a professionally qualified archaeological organisation or archaeologist."

Additional guidance is provided if the results of an evaluation indicate that significant archaeological deposits survive within a development area. PPG 16 stresses the importance of preservation (Paragraphs 8 and 18):

> "Where nationally important archaeological remains, whether scheduled or not, and their settings, are affected by proposed development there should be a presumption in favour of their physical preservation."
>
> "The desirability of preserving an ancient monument and its setting is a material consideration in determining planning applications whether that monument is scheduled or unscheduled."

But acknowledges that (Paragraphs 24 and 25):

> "the extent to which remains can or should be preserved will depend upon a number of factors, including the intrinsic

> importance of the remains. Where it is not feasible to preserve remains, an acceptable alternative may be to arrange prior excavation, during which the archaeological evidence is recorded."
>
> "Where planning authorities decide that the physical preservation *in situ* of archaeological remains is not justified in the circumstances of the case and that development resulting in the destruction of the archaeological remains should proceed, it would be entirely reasonable for the planning authority to satisfy itself before granting planning permission, that the developer has made appropriate and satisfactory provision for the excavation and recording of the remains. Such agreements should also provide for the subsequent publication of the results of the excavation."

This level of work would involve the total excavation and recording of archaeological remains within the development area by a competent archaeological contractor prior to their destruction or damage.

1.2.2 The Devon County Structure Plan

The Government guidance set out in PPG 16 has been integrated into County Structure Plans and Local Plans. The Devon Structure Plan (October 2004), includes two policies relevant to the historic environment and archaeological remains. The first (Policy CO7) states:

> "The quality of Devon's historic environment should be conserved and enhanced. In providing for new development particular care should be taken to preserve the special historic character of settlements, the character and appearance of conservation areas, the historic character of the landscape, listed or other historic buildings of architectural or historic interest and their settings and parks and gardens of special historic interest and their settings."

The second policy (Policy CO8) is specifically concerned with archaeological sites and states:

> "Internationally, nationally and regionally important archaeological sites and their settings, whether Scheduled Monuments or unscheduled, will be preserved. Other important sites and their settings should be preserved wherever possible, and in considering proposals for development which would have an adverse impact on them, the importance and value of the remains will be a determining factor. Where a lack of information precludes the proper assessment of a site or area with archaeological potential, developers will be required to arrange appropriate prior evaluation in advance of any decision to affect the site or area. Where the loss of an archaeological site or area is

1.3 Aims and Objectives

The primary aim of this report is to provide a professional assessment of the archaeological potential of the proposed development sites. This follows the Government guidance in PPG 16 by presenting a synthetic account of the available archaeological and historic data and its significance at an early stage in the planning process. The report will provide the evidence necessary for informed and reasonable planning decisions concerning the need for further archaeological work. The information will allow for the development of an appropriate strategy to mitigate the effects of development on the archaeology, if this is warranted.

In accordance with PPG 16, the report presents a desk-based evaluation of existing information. It additionally follows the Institute of Field Archaeologists (IFA) *Standard* definition of a desk-based assessment (IFA 2001). In brief, it seeks to identify and assess the known and potential archaeological resource within a specified area ('the site'), collating existing written and graphic information and taking full account of the likely character, extent, quantity and worth of that resource in a local, regional and national context. It also aims to define and comment on the likely impact of the proposed development scheme on the surviving archaeological resource.

The IFA *Standard* states that the purpose of a desk-based assessment is to inform appropriate responses, which may consist of one or more of the following:

- The formulation of a strategy for further investigation, whether or not intrusive, where the character and value of the resource is not sufficiently defined to permit a mitigation strategy or other response to be devised.
- The formulation of a strategy to ensure the recording, preservation or management of the resource
- The formulation of a project design for further archaeological investigation within a programme of research

In accordance with PPG 16, this desk-based assessment forms the first stage in the planning process as regards archaeology as a material consideration. It is intended to contribute to the formulation of an informed and appropriate field evaluation and mitigation strategy.

1.4 Methodology

The format and contents of this report are an adaptation of the standards outlined in the Institute of Field Archaeologists' guidance paper for desk-based assessments (IFA 2001). The approaches adopted and the sources consulted additionally follow the recommendations for desk-based assessments outlined in Exeter City Council's planning guidance for archaeology and development (February 2004).

The work has involved the consultation of the available documentary evidence, including records of previous discoveries and historic maps, and has been supplemented with a site walkover. The format of the report is adapted from an Institute of Field Archaeologists *Standard Guidance* paper (IFA 2001).

In summary, the work has involved:

- Identifying the client's objectives
- Identifying the cartographic and documentary sources available for consultation
- Assembling, consulting and examining those sources
- Identifying and collating the results of recent fieldwork
- Site walkover

The principal sources consulted in assessing this site were:

- The Devon County Sites and Monuments Record
- The Archaeology Officer for the Devon County Archaeological Service
- The Archaeology Officer for Exeter City Council
- The Royal Albert Memorial Museum
- The Devon Record Office
- The West Country Studies Library
- The National Monuments Record

The Devon Sites and Monuments Record holds details of all known archaeological and historic sites in the vicinity of the proposed development. The Archaeology Officers for Exeter City Council and the Devon County Archaeological Service provided details of recent fieldwork still to be entered on the County Sites and Monuments Record or where reports are not yet available. The Royal Albert Memorial Museum holds the archive of a surface collection extending onto one of the proposed development sites. The Devon Record Office retains the tithe and other historic maps including some of the Ordnance Survey editions. The West Country Studies Library has facsimile copies of some of the smaller scale historic maps of Devon, a selection of Ordnance Survey editions and a range of secondary documentary sources. Research at the National Monuments Record was confined to a consultation of the aerial photographic collection and listing schedules held by English Heritage.

Two reports providing the results of previous studies within the proposed development area were also key sources for the current appraisal. Both were commissioned by Exeter City Council Planning Services as part of the preparation of the Local Plan. They include:

- A desk-based study by Exeter Archaeology (1996a)
- A study and building survey of the Royal Naval Stores Depot by Paul Francis (1997)

With the exception of a programme of surface collection extending onto part of the Dart site, to the south-east of the Royal Naval Stores Depot, there has been no systematic archaeological work carried out within the proposed

development area. The assessment of its potential has, therefore, relied on predictive modelling based on the known distribution of remains within a wider Study Area. This search area was defined by the Archaeology Officer for Exeter City Council and was designed to include the evidence necessary for an informed appraisal of the proposed development area.

The available information is derived from geophysical surveys, watching briefs, evaluations, excavations, systematic surface collections, unsystematic surface collections, artefacts recovered by metal detectorists, casual finds, aerial photographs and historical records. It should be stressed that the distribution represents the extent of current knowledge and is the product of chance. Although selected parts of the local landscape have been the subject of systematic archaeological fieldwork, this has not covered the entire area. For this reason, apparently blank zones should not be automatically regarded as being devoid of remains.

The assessment of the likely condition of any potential archaeological remains has relied upon the results of local archaeological fieldwork, a study of the available historic maps and aerial photographs and observations made during the site walkover, which provide evidence for the impact of previous land-use and development on the site.

One of the aims of the report is to identify and recommend appropriate targets for field evaluation. This should allow for the identification and location of potential archaeological deposits on the site and provide the evidence necessary to determine their significance and condition. A staged approach of this type will provide the information necessary for the formulation of an appropriate mitigation strategy, ensuring the adequate recording and/or protection of any archaeology encountered within the proposed development area.

There have been no restrictions on reporting or access to the relevant records, although English Heritage were unable to provide a copy of an aerial photograph due to copyright restrictions (see Section 4.5). The copyright to the Devon Sites and Monuments Record and the historic maps (Figures 14 to 26) is held by Devon County Council. The copyright to the aerial photographs is held by English Heritage (Figures 27 to 30).

2 THE SITE

2.1 Location (Figures 1 to 3)

The Newcourt area, covered by Key Proposal 8 in the Local Plan (1995-2011), is located to the south-east of Exeter in the parishes of Heavitree and Topsham, where it is centred on National Grid Reference (NGR) SX 955 901 (Figure 1). The six sites and the spine road which are the subject of this report form part of a more extensive proposed development which is to additionally include a science park and two other residential sites.

The six sites include three contiguous land holdings in the south-western part of the Newcourt area: the RNSD site centred on NGR SX 9541 8978; the SEF site centred on NGR SX 9530 8989; and the Dart site centred on NGR SX 9547 8967 (Figures 1 and 2). The fourth landholding, known as the Langdon site, is situated in the central part of the Newcourt area to the south of Old Rydon Lane where it is centred on NGR SX 9582 9029 (Figures 1 and 3). The other two proposed development sites occupy the northern part of the Newcourt area to the north of Old Rydon Lane. They include Pratt Residential, centred on NGR SX 9580 9055 and Zindalina, centred on NGR SX 9605 9065 (Figures 1 and 3).

2.2 Description (Figure 1)

The Newcourt area forms a trapezoidal block of agricultural and previously developed land to the west of the M5 between Junctions 30 and 31. Its eastern edge is marked by the railway line, while the A379 forms its northern boundary. The A3015 lies to the north-west, the Topsham Road runs along the south-western side of proposed development land and the route of the M5 is located a short distance to the east. The area is bisected by Old Rydon Lane which also forms the parish boundary between Topsham and Heavitree. The six sites discussed in this report are located within this block of land and extend over a total area of 29.61 hectares (73.19 acres).

2.2.1 The RNSD Site (Figure 2)

The RNSD site is 7.27 hectares (17.96 acres) in extent and is situated on the south-western side of the Newcourt area in the parish of Topsham. It occupies the south-eastern part of the former lower Royal Naval Stores Depot. Its perimeters are marked by the fence along the edge of the SEF site to the north-west, the property boundaries of houses alongside the Topsham Road to the south-west, and the fence facing agricultural land to the south-east and the golf course to the north-east.

The site is occupied by a series of buildings, many of which date back to the Second World War when it was used by the US navy as an amphibious supply base (Francis 1997; Horner 1996). These structures have been the subject of a building recording survey (Francis 1997) and their character and significance are discussed in a subsequent section (Section 4.3). The ground between the buildings on the south-western side of the site is surfaced with concrete, while a number of the structures in this area are set on terraces. The centre of the proposed development is under a mixture of tarmac, concrete and grass. The buildings in the northern part of the site are reached by a tarmac road and the intervening land is under grass.

2.2.2 The SEF Site (Figure 2)

The SEF site extends over 9.39 hectares (23.2 acres) and is also located on the south-western side of the Newcourt area in the parish of Topsham. Like the RNSD site it occupies part of the former lower Royal Naval Stores Depot and its perimeter is marked by a fence. This is congruent with the edge of the RNSD site to the south-east, the rear property boundaries of houses fronting onto the Topsham Road to the south-west and the edge of the golf course to the north-west and north-east.

Some of the wartime buildings still survive within this proposed development area, but many have been demolished and replaced with modern warehouses and ancillary structures. As with the RNSD site, the character and significance of these buildings is discussed in a subsequent section of this report (Sections 4.3). The present structures are mainly located in the south-western two thirds of the site where they are surrounded by concrete aprons. By contrast the north-eastern end of the site is occupied by a single works building and is largely under grass.

2.2.3 The Dart Site (Figure 2)

The Dart site is also located in the south-western part of the Newcourt area in the parish of Topsham and is 2.22 hectares (5.5 acres) in extent. Its south-western, north-western and north-eastern edges are defined by the perimeter fence of the adjacent RNSD land. The south-eastern side of the site is currently unfenced and forms part of a larger field extending towards Seabrook Farm. At the time of the site visit the area was still under crop.

2.2.4 The Langdon Site (Figure 3)

The Langdon Site is situated in the central part of the Newcourt area in the parish of Topsham and is 1.20 hectares (2.96 acres) in extent. Its northern edge is marked by a low wall alongside Old Rydon Lane which forms the parish boundary with Heavitree. The western side of the proposed development is congruent with the road leading to Newcourt House, while the golf course occupies adjacent land to the south-west. The upper RNSD site, which is part of a separate application, lies to the east. There is currently no boundary between this and the Langdon site.

The proposed development area is under established parkland grass with scattered mature beech trees. Brambles and scrub, mostly along the edges of the site, were being cleared when it was visited.

2.2.5 Pratt Residential (Figure 3)

Pratt Residential extends over 8.74 hectares (21.61 acres) and occupies two fields defined by fences and hedges to the north of Old Rydon Lane in the

acceptable, proper provision for archaeological excavation and recording will be required."

1.2.3 The Exeter City Local Plan

The Exeter City Local Plan First Review (1995 to 2011) includes a number of more detailed policies relevant to heritage conservation. Three of these are concerned with Listed Buildings, Buildings of Local Importance and historic parks and gardens. The policy relevant to Listed Buildings (Policy C2) states:

> "Development (including changes of use, alterations and extensions) which affects a Listed Building must have special regard to the desirability of preserving the building or its setting, or any features of special architectural or historic interest which it possesses."

The policy concerned with Buildings of Local Importance (Policy C3) states:

> "Development (including changes of use, alterations and extensions) which affects a building of local importance, as identified in Schedule 5, will not be permitted where it harms the architectural or historic value of the building."

The policy relevant to historic parks and gardens (Policy C4) states:

> "Redevelopment within, adjacent to, or otherwise likely to affect the setting of, parks and gardens of special or local historic interest will not be permitted if the proposals:
> a) would involve the loss of features considered to form an integral part of the character or appearance of the park and garden; and
> b) would otherwise detract from the enjoyment, layout, design, character, appearance, or setting of the park and garden.

The Local Plan additionally includes a single policy relevant to archaeological remains (Policy C5), which states:

> "Development will not be permitted which would cause harm to a site, monument or structure of national archaeological importance, whether Scheduled or unscheduled, or which would cause harm to its setting. Proposals should preserve nationally important archaeological remains in situ and, where appropriate, make arrangements for their enhancement and display. Where the proposal will affect remains of regional or local importance, the desirability of preserving the remains in situ will be weighted against the need for the development. If preservation in situ is not feasible or appropriate the developer must undertake archaeological recording works in accordance with a scheme to be agreed in advance.

parish of Heavitree. The two fields are divided by a farm track set at right angles to Old Rydon Lane.

The boundaries of the most south-westerly follow Old Rydon Lane to the south-east, the access road to the nursery to the south-west, the edge of fields to the north-west where the science park is proposed and the farm track to the north-east. The property boundaries of Wynard's Cottage extend from Old Rydon Lane into the southern-central part of the field, while buildings in the north-east corner have been demolished and are marked by traces of a large bonfire. At the time of the site visit the field was under maize stubble.

By contrast the north-eastern of the two fields is under pasture which has been grazed in the recent past. Its margins are congruent with the farm track to the south-west, the edge of a field to the north-west where the science park is proposed, and part of this same field and the boundaries of Beech Cottage and the Zindalina land to the north-east. The south-eastern edges of the proposed development are congruent with the rear property boundaries of modern houses fronting onto Old Rydon Ley. Two agricultural buildings occupy the south-western corner of the field, but the associated enclosures mapped by the Ordnance Survey in this part of the site no longer survive.

2.2.6 The Zindalina Site (Figure 3)

The Zindalina site is 0.79 hectares (1.96 acres) in extent and is located to the north of Old Rydon Lane in the parish of Heavitree. Its edges are defined by the Beech Cottage property boundary to the north, the railway line to the east, Old Rydon Lane to the south and the margins of the Old Rydon Ley development and Pratt Residential to the west. The site is currently under tall rough grassland and nettles.

2.2.7 The Spine Road (Figures 2 and 3)

The proposed route of the spine road enters the south-western edge of the Newcourt area from the Topsham Road (Figure 2). This follows the existing access into the RNSD land and runs along the north-western margins of this site. The proposed route turns eastwards within the RNSD site and then swings north-eastwards and leaves this land holding at its north-eastern corner (Figure 2).

From this point the projected line of the road follows an existing access dating from the Second World War currently under tarmac. This runs between the golf course to the north-west and farmland to the south-east and crosses a brook. This stretch of the road, which is 110 metres long, links the RNSD site with another proposed development area forming a separate application by Westbury. For the purposes of this report this stretch of the route will be identified as the 'south-western spine road link' (Figure 2).

The proposed route of the road runs just within the north-western edge of the Westbury land (Figure 2) and then continues north-eastwards across the upper RNSD site (Figure 3), which is also to form part of the Westbury application. The proposed road line branches within the upper RNSD site and runs north-westwards across Old Rydon Lane and Pratt Residential (Figure 3).

The projected route continues in this direction beyond Pratt Residential for an additional 230 metres across the fields to the north where the science park is proposed, linking with the A379. This part of the proposed road line crosses an existing field boundary on land which is currently under maize stubble. For the purposes of this report this stretch of the route will be identified as the 'northern spine road link' (Figure 3).

2.3 Topography

The Newcourt area is situated on relatively low lying land between the Rivers Exe to the south-west and Clyst to the east (Figure 1). To the south of Old Rydon Lane the topography is dominated by a shallow valley along the line of a stream draining into the Exe near Newport Park. This describes a broad arc running initially south-eastwards and then swinging to the south-west. The course of the valley, which falls from about 15 to 10 metres above Ordnance Datum (AOD), lies to the east of the RNSD, SEF, and Dart sites and to the south-west of the Langdon site.

The land to the north of Old Rydon Lane is generally higher, rising in a north-westerly direction from approximately 20 metres to 45 metres AOD. A spur on a north to south axis, defined by the 25 metre contour and overlooking the Clyst Valley, is located along the eastern margins of this area close to the railway line.

2.3.1 The RNSD and SEF Sites

These sites occupy a gentle south-facing slope overlooking the River Exe. The land rises from around 10 metres AOD in the southern corner of the RNSD site to the 20 metre contour, which crosses the northern part of the RNSD area and the centre of the SEF site.

2.3.2 The Dart Site

The Dart site lies on the western fringes of the stream valley where it occupies the same broad south-facing slope as the RNSD and SEF land. It is crossed by the 15 metre contour with the lowest lying ground in its southern corner and the highest close to the 20 metre contour, which runs just beyond its northern boundary.

2.3.3 The Langdon Site

The Langdon site occupies a fairly level area at approximately 20 metres AOD, with a slight fall towards Old Rydon Lane at its northern end. More broadly this is located to the west of the spur of higher ground which overlooks the Clyst Valley.

2.3.4 Pratt Residential

This same north to south spur runs across the eastern side of Pratt Residential. Elsewhere the land rises in a north-westerly direction from Old Rydon Lane at approximately 20 metres AOD to around 30 metres AOD close to the north-western margins of the site.

2.3.5 The Zindalina Site

The Zindalina site occupies the north to south spur crossing Pratt Residential and overlooking the Clyst Valley. Here the land is fairly level at approximately 25 metres AOD.

2.3.6 The Spine Road

The proposed axis of the south-western spine road link crosses the stream valley at right angles. At this point the upper edge of the valley is defined by the 15 metre contour. The proposed route of the northern spine road link crosses the higher part of the same south-east facing slope occupied by Pratt Residential. The projected road line runs upwards from approximately 30 metres AOD at its south-eastern end to about 40 metres AOD close to the A379.

2.4 Geology

There has been no geotechnical work carried out within any of the proposed development areas. The only geological map available for consultation was an out of date one inch to one mile edition of the Exeter sheet held by the West Country Studies Library (Sheet 325, Geological Survey of Great Britain (England and Wales), which uses the pre-Second World War Ordnance Survey map base. This together with the small scale of the map means that it has only been possible to identify the approximate location of boundaries between different geological outcrops.

The geology of the Newcourt area and indeed of the Exeter district is dominated by New Red Sandstone formations believed to be late Permian in date (250 to 260 million years before present; Edwards and Scrivener 1999). The earliest is the Heavitree Brecchia which is thought to have formed under hot desert conditions (Edmonds, McKeown and Williams 1975). The period

was one of severe erosion when episodes of flooding washed large quantities of debris from an early mountain range and deposited the material on alluvial fans (Edmonds, McKeown and Williams 1975; Edwards and Scrivener 1999). Within the Newcourt area the Heavitree Brecchia correlates with the Brecchia and Conglomerate shown on the one inch edition geological map (Sheet 325, Geological Survey of Great Britain (England and Wales).

The formation is characterised by well-cemented clasts (conglomerates composed of various older rocks) in a 'poorly sorted, clay-rich, fine to coarse-grained sandstone' (Edwards and Scrivener 1999). This weathers to a gravely clayey sand or gravely sandy clay and is often highly variable in character because it tends to consist of inter- and cross-bedded layers of sand and sandstone (ibid.).

The younger Dawlish Sandstone also outcrops in the Newcourt area. This is the latest of the New Red Sandstone formations thought to date to the end of the Permian (approximately 250 million years before present; Edwards and Scrivener 1999). It is composed of wind blown sand dunes and deposits of sandstone and mudstone that formed between the dunes (ibid.). In the Newcourt area it is equivalent to the Lower Sandstone shown on the one inch edition geological map (Sheet 325, Geological Survey of Great Britain (England and Wales).

The Dawlish Sandstone consists of 'reddish brown, weakly cemented sandstones, mainly cross-bedded, with intercalated thin lenses and beds of reddish brown claystone or clayey siltstone and fine-grained brecchia' (Edwards and Scrivener 1999). In effect, this means that it is highly variable in character and can weather to sand, clay, silt or gravel (ibid.).

These Permian formations are overlain along the line of the Exe by much younger Pleistocene River Terrace Deposits (2.3 million to 10,000 years before present). The one inch edition geological map (Sheet 325, Geological Survey of Great Britain (England and Wales) identifies these broadly as Terrace Gravel. Recent mapping of the terraces indicates that the Fourth and Fifth Terraces, consisting largely of gravel, are congruent with the south-western side of the Newcourt Area (Edwards and Scrivener 1999, Figure 37).

The surface of the Fourth Terrace lies about 12 metres above the floodplain and is fairly extensive between Countess Wear and Topsham (Edwards and Scrivener 1999). Here it consists of pebbly sandy gravel composed mainly of rounded quartzite with some angular to sub-angular flint (ibid.). The Fifth Terrace is about 22 metres above the floodplain and is well developed between Exeter and Topsham (ibid.). Between Countess Wear and Topsham it is composed of sandstone pebbles and cobbles in a sparse reddish brown sandy matrix (ibid.).

2.4.1 The RNSD and SEF Sites

The one inch edition geological map (Sheet 325, Geological Survey of Great Britain (England and Wales) shows Dawlish Sandstone across most of the RNSD site and across all of the SEF land, while Terrace Gravel is depicted in the south-eastern part of the RNSD site. This is at odds with the more recent mapping of the Terrace Gravels, which shows the Fifth Terrace extending across the north-eastern part of the RNSD and the SEF land, with the Fourth Terrace occupying the south-western parts of both sites (Edwards and Scrivener 1999, Figure 37). According to this source, the Dawlish Sandstone does not outcrop within either of the proposed development areas, although it is likely to be stratified below the gravel.

2.4.2 The Dart Site

The one inch edition geological map (Sheet 325, Geological Survey of Great Britain (England and Wales) depicts Terrace Gravel across the Dart Site. The more recent mapping suggests that this proposed development area occupies the Fourth and Fifth Terraces (Edwards and Scrivener 1999, Figure 37). The small scale of the published map means that the precise location of boundary between these terraces cannot be identified (ibid.).

2.4.3 The Langdon Site

The one inch edition geological map (Sheet 325, Geological Survey of Great Britain (England and Wales) shows Dawlish Sandstone across the Langdon Site.

2.4.4 Pratt Residential

Most of Pratt Residential lies on the Heavitree Brecchia with Dawlish Sandstone on its southern edge alongside Old Rydon Lane (Sheet 325, Geological Survey of Great Britain (England and Wales).

2.4.5 The Zindalina Site

The southern part of the Zindalina site occupies the Heavitree Brecchia, while the northern end is located on Dawlish Sandstone (Sheet 325, Geological Survey of Great Britain (England and Wales)

2.4.6 The Spine Road

The south-western spine road link crosses Terrace Gravel and Dawlish Sandstone (Sheet 325, Geological Survey of Great Britain (England and

Wales). The northern spine road link runs across the Heavitree Brecchia (Sheet 325, Geological Survey of Great Britain (England and Wales).

2.5 Soils

Three soil types are recorded across the proposed development sites in the Newcourt area. Two of these form over the Permian Heavitree Brecchia and Dawlish Sandstone. The most widespread are the brown earths of the Bridgnorth Association. These are reddish coarse sandy loams or loamy sands with depths varying between 0.6 and 0.9 metres (Clayden 1971; Findlay et. al. 1984). The clay content in these soils is generally less than 15% (ibid.). This means that the soils tend to be well drained and easy to work (Findlay et. al. 1984).

The second of the soils present over the New Red Sandstone deposits are the Bromsgrove Association. These are brown earths with a distinctive reddish hue (Clayden 1971). Although similar to the Bridgnorth Association, these soils tend to have a lower sand and higher clay content (ibid.). They are also between 0.6 and 0.9 metres in depth and are well drained and easily worked (Clayden 1971; Findlay et. al. 1984).

The third soil type is the Rudway Series which in the Newport area forms above Terrace Gravel (Clayden 1971). These are dark brown or reddish brown loams which are often more than 0.9 metres thick, although they tend to be shallower over gravel, where depths of 0.45 metres or less are usual (ibid.).

2.5.1 The RNSD, SEF and Langdon Sites

The soils in these areas have not been mapped by the Soil Survey of England and Wales (Exeter and Newton Abbot: Sheet 325 and 339). It seems probable that the Rudway Series would overlie the Terrace Gravel on the RNSD and SEF sites, while the Langdon Site is likely to be characterised by soils of either the Bromsgrove or Bridgnorth Associations.

2.5.2 The Dart Site

Soils of the Rudway Series are mapped on the Dart Site (Soil Survey of England and Wales (Exeter and Newton Abbot: Sheet 325 and 339).

2.5.3 Pratt Residential and the Zindalina Site

The Bridgnorth Association is mapped across most of Pratt Residential and all of Zindalina (Soil Survey of England and Wales (Exeter and Newton Abbot: Sheet 325 and 339). The Bromsgrove Association is shown across the centre of Pratt Residential in a broad strip congruent with the farm track between the two fields (ibid.).

2.5.4 The Spine Road

The soils in the area of the south-western spine road link have not been mapped. The northern spine road link crosses the brown earths of the Bridgnorth Association (Soil Survey of England and Wales (Exeter and Newton Abbot: Sheet 325 and 339).

3 PROPOSED SCHEME OF DEVELOPMENT

There are no detailed plans for any of the six sites, although all are proposed residential developments. These are the subject of outline planning applications. A full planning application will be submitted for the spine road, which will link the proposed developments in the Newcourt area.

The six sites and the spine road discussed in this report are part of a more extensive development. This is to include two additional residential areas and a science park, all of which are the subject of separate applications.

4 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

4.1 Known Archaeological Sites (Figures 4 to 10)

None of the six proposed development sites or the spine road is located in a Conservation Area, nor do they encroach on any Historic Parks and Gardens on the English Heritage or Devon Local Register. There are no designated Battlefields or Scheduled Ancient Monuments on any of this land, which lies well outside Exeter's Historic Core identified in the Local Plan as an Area of Archaeological Importance (Exeter City Local Plan 1995 to 2011). There are no Listed Buildings on any of the sites under consideration in this report, although Listed Buildings and Buildings of Local Importance (Exeter City Local Plan 1995 to 2011, Schedule 5) do exist relatively close to the proposed developments.

In addition to the designated sites, some of the Second World War buildings on the RNSD and SEF land have been identified as being of architectural and historic interest (Francis 1997). Wynard's Cottage on the southern fringes of Pratt Residential dates back to at least AD 1889 and is also of historic interest.

There are additionally three previously recorded archaeological sites or find-spots within the proposed development land and one cropmark newly identified during the research for this report. The first is a flint scatter which extends into the south-eastern margins of the Dart site (Sage and Allan 2004; SMR No.: SX98NE 165). The second is the cropmark of a rectangular ditched enclosure and associated linear features to the north of Pratt Residential (SMR No.: SX99SE 211). These are undated, but could be of late Prehistoric or Roman origin (50 BC to AD 410). The cropmark is located close to the line of the northern spine road link, which encroaches on some of the recorded elements. The third find-spot is represented by a late Neolithic to early

Bronze Age (2600 to 1800 BC) barbed and tanged arrowhead (SMR No.: SX99SE114) recovered from the site of the cropmark enclosure to the north of Pratt Residential (SMR No.: SX99SE 211). The new site identified on an aerial photograph in the National Monuments Record is an oval enclosure of prehistoric character, located just beyond the north-western boundary of Pratt Residential. This lies immediately to the south-east of the previously recorded rectangular ditched enclosure (SMR No.: SX99SE 211).

None of the proposed development sites have been the subject of systematic archaeological fieldwork. The flint scatter on the Dart site was identified during surface collection, but the records in the Royal Albert Memorial Museum suggest that this only just encroached on the edge of the proposed development area.

This lack of fieldwork means that the potential of the sites in question can only be assessed by an appraisal of the evidence from the surrounding landscape. The extent of this search area was suggested by the Archaeology Officer for Exeter City Council, to provide a representative picture of past settlement and land-use in the environs of the proposed developments. This is described in this report as the Study Area and the boundaries are shown in Figure 4.

There are numerous archaeological remains and find-spots within the Study Area. This is partly a reflection of the focus of recent development and of associated archaeological fieldwork. Although the results will be discussed in subsequent sections in chronological order, key archaeological investigations are mentioned below and are depicted in Figure 4 where they are identified by a unique letter. These sites are listed in alphabetical order in the gazetteer (Section 7.2).

Significant archaeological investigations have taken place on three sites to the south-east of the RNSD, SEF and Dart land. The most recent work focussed on a proposed development area and involved a desk-based assessment, geophysical survey and archaeological evaluation of land off the Exeter Road (Figure 4, Site A), which identified a Roman enclosure (Exeter Archaeology 1999; Sage 1999; Sage and Allan 2004, 37, No. 23). An area excavation carried out nearby in advance of the construction of the M5 (Figure 4, Site B) recovered evidence for Mesolithic activity (10000 to 4000 BC), a group of late Neolithic to early Bronze Age pits (2600 to 1800 BC) and an early Roman farmstead (AD 50/55 to 70/75; Jarvis and Maxfield 1975). The surface collection that infringed on the south-eastern margins of the Dart site (Figure 4, Site C) was carried out by M. Wallser on Seabrook Farm between 1985 and 1986 (Sage and Allan 2004, 32, No. 4). In total around 1500 pieces of worked flint were recovered, but the results have never been published and the material has been deposited in the Royal Albert Memorial Museum.

A large area at Countess Wear to the north-west of the RNSD, SEF and Dart sites and to the west of the Langdon site, Pratt Residential and Zindalina (Figure 4, Site D) has been the subject of a geophysical survey and surface collection (Johnson 1996; Exeter Archaeology 1996b). The work identified a single ditched rectangular enclosure and a disparate scatter of worked flint. In

the same general area a desk-based assessment, geophysical survey and watching brief at Woodwater Park in 1998 (Figure 4, Site E) produced largely negative results, although the natural had been truncated by up to a metre (Exeter Archaeology 2002).

Fieldwork in advance of modern development has also concentrated on a series of sites to the north and north-west of the Langdon site, Pratt Residential and Zindalina (Figure 4, Sites F to N). At Pynes Hill (north) a negative geophysical survey was followed by an excavation (Figure 4, Site F) which identified a series of ditches, pits and postholes attributed to the prehistoric period (Passmore 2002). On the opposite side of the road, the Tesco Superstore and the area to the north (Figure 4, Sites G to K) has been the subject of intensive fieldwork focussed on two locations (Figure 4, Sites G and J). The earliest phase of evaluation and excavation took place on the site of the Superstore in 1993 (Figure 4, Site G; Pearce and Weddell 1994). This identified a series of prehistoric, Roman and Medieval features (ibid.). A subsequent geophysical survey, evaluation and excavation to the north (Figure 4, Site J) revealed evidence for prehistoric settlement and ritual activity, together with features relating to phases of Roman, Medieval and post-Medieval land-use (Johnson 2000; Reed 2001; Dyer 2003).

Recent fieldwork yet to be written up has been carried out on the site of the new Clyst Heath Nursery and Junior School (Figure 4, Site L). This has identified evidence of an Iron Age settlement and a Roman ditch (Bill Horner pers. comm.). A second ongoing programme of archaeological investigation on an adjacent block of land (Figure 4, Site M) has revealed a Bronze Age ring ditch and associated cremation, together with Iron Age to Roman features (Exeter Archaeology 2002; Johnson 2002; Andrew Pye pers. comm.). Recent archaeological work has also taken place at the St. Peter's Secondary School in the northern corner of the Study Area (Figure 4, Site N). A geophysical survey on the site produced negative results (Oxford Archaeotechnics 2003), but excavation has identified a series of features dating to the Bronze Age (1800 to 600 BC) and possibly to the Iron Age (600 BC to AD 43; Bill Horner pers. comm.).

Archaeological fieldwork has additionally been carried out on two further land holdings to the north-east of the Langdon site, Pratt Residential and Zindalina (Figure 4, Sites P and R). A watching brief at Bishops Court Quarry in 1998 (Figure 4, Site P) produced no significant finds (Manning and Sage 1998). Field investigations at Sandy Park (Figure 4, Site R) were similarly largely negative, although a scatter of worked flint was recovered from the topsoil (Andrew Pye pers. comm.).

The distribution of these and all other archaeological remains recorded in the vicinity of the development sites is shown in Figures 5 to 10 and a summary of this evidence is presented below in chronological order. Local sites mentioned in the report are identified by unique numbers, corresponding with the numbers shown in Figures 5 to 10 and listed in the gazetteers (Sections 7.3 to 7.8). These provide a brief description for each entry, an Ordnance Survey National Grid reference, and the Devon Sites and Monuments Record number.

The sources of all data are duly referenced in the text or gazetteers, while all reports consulted are listed in the bibliography (Section 7.1).

An approximate distance between the archaeological sites and the proposed development land is also given in the text. In order to make this less cumbersome the development areas have been amalgamated and the distances have been measured from the outer boundaries of each group. The sites in the south-west of the Newcourt area – the RNSD, SEF and Dart land – are described as Group A; while those to the north-east – The Langdon Site, Pratt Residential and the Zindalina Site – are described as Group B.

4.1.1 The Mesolithic Period (10000 to 4000 BC; Figure 5; Section 7.3)

The earliest indication of human activity in the Study Area is provided by worked flint and chert dating from the Mesolithic period. At this time the economy was based on hunting and gathering and it is thought that relatively small groups of people were moving around the landscape between temporary camps, following seasonally available resources. These relatively transient sites tend to be small and can often only be identified by concentrations or stray finds of worked flint or other stone. This is exactly the kind of evidence represented in the Study Area, where all of this material was either found on the surface or in unstratified contexts.

The closest finds to the proposed development land were recovered during the surface collection on Seabrook Farm by M. Wallser (Figure 4, Site C). Two microliths came from the scatter of worked flint about 100 metres to the south-east of Group A and 800 to 950 metres south-west of Group B (Figure 5, 1). These are not listed separately in the SMR and were identified during the visit to the Royal Albert Memorial Museum.

Contemporary material is recorded from two other findspots well to the south and south-east of the proposed development sites. The first is represented by a small group of microliths recovered from residual contexts during the excavations on the line of the M5 (Figure 4, Site B; Jarvis and Maxfield 1975), approximately 600 metres to the south-east of Group A and 1.2 to 1.4 kilometres south of Group B (Figure 5, 2). A single microlith was also found in a field near Cott's Farm, some 950 metres to the east of Group A and about 850 to 1100 metres from Group B (Figure 5, 3).

4.1.2 The Neolithic to Bronze Age (4000 to 600 BC; Figure 5; Section 7.3)

A mobile lifestyle is thought to have continued well into the Neolithic period (4000 to 2100 BC), although the economy began to change with the domestication of various animals and the emergence of garden plot horticulture. This is a time when traces of settlement are ephemeral, in sharp contrast to the highly visible funerary and ceremonial monuments. In the Study Area Neolithic remains are elusive, probably because they are largely the product of domestic activity and of the rituals of everyday life.

There are relatively few closely dated Neolithic artefacts from the Study Area and for the most part the material can only be attributed to a very broad time frame also encompassing the early Bronze Age. Early Neolithic finds (4000 to 3400 BC) are recorded on land to the north of the Tesco Superstore (Figure 4, Site J), about one kilometre to the north of the Group A sites and some 650 metres north-west of Group B (Figure 5, 4). Four pieces of early Neolithic worked flint were found during the evaluation (Reed 2001), while one of the pits recorded during the follow-up excavation contained four fragments of pottery that were tentatively attributed to this same phase (Dyer 2003).

A group of late Neolithic features (3400 to 2100 BC) in the southern part of the Study Area was excavated in advance of the M5 motorway (Figure 4, Site B; Jarvis and Maxfield 1975), approximately 600 metres to the south-east of Group A and 1.2 to 1.4 kilometres south of Group B (Figure 5, 2). The excavation revealed pits and postholes arranged in two small clusters about 20 metres apart (Jarvis and Maxfield 1975). Thirty-six features produced either prehistoric pottery or worked flint and of these only 13 contained material of late Neolithic character (ibid.). Pottery came from nine of the features and included Peterborough ware (3400 to 2500 BC; after Gibson and Kinnes 1997), grooved ware (2900 to 2100 BC; after Garwood 1999) and possibly beaker (2600 to 1800 BC; after Kinnes et. al. 1991), although this was by no means certain (Smith 1975). The 140 pieces of worked flint from these contexts and the bulk of the flint assemblage from later deposits was thought to be consistent with a late Neolithic date (Jarvis and Maxfield 1975).

Evidence for broadly contemporary activity was also recovered during the excavations to the north of the Tesco Superstore (Figure 4, Site J; Dyer 2003), about one kilometre to the north of the Group A sites and some 650 metres north-west of the Group B sites (Figure 5, 4). Ten pits contained pottery spanning the late Neolithic to early Bronze Age period (3400 to 1700 BC; Dyer 2003). The types represented include Peterborough ware (3400 to 2500 BC), either grooved ware (2900 to 2100 BC) or food vessels (2100 to 1700 BC; after Healy 1995, Figure 15.5) and collared urns (2000 to 1450 BC; after Longworth 1984; and Burgess 1986).

An oval enclosure found on the same site (Figure 4, Site J; Figure 5, 4) has been interpreted as a Bronze Age farmstead dating between 2000 and 600 BC (Dyer 2003). This is defined by a ditch surrounding an area 46.5 metres long and 37.5 metres wide (ibid.). This feature appears to have produced little or no dateable material and the reasons for its attribution to the Bronze Age are unclear. Moreover, the date range given seems somewhat curious when none of the identified pottery from other features on the site is later than 1450 BC and at least part of the assemblage comprises ceramics more normally associated with funerary contexts (collared urns; cf. Longworth 1984). One can only assume that the date relies on the morphology of the enclosure, but if this is the case an Iron Age origin (600 to 50 BC) seems equally possible.

Several Bronze Age pits were excavated just to the south on the Tesco Superstore site (Figure 4, Site G; Pearce and Weddell 1994), approximately 800 metres to the north of Group A and 300 metres to the north-west of Group

B (Figure 5, 5). One of these produced numerous fragments from an early Bronze Age collared urn (2000 to 1450 BC; ibid), while others contained pottery of late Neolithic to Bronze Age character including beaker sherds (2600 to 1800 BC; Pearce and Weddell 1994).

The recent excavations at the St. Peter's Secondary School in the northern corner of the Study Area (Figure 4, Site N) have also recorded pits and linear features which may be of Bronze Age date, although an Iron Age origin has also been proposed (Bill Horner pers. comm.). These are located some 1.85 kilometres to the north of Group A and 1.45 kilometres north of Group B (Figure 5, 6).

The remaining late Neolithic to early Bronze Age find-spots in the Study Area are all from the surface (Figure 5, 7 to 10). The most easterly is located on the slopes of the Clyst Valley, approximately 950 metres north-east of Group A and 200 metres to the east of Group B (Figure 5, 7). This marks the position of 17 pieces of worked flint found in an area approximately 60 metres across during the construction of the M5 motorway. A barbed and tanged arrowhead (2600 to 1800 BC) came from the field immediately to the north of Group B and Pratt Residential, some 80 from the site boundary close to the line of the northern spine road link, and about 550 metres to the north-east of Site A (Figure 5, 8). The two other dateable finds come from the western edge of the Study Area (Figure 5, 9 and 10). The first is a thumbnail scraper (2600 to 1800 BC) from the Countess Wear site (Figure 4, Site D; Exeter Archaeology 1996b), approximately 700 metres to the north-west of Group A and 900 metres west of Group B (Figure 5, 9). The second is a much larger group of 72 flint tools of late Neolithic to early Bronze Age character collected between 1935 and 1939 (Sage and Allen 2004, 32, No. 1). This material came from a field some 400 metres to the west of Group A and one kilometre to the south-west of Group B (Figure 5, 10).

Ceremonial sites, particularly those connected with burial, continue to feature prominently in the archaeological record of the Bronze Age, mainly because they leave a recognisable signature on today's landscape. This is reflected in the Study Area by records of seven or possibly nine ring ditches that originally surrounded circular burial mounds or round barrows. Very few have been excavated and those that have are characterised by a notable paucity of finds, which makes them difficult to date with any degree of precision. Elsewhere in the country this form of funerary monument is most characteristic of a period between around 2600 and 1000 BC. In effect this means that some of the ring ditches in the Study Area could be contemporary with the late Neolithic to early Bronze Age sites described above, while others might be considerably later.

Approximately half of the recorded ring ditches cluster in the northern part of the Study Area (Figure 5, 4, 5, 11 and 12), where they were discovered during archaeological field investigations prior to development. They include one ring ditch excavated in 2003 (Figure 4, Site J; Dyer 2003), about one kilometre to the north of the Group A sites and some 650 metres north-west of the Group B sites (Figure 5, 4); and two others identified in 1993 (Figure 4,

Site G; Pearce and Weddell 1994), approximately 800 metres to the north of Group A and 300 metres to the north-west of Group B (Figure 5, 5). The northernmost example (Figure 5, 4) had a diameter of approximately 10 metres (Dyer 2003), while the other two were only six metres across (Figure 5, 5; Pearce and Weddell 1994). Even though all three were largely devoid of finds, the presence of collared urns on both sites (see above) does suggest funerary activity in the area between 2000 and 1450 BC (cf. Longworth 1984). A ring ditch and associated cremation has also been found recently in the southern part of the Rydon Lane development area (Figure 4, Site M; Andrew Pye pers. comm.), some 1.3 kilometres to the north of Group A and 800 metres to the north of Group B (Figure 5, 11). Two other possible examples were excavated on the nearby site of the Clyst Heath Nursery and Junior School (Figure 4, Site L), approximately 1.3 kilometres to the north-east of Group A and 700 metres north of Group B (Figure 5, 12; Bill Horner pers. comm.). The interpretation of these features is uncertain since it has yet to be determined whether they represent ring ditches or the eaves drip gullies of round houses (Bill Horner pers. comm.).

The remaining three ring ditches known to exist within the Study Area all lie to the south of Old Rydon Lane and have been identified as cropmarks on aerial photographs. Two on the eastern side of the Study Area are located about 750 metres north-east of Group A and 300 metres east and south-east of Group B (Figure 5, 13); and some 400 metres east of Group A and 200 metres south of Group B (Figure 5, 14). The third is situated at Countess Wear, approximately 600 metres north-west of Group A and 900 to 1100 metres west of Group B (Figure 5, 15). In 1990 the site was visible as a low mound, some 0.2 metres high with a diameter of 15 metres (Exeter Archaeology 1996a).

The only other find of certain Bronze Age date from the Study Area is a looped palstave (Sage and Allan 2004, 32, No. 6). This was discovered on the university playing fields approximately 600 metres south-east of Group A and one kilometre to the south of Group B (Figure 4, Site A; Figure 5, 16).

4.1.3 The Iron Age (600 BC to AD 43; Figure 5; Section 7.3)

With the possible exception of some of the pits and ditches identified at St. Peter's Secondary School in the northern corner of the Study Area (Figure 4, Site N; Figure 5, 6), there is only one recorded site of confirmed Iron Age date. This is located at the new Clyst Heath Nursery and Junior School (Figure 4, Site L), some 1.3 kilometres to the north-east of Group A and 700 metres north of Group B (Figure 5, 12; Bill Horner pers. comm.). Here recent excavations have uncovered a group of pits containing middle Iron Age pottery (400 to 50 BC; Bill Horner pers. comm.).

4.1.4 Un-phased Prehistoric Sites (Figure 6, Section 7.4)

A relatively large number of features and finds within the Study Area have been attributed broadly to the prehistoric period, but have not been phased more precisely. The sites include excavated features from land to the north of the A379. These are all truncated and are largely devoid of finds. They include some features which are generally found on prehistoric sites and ditches on an alignment running counter to the Medieval and post-Medieval system of field boundaries.

The excavations at the Tesco Superstore (Figure 4, Site G) uncovered a boundary ditch, elongated pits and a four-post structure associated with a scatter of pits (Pearce and Weddell 1994). The site is located approximately 800 metres to the north of Group A and 300 metres to the north-west of Group B (Figure 6, 17). Four-post structures are known to occur on later prehistoric settlements, where they are thought to have served as granaries. The presence of this and the character of the other features point to occupation.

The work on the site immediately to the north (Figure 4, Site J), about one kilometre to the north of Group A and 650 metres north-west of Group B (Figure 6, 18), also identified evidence pointing to settlement (Reed 2001; Dyer 2003). The undated features in the vicinity of the putative Bronze Age enclosure (Figure 5, 4) included 34 postholes and 55 pits (Dyer 2003). A further 11 postholes, 19 pits and several boundary ditches were identified in the northern part of the excavated area (ibid.). These produced no finds but were attributed to the prehistoric period, while it was suggested that the boundary ditches may have been elements of a field system extending across the Tesco site to the south (Figure 6, 17; Dyer 2003).

Similar evidence was revealed by the excavations at Pynes Hill (Figure 4, Site F), about 900 metres to the north of Group A and 550 metres north-west of Group B (Figure 6, 19). The features included part of a boundary ditch, eight postholes and 47 pits which were mostly undated, but attributed to the prehistoric period (Passmore 2002).

The rest of the prehistoric finds from the Study Area are scatters and concentrations of worked flint. This material is most likely to pre-date the Iron Age (before 600 BC), although the expedient use of flint tools did continue during this period.

There are three find-spots on the western side of the Study Area (Figure 6, 20 to 22). The most northerly marks the position of two pieces of worked flint recovered during the watching brief at Woodwater Park (Figure 4, Site E; Exeter Archaeology 2002). These came from a location some 800 metres north-west of Group A and 650 metres north-west of Group B (Figure 6, 20). The second scatter of worked flint was found during field walking to the south at Countess Wear (Figure 4, Site D; Exeter Archaeology 1996b). The site is approximately 700 metres north-west of Group A and 900 metres west of Group B (Figure 6, 21). The third flint scatter in this area comprises 74 flints

found in a ploughed field on the edge of the golf course, approximately 200 metres west of Group A and 800 metres south-west of Group B (Figure 6, 22).

Six additional flint scatters are recorded to the south-east of the Group A sites on Seabrook Farm and the line of the M5 motorway (Figure 6, 23 to 28). Four central grid references correlate with the collection from Seabrook Farm (Figure 6, 23 to 26). One of these is on the Dart site (Figure 6, 23) and the others are between 100 and 250 metres to the south-east of Group A and between 800 and 1100 metres to the south of Group B.

There does not appear to be any record in the museum of the actual distribution around the central grid references. Furthermore, the implements have been removed from the assemblage so that it cannot be dated (Oliver Blackmore pers. comm.). The area outlined on Figure 4 (Site C) is thought to represent the extent of the surface collection, so it is somewhat curious that the grid reference for the scatter of 350 pieces on the Dart site is outside the investigated land (Figure 6, No. 23). The other points identify scatters of 735 (Figure 6, No. 24), 414 (Figure 6, No. 25) and 52 pieces (Figure 6, No. 26). The finds from three of these (Figure 6, Nos. 23 to 25) have been briefly mentioned in a recent publication that lists a total of 1499 pieces of worked flint (Sage and Allan 2004, 32, No. 4). However, it is thought that an additional 52 worked flints also form part of this same collection (Figure 6, 26), while it is unclear whether the total includes the removed implements or not.

The other two find-spots on the line of the M5 motorway are 500 to 600 metres south-east of Group A and 900 to 1100 metres south of Group B (Figure 6, 27 and 28). The northernmost consists of a light scatter of 16 worked flints, including two scrapers, from an area with a radius of 70 metres (Figure 6, 27). The most southerly (Figure 6, 28) represents 1108 pieces of worked flint and 10 pieces of worked chert collected from the spoil heaps of the 1974 excavations (Figure 4, Site B; Sage and Allan 2004, 32, No. 3).

The two remaining scatters of worked flint, from the north-eastern corner of the Study Area, are located approximately 1.1 to 1.35 kilometres north-east of Group A and 300 to 500 metres east and north-east of Group B (Figure 6, 29 and 30). The one to the south of Old Rydon Lane consists of 14 flakes (Figure 6, 29), while the flint scatter to the north was found in the topsoil during recent archaeological investigations near Sandy Park (Figure 4, Site R; Figure 6, 30; Andrew Pye pers. comm.).

4.1.5 The Roman Period (AD 43 to 410; Figure 7; Section 7.5)

The effects of the Roman invasion of AD 43 are marked in Exeter by the establishment of a legionary fortress around AD 55 (Bidwell 1979). This dominated the surrounding territory and was the base of *Legio II Augusta*, which had played a pivotal role in the conquest of Britain under the leadership of Vespasian between AD 43 and 47 (ibid.; Millett 1990). Sometime around AD 65 the legion was moved to Gloucester and the civilian town of Exeter,

which was to serve as the *civitas* capital (*Isca Dumnoniorum*) was founded on the site of the former fortress (ibid.).

Recent excavations at Topsham have identified the defences of a military base, which although poorly dated, are thought likely to have been in use between AD 50/55 and 75/85 (Sage and Allan 2004). This may well have functioned as a port supplying the legionary fortress at Exeter, since it is probable that the Exe was only navigable to sea-going shipping up to Topsham (ibid.).

The main Roman road leading between Exeter and Topsham was an early construction that may have preceded the legionary fortress, providing a vital supply route (Sage and Allan 2004). This is broadly followed by the line of the Topsham Road, which runs parallel to the south-western boundary of the Group A sites, some 60 metres to the south-west, and is 900 metres to the south-west of Group B (Figure 7, 31). A second Roman road between Exeter and Charmouth crosses the northern end of the Study Area on the line of Quarry Lane, approximately 1.7 kilometres north of Group A and one kilometre north of Group B (Figure 7, 32). A Roman track set at right angles to this road has been uncovered during the recent archaeological investigations in the northern part of the Rydon Lane development area (Figure 4, Site M; Andrew Pye pers. comm.). This feature lies to the north of Quarry Lane, some 1.7 kilometres north of Group A and 1.2 kilometres north of Group B.

Most of the evidence for associated Roman activity is derived from the south-eastern corner of the Study Area. The remains include part of a farmstead excavated on the line of the M5 motorway (Figure 4, Site B; Jarvis and Maxfield 1975), approximately 600 metres south-east of Group A and 1.2 kilometres south of Group B (Figure 7, 34). This was constructed at about the same time as the legionary fortress in Exeter (AD 50/55) and appears to have been abandoned approximately 20 years later (AD70/75). The main building was a rectangular three-roomed timber structure 10.2 metres long by 3.8 metres wide (Jarvis and Maxfield 1975). This was associated with an out-building; five four- to six-post structures that may have functioned as granaries or stores; traces of possible wind-breaks and compounds marked by lines of stake and postholes; eight pits; two wells; and boundary ditches (ibid.). Native and Roman influences are demonstrated by the character of the features, while the high proportions of fine pottery from the farmstead suggest that its owner was relatively prosperous (ibid.).

There is little sign of Roman activity on the site in the years immediately following its abandonment, although a single boundary ditch of second century date (Jarvis and Maxfield 1975) may indicate that it had been subsumed into an agricultural area. By the late third or fourth century AD the land was the focus of funerary ritual, marked by a single cremation buried in a pottery vessel (ibid.). This was surrounded by a shallow rectangular trench that might have marked the position of a tomb (ibid.).

Locally the focus of later first to mid-third century occupation appears to have shifted to the north, where a Roman enclosure has been identified on the opposite side of the Topsham to Exeter Road (Figure 4, Site A; Sage 1999;

Sage and Allan 2004, 35, No. 23). This is located approximately 600 metres south-east of Group A and 1.15 kilometres south of Group B (Figure 7, 35). The site was identified by a geophysical survey and investigated during an evaluation that revealed the ditches forming two sides of the enclosure (Sage 1999; Sage and Allan 2004, 35, No. 23). It was suggested that the Roman road may have marked the south-western boundary of the site (Sage and Allan 2004, 35, No. 23). The 23 sherds of pottery recovered from the upper ditch fills dated between the mid-second and mid-third centuries AD, while the lower deposits proved to be barren of finds (ibid.).

Six Roman coins have been found in the vicinity of the enclosure and farmstead. The first is a bronze sestertius of Marcus Aurelius or Lucius Severus (AD 160 to 180), picked up by a metal detectorist in 1999 (Sage and Allan 2004, 35, No. 22) in a location 550 metres south-east of Group A and 1.1 kilometres south of Group B (Figure 7, 36). The other five coins were found together and may have been part of a hoard. These came from a field near to the first century farmstead, some 600 metres south-east of Group A and 1.2 kilometres south of Group B (Figure 7, 37). All are silver and are thought to have been issued during the reign of Augustus (31 BC to AD 14). Although these pre-date the conquest, they could have been brought into the country after AD 43 by soldiers in the Roman army.

A Roman coin of probable first century date was also found in the garden of 482 Topsham Road. This is just 80 metres south-west of the Group A sites and 950 metres south-west of Group B (Figure 7, 38).

The rest of the recorded features attributed to the Roman period are located in the central and northern part of the Study Area, where they are poorly dated and appear to be connected with land-use. The remains include a boundary ditch and associated track and cultivation furrows on the site of the Tesco Superstore (Figure 4, Site G; Pearce and Weddell 1994), some 800 metres to the north of Group A and 300 metres to the north-west of Group B (Figure 7, 39). These produced no dating evidence and were attributed to the Roman period on the basis of their alignment, although a Medieval origin was also postulated (Pearce and Weddell 1994). Similar features on a comparable axis were recorded during excavations further to the north (Figure 4, Site J; Dyer 2003), approximately one kilometre to the north of the Group A sites and some 650 metres north-west of the Group B sites (Figure 7, 40). Again there was no dating evidence and the phasing relied on comparison with the alignment of the putative Roman boundary at the Tesco Superstore site (ibid.). The possibility of a post-Roman origin was also acknowledged (ibid.).

The recent investigations at the Rydon Lane development have uncovered a furnace (Figure 4, Site M; Andrew Pye pers. comm.), some 1.3 kilometres to the north of Group A and 800 metres to the north of Group B (Figure 7, 41). The date of this has yet to be confirmed, but a Roman or even Iron Age origin has been postulated (Andrew Pye pers. comm.).

Further to the south-west, an analysis of the alignment and character of the post-Medieval field boundaries, has led to the tentative suggestion that they

might represent a survival of the Roman system of land division (Exeter Archaeology 1996a). This system is centred on a grid reference 750 metres north-west of Group A and 550 metres north-west of Group B (Figure 7, 42). However, elements of this potentially early field system extend across the northern part of the Group A sites and the south-western side of Pratt Residential (Exeter Archaeology 1996a, Figure 3). It has been stressed that there is no archaeological evidence to support the putative Roman origins of this field system (ibid.). An analysis of the layout and land-ownership patterns across the Group B sites in the 1840's certainly points to a Medieval rather than Roman origin (Section 4.4.4). Furthermore, one of the boundaries forming part of the putative Roman layout, excavated on the site of the Tesco Superstore (Figure 4, Site G), proved to be of post-Medieval origin (ibid.).

The only other find, the base of a pottery vessel which is certainly of Roman date, was recovered from a location near Old Rydon Lane, some 300 metres north-east of Group A and 100 metres west of Group B (Figure 7, 43). The pottery is an imported samian ware vessel of first or second century date.

4.1.6 The Late Saxon, Medieval and Tudor Periods (AD 937 to 1603; Figure 8; Section 7.6)

There is no evidence for any early or middle Saxon activity, nor is there any sign of Saxon settlement within the Study Area. However, a tenth century manorial boundary does cross this part of the landscape. The parish boundary between Heavitree and Topsham along Old Rydon Lane is thought to roughly coincide with the perimeter of the late Saxon Manor of Topsham. This is first documented in AD 937 or 938 when the Manor was part of the lands of King Athelstan, who granted a charter to the monastic church of St. Peter in Exeter (Bradbeer 1968). As presently defined the parish boundary runs 200 metres to the north of the Group A sites and passes between Pratt Residential and the Langdon Site within Group B (Figure 8, 44).

It is probable that the earlier manorial boundary lay to the north of Old Rydon Lane, which would place it within Pratt Residential, but its course is uncertain. It is said to have followed 'The Way' which is mentioned in an eleventh century charter and is first documented in AD 937 or 938. The western end of the boundary may have coincided with a dyke also described in the Topsham charter (Figure 8, 45).

The Manor of Topsham and the Manor of East Wonford, which coincides with the part of Heavitree parish occupied by the Group B sites to the north of Old Rydon Lane, are both listed in the Domesday Book of AD 1088. Topsham is recorded as 'Toppeshant' (Bradbeer 1968), while East Wonford which was also a late Saxon landholding, is listed as 'Wenforde' (Worthy 1892).

Medieval remains in the Study Area are largely restricted to roads and features relating to land-use. Apple Lane which is located at the northern end of the Study Area, 1.3 kilometres north-east of Group A and 500 metres north-east of Group B (Figure 8, 46), may have been in use at this time. The Topsham road,

passing some 60 metres to the south-west of the Group A sites and 900 metres to the south-west of Group B (Figure 8, 47), was the main route between Exeter and the Medieval port at Topsham.

The only known site of Medieval occupation coincides with Weare House on the Exeter golf course, some 200 metres west of Group A and 700 metres south-west of Group B (Figure 8, 48). This was originally called 'Heniton' or 'Hineton Siege' (Exeter Archaeology 1996a, 22) and was the seat of the Holland Family, Dukes of Exeter (Bradbeer 1968). A house is said to have been constructed on the site in AD 1331 (ibid.), although this no longer survives.

Other Medieval features in the south-eastern corner of the Study Area relate to land-use. They include a series of long narrow plots at right angles to the Exeter Road, some 700 metres south-east of Group A and 1.1 kilometres south of Group B (Figure 8, 49). These were identified in the evaluation report on the archaeological investigation of this area (Figure 4, Site A), and are thought to represent Medieval strip cultivation within an open field (Sage 1999).

A boundary ditch pre-dating the fourteenth or fifteenth century was also found on the opposite side of the Topsham Road (Figure 4, Site B; Jarvis and Maxfield 1975). This is approximately 600 metres south-east of Group A and 1.2 kilometres south of Group B (Figure 8, 50).

The only Medieval features identified during the archaeological investigations in the northern part of the Study Area are a ditch and two pits, each containing a single fragment of pottery, excavated on the site to the north of the Tesco Superstore (Figure 4, Site J; Reed 2001; Dyer 2003). This is located about one kilometre to the north of the Group A sites and some 650 metres north-west of the Group B sites (Figure 8, 51).

The northern part of the Study Area lies within Clyst Heath which is the site of two battles. The central grid reference for these is approximately 1.6 kilometres north-east of Group A and 750 metres north-east of Group B (Figure 8, 52). The first battle of Clyst Heath took place on the 15th December 1455, when the Earl of Devon defeated Sir William Bonville. The second battle, on 4th August 1549, was fought as part of the prayer book riot between Cornishmen and foreign mercenaries under the leadership of Lord Russell, who later became the First Earl of Bedford.

Numerous skeletons ploughed up during the nineteenth century below Pyne's Hill are thought to be derived from a mass grave relating to one of the two battles. This is located 900 metres north of Group A and 550 metres north-west of Group B (Figure 8, 53).

4.1.7 The Post-Medieval Period (AD 1604 to 1945; Figure 9; Section 7.7)

The sites of several nineteenth century buildings are recorded in the Study Area. These include a group of structures, now destroyed and under the A379,

that may represent part of a farmstead (Exeter Archaeology 1996a, 11). The site is about 750 metres north-east of Group A and 250 metres north of Group B (Figure 9, 54). The buildings appear on maps dating from the beginning of the nineteenth century (Exeter Archaeology 1996a, 11).

Sandy Park Farm, shown on the Heavitree tithe map of AD 1844 (Exeter Archaeology 1996a, 16), occupies a position some 1.3 kilometres north-east of Group A and 300 metres north-east of Group B (Figure 9, 55). Further to the north a long narrow structure is plotted on the Ordnance Survey map for the 1880's. This occupied a position approximately 1.7 kilometres north-east of Group A and 950 metres north of Group B, (Figure 9, 56).

The site of the Heavitree parish beacon was situated near Pynes Hill, some 900 metres north of Group A and 600 metres north-west of Group B (Figure 9, 57). It is also thought that a windmill may have occupied a nearby plot of land (Figure 9, 58).

The Exmouth Branch of the LSWR railway, 600 metres to the east of Group A and running alongside the Zindalina site (Figure 9, 59), was opened on 1st May 1861. A signal post in the south-eastern corner of the Study Area, approximately 800 metres from both the Group A and Group B sites (Figure 9, 60), appears on a later Ordnance Survey map of AD 1932.

Several boundary features relating to the post-Medieval agricultural landscape have been recorded during archaeological investigations in the northern part of the Study Area. They include a nineteenth century hedge bank on the Tesco Superstore site (Figure 4, Site G; Pearce and Weddell 1994), some 800 metres to the north of Group A and 300 metres to the north-west of Group B (Figure 9, 61); boundary ditches and two pits in the excavated area to the north (Figure 4, Site J; Dyer 2003), about one kilometre to the north of Group A and some 650 metres north-west of Group B (Figure 9, 62); and two eighteenth to nineteenth century ditches recorded during the watching brief at Bishops Court Quarry (Figure 4, Site P; Manning and Sage 1998), approximately 1.6 kilometres to the north-east of Group A and 750 metres north-east of Group B (Figure 9, 63).

A group of post-Medieval features were also excavated in the south-eastern corner of the Study Area (Figure 4, Site B; Jarvis and Maxfield 1975), about 600 metres south-east of Group A and 1.2 kilometres south of Group B (Figure 9, 64). These were thought to have been related to the sugar business just outside the Study Area to the south-east, and included an eighteenth to early nineteenth century rectangular enclosure, three seventeenth to nineteenth century ditches, a post-built timber structure and a circular trench (Jarvis and Maxfield 1975).

Two ponds are recorded on Ordnance Survey maps of AD 1932 to 1933, some 200 metres to the south-west of Group A and 1.1 kilometres south-west of Group B (Figure 9, 65 and 66). The legend 'fishpond' is written clearly across one of these on the map (Figure 9, 65), while the other was apparently used for recreational purposes by the owners of Weare House (Figure 9, 66).

Three sand quarries are known to have existed close to the northern edge of the Study Area, approximately 1.6 kilometres north-east of Group A and 800 to 900 metres north and north-east of Group B (Figure 9, 67 to 69). The first, known as the Clyst Heath Sand Quarry, is probably the same as the site shown on the nineteenth century maps (Exeter Archaeology 1996a, 4 at SX 9600 9158). This is described in the Heavitree tithe apportionment of AD 1842 as 'Sand Quarry' (ibid.) and in 1937 was operated by Garnet (Figure 9, 67). The second, known as the Heavitree Sand pit, also has nineteenth century origins (Figure 9, 68; Exeter Archaeology 1996a), while the third, the Bishop's Court Sand Pit (Figure 9, 69), was used more recently (Exeter Archaeology 1996a).

A gravel pit is depicted on the late nineteenth century maps further to the south on the Terrace Gravels of the River Exe, 200 metres east of Group A and 400 metres south of Group B (Figure 9, 70). This appears on the First Edition Ordnance Survey map of AD 1889 as 'Old Gravel Pit' (Exeter Archaeology 1996a, 26), suggesting that it is of much earlier origin. A nearby boundary stone is recorded from the AD 1938 Ordnance Survey map, some 600 metres east of Group A and 450 metres south-east of Group B (Figure 9, 71).

The latest sites known to have existed within the Study Area are the two Second World War bases. The first encompassed the RNSD and SEF sites within Group A (Figure 9, 72) and extended north-eastwards to include the 'middle site' and the Upper RNSD Depot immediately east of the Langdon site in Group B (Figure 9, 73). This was established in 1943 and served as an amphibious supply base for the US navy (Horner 1996; Francis 1997). The site was taken over by the Royal Navy in 1946 and was used as a supply depot. Since many of the Second World War buildings survive within the RNSD and SEF sites, this is discussed in more detail in a subsequent section (Section 4.3).

The second military camp was located at St. Peter's School, 1.6 kilometres to the north of Group A and 1 kilometre north of Group B (Figure 9, 74). This served as the base for the 4th Quartermaster Company and the 704th Ordnance Company of the US Infantry Division.

4.1.8 Undated Cropmarks (Figure 10; Section 7.8)

There are four undated rectilinear enclosures recorded on aerial photographs of the Study Area. There is no direct evidence for the date of these, but the morphology of the crop marks has led to the suggestion that they might represent late Iron Age to early Roman settlements. As yet, this remains to be proven as none have been excavated.

The enclosures include a site just 80 metres to the north of Pratt Residential and Group B within the Science Park area (Figure 10, 75). This is approximately 600 metres to the north-east of Group A. The enclosure is set on a similar alignment to the present fields and is associated with linear features on the same axis that may be boundaries of an early field system.

Part of a comparable enclosure has been observed some 950 metres to the north-east of Group A, and 250 metres to the south-east of the Zindalina site and Group B (Figure 10, 76). A third enclosure to the south of this is situated some 800 metres to the east of Group A and 500 metres south-east of Group B (Figure 10, 77).

The only other recorded site of this type within the Study Area is located at Countess Wear, approximately 800 metres north-west of Group A and 900 metres west of Group B (Figure 10, 78). This was first identified from an aerial photograph and has been the subject of a geophysical survey and surface collection (Figure 4, Site D; Johnson 1996; Exeter Archaeology 1996b). The geophysical survey indicated that the enclosure was defined by a single ditch and was approached by a track, which passed through the entrance and continued for some 15 metres across the interior (Johnson 1996). A possible circular structure with a diameter of some 15 metres was identified within the enclosure, while there appeared to be a pit outside the ditch (ibid.). No prehistoric or Roman pottery was found during the surface collection, while the worked flint did not appear to concentrate in the area of the enclosure (Exeter Archaeology 1996b).

4.2 Listed Buildings, Buildings of Local Importance and Buildings of Historic Interest (Figure 11; Section 7.9)

There are eight Listed Buildings in the hinterland of the proposed developments. All are Grade II, with the exception of Weare House (Figure 11, 79), which is Grade II*. English Heritage defines Grade II structures as being "of special interest, warranting every effort to preserve them", while Grade II* are "particularly important buildings of more than special interest". Three Buildings of Local Importance, identified in Schedule 5 of the Local Plan (1995-2011), are also located in the environs of the proposed developments. As with the Listed Buildings none occur on the sites themselves. Although Wynards Cottage (Figure 11, 85) does not appear on any of these schedules, it too is of historic interest.

The distribution of these various buildings is shown in Figure 11. As with the archaeological remains, each is identified by a unique number which is listed in the accompanying gazetteer (Section 7.9). This also gives the Devon Sites and Monuments record number for each structure, along with a National Grid Reference and a brief description.

Newcourt House, a Grade II Listed Building, is a square stucco mansion of eighteenth century date (DOE n.d.), located some 250 metres north-east of Group A and 120 metres south and west of Group B (Figure 11, 79). The house was built by John Shapley in AD 1727 and in the late eighteenth century was occupied by Thomas Sainsbury, who was Lord Mayor of London in AD 1787 (Bradbeer 1968). The house had two lodges and was set in an area of extensive gardens (see Sections 4.4.3 and 4.4.5; Figures 17 and 20).

Weare House, listed as Grade II*, is a stucco mansion largely of early nineteenth century date (DOE n.d.). This is used as a club house on the Exeter Golf Course and is some 150 metres west of Group A and 750 metres south-west of Group B (Figure 11, 80). The house on the site in the eighteenth century was pulled down and replaced by another which was partially destroyed by fire (Bradbeer 1968). The remains were sold to William Spicer in AD 1760 and then passed to Sir John Duckworth in AD 1804, who largely rebuilt the house (ibid.).

Six structures within the Exe Vale (Digby) Hospital complex are listed as Grade II (DOE n.d.). These are centred on a position some 1.2 kilometres north-east of Group A and 550 metres north of Group B (Figure 11, 81). The hospital was originally the Exeter Lunatic Asylum and was built between AD 1882 and 1886 by R. Stark Wilkinson, the architect for Exeter City Council (DOE n.d.). Apart from the hospital the listed structures include the chapel, lodge, water tower and gates, as well as Digby House which was designed for the asylum medical officer (ibid.).

The three Buildings of Local Importance are all situated alongside the Topsham Road. Newport Lodge is some 200 metres to the south-east of Group A and over one kilometre to the south of Group B (Figure 11, 82). This was constructed during the eighteenth century and originally served as a toll house. Seabrook House is a broadly contemporary structure, approximately 100 metres south-east of Group A and one kilometre south-east of Group B (Figure 11, 83). Crossways Lodge, is situated in the south-western corner of the Study Area, some 500 metres north-west of Group A and one kilometre south-west of Group B (Figure 11, 84).

Wynards Cottage to the north of Old Rydon Lane, on the fringes of Pratt Residential in Group B and 500 metres to the north-east of Group A (Figure 11, 85), is of mid to late nineteenth century date (see Section 4.4.6). The buildings are not listed, nor do they appear in Schedule 5 of the Local Plan (1995 to 2011).

4.3 The Second World War Buildings of the US Navy Amphibious Supply Base (Figures 12 and 13; Section 7.10)

The RNSD and SEF land encompasses the former site of the Lower Royal Naval Stores Depot. This has been the subject of a building survey carried out by Paul Francis in 1997, which resulted in a series of recommendations relating to the surviving buildings. This section is based on the report produced by Paul Francis (1997) and on the results of an earlier assessment by Bill Horner (1996). The condition of the buildings was re-assessed in January 2006.

The land now occupied by the RNSD and SEF sites, together with the 'middle site' and the upper RNSD Depot (both the subject of separate applications) had been requisitioned in 1943 under emergency wartime regulations (Horner 1996). The area was used by the US Navy during the Second World War as

an amphibious supply base (Francis 1997). This was built by the US Navy Construction Battalion, known as the Seabees, between 1943 and 1944, and played a vital role during the build-up to D-Day and the subsequent campaign in Europe (ibid.).

Exeter served as the principal supply base for the US Navy and was responsible for the issue of medical supplies, ordnance, spare parts for the ships of the invasion fleet, ships' stores and clothing, radio equipment, navigation, radar and sonar sets (Francis 1997). An audio visual department, providing information and training films to Navy personnel, also operated on the base, while the motor transport section was responsible for the maintenance of the 146 vehicles used by the supply department and the Tenth Special Construction Battalion (ibid.).

The layout of the lower site, encompassing the RNSD and SEF land, during the Second World War is shown on Figure 12, while the buildings of this period standing on the site in 1997 appear on Figure 13. Most of them are still in place and are identified on Figure 13 and in the accompanying gazetteer (Section 7.10) by the numbers painted on their exteriors. These same numbers were used to identify individual buildings in the 1997 survey report (Francis 1997).

The base originally fronted onto the Topsham Road, where there were a series of nissen huts (16 foot span) and Quonset sheds (20 foot span) that had been used for accommodation (Figure 12; Francis 1997). These were demolished and the land sold for housing during the early 1960's, when the current south-western boundary of the RNSD and SEF sites was established. Many other wartime buildings, mainly on the SEF site, were also removed in the years following the Second World War. The range of the demolished building types were identified by Francis (1997, map 4). Most of these are represented by structures which still survive on the RNSD and SEF sites. The road system laid out by the Americans in 1943 leading between these buildings, and corresponding with the route of the south-western spine road link is also still in place.

Ten different building types are extant on the lower site. Two forms of Ministry of Aircraft Production hangars are represented (Francis 1997). The Type A1 hangar (454/43) has a clear span of 95 feet with steel doors at either end (ibid.). Five of these stand on the lower site: three on the RNSD land (Figure 13, Nos. 21, 32 and 34) and two on the SEF site (Figure 13, Nos. 39 and 45). These are steel framed with galvanised corrugated sheeting forming the roof and wall cladding. The A1 hangars on the RNSD and SEF sites are of standard length (175 feet), comprising 12 bays of 14 feet 7 inches (ibid.). The northernmost of the hangars on the RNSD land has cladding sheets of corrugated iron missing at one end and partly at the other (Figure 13, No. 21). Some of the cladding panels are missing from the top on one end of another (Figure 13, Nos. 32) while a lot of cladding is missing from an end of the remaining hangar on the RNSD land (Figure 13, No. 34). Both hangars on the SEF site were inaccessible but the exteriors appear in good condition (Figure 13, Nos. 39 and 45).

Four Robins Type B hangars (2204/41 and 6874/43) are present on the RNSD site (Figure 13, Nos. 30, 35, 60 and 62). These are steel-framed buildings with doors at one end that would originally have been clad with corrugated sheeting painted black (Francis 1997). The A-frames dividing the bays are spaced at 12 feet 6 inches (ibid.). The two Robins hangars in the southern part of the RNSD site (Figure 13, Nos. 30 and 35) are of standard length (62 feet 6 inches), comprising five bays (ibid.) with the latter in good condition and the former in fair condition and exhibiting signs of rusting in the cladding at one end and in places on the roof. The two Robins hangars in the northern part of the RNSD site (Figure 13, Nos. 60 and 62) are double length (125 feet), 10 bay sheds (ibid.). The northernmost example (Figure 13, No. 60) has some of the wall panels missing from the south-western side and at the south-eastern end, but is otherwise in good condition. The other hangar has cladding missing at one end (Figure 13, No. 62).

There are 16 American built Quonset huts or 'arched rib utility huts' on the RNSD and SEF sites (Figure 13, Nos. 18, 19, 20, 20A, 27, 28, 29, 29B, 31, 33, 36, 36A, 38B, 41, 47 and 59A). These are arch shaped buildings constructed around curved sheet steel ribs set four feet apart and clad with panels of corrugated iron (Francis 1997). Two of the Quonset huts have a 20 foot span (Figure 13, Nos. 29B and 36A) and were designed as quarters buildings, office accommodation or small stores (ibid.). The example in the southern corner of the SEF site (Figure 13, No. 29B) was used as a muster station, 32 feet long with eight bays (Francis 1997) and has been recently demolished. The Quonset hut in the south-western corner of the RNSD site (Figure 13, No. 36A) was 100 feet long with 25 bays. This building has been mostly demolished.

The other 14 Quonset huts are in variable condition (Figure 13, Nos. 18, 19, 20, 20A, 27, 28, 29, 31, 33, 36, 38B, 41, 47 and 59A) and have spans of 40 feet. Nine of these are 100 feet long (Figure 13, Nos. 19, 28, 29, 31, 33, 38B, 41, 47 and 59A) and the remaining five are 200 feet long (Figure 13, Nos. 18, 20, 20A, 27 and 36). Eleven of the 40 foot span Quonset huts are located on the RNSD site (Figure 13, Nos. 18, 19, 20, 20A, 27, 28, 29, 31, 33, 36 and 59A) and three, all 100 feet in length, stand on the SEF site (Figure 13, Nos. 38B, 41 and 47). No. 18 has been demolished recently. No. 19 was inaccessible but shows signs of rusting in the cladding. Nos. 20 and 20A both have the end few feet of the building missing. No. 28 is two-thirds demolished while No. 29 has been completely demolished. No. 31 is in fair condition showing signs of rusting in the roof cladding sheets as does No. 33 but also in the side sheets. No.36 is in a generally good condition except for areas of rust at one end and small signs of rusting in the roof. No. 38B has been demolished. No 59A was inaccessible but exhibited small signs of rusting in the roof and an end door is no longer original having been blocked with breeze blocks and a smaller door.

There are two different types of American transit sheds on the RNSD and SEF sites (Francis 1997). Both have a clear span of 31 feet and similar steel-framed trusses and purlins with corrugated iron sheeting on the roofs and walls

(ibid.). Two Carnegie type transit sheds are located on the RNSD site (Figure 13, Nos. 34A and 21B). These have bays 20 feet wide divided by stanchions made from two U-shaped girders welded together (ibid.). The Carnegie shed in the southern part of the site (Figure 13, No. 34A) is 100 feet long with five bays (ibid.) and appears in good condition but was inaccessible. The other example in the central part of the site (Figure 13, No. 21B) is 200 feet long with 10 bays (Francis 1997) and has most of the steel panels missing from the sides and the south-eastern end of the roof.

Two Illinois transit sheds were recorded on the lower site at the time of the building survey (Francis 1997). These have a bay width of 16 feet 6 inches which are divided by H-shaped steel stanchions (ibid.). One of these sheds stands in the south-western corner of the RNSD site (Figure 13, No. 37). This is 198 feet long with 12 bays, has glazed double doors in alternate bays along one side wall (ibid.) and lacks some roof panels. In addition the doors in the side are well rusted at the bottoms. The other Illinois transit shed was situated in the southern corner of the SEF site (Figure 13, No. 38), but has now been demolished. It is listed as the gymnasium, was 99 feet long with 6 bays and had been used by the Royal Navy after the Second World War as a life raft test centre (Francis 1997).

One Nissen hut with a 16 foot span was still extant in the southern part of the RNSD site in 1997 (Figure 13, No. 29A). This had a steel frame composed of T-shaped ribs spaced at intervals of six and a half feet (Francis 1997). The hut was clad with corrugated iron and was 54 feet 10 inches long with concrete breeze block end walls (ibid.). This structure has now been demolished.

Three Nissen huts with 24 foot spans stand on the RNSD site (Figure 13, Nos. 21A, 24 and 25). These are of similar construction to the 16 foot span huts, have brick end walls and were mainly used as office accommodation (Francis 1997). Two are 96 feet long (Figure 13, Nos. 21A and 24), while the third is 74 feet long with a chimney stack (Figure 13, No. 25). No. 21A is in fair condition.

One Ministry of Works Standard hut is located in the south-western corner of the RNSD site (Figure 13, No. 37A). This has a 20 foot span with a reinforced concrete frame, is two bays long and was a latrine block still in use in 1997 (Francis 1997). It is in fair condition.

A large shed-like structure in the southern corner of the RNSD site (Figure 13, No. 34B), is also thought to date to the Second World War (Francis 1997). This has tubular steel stanchions with timber beams and purlins and galvanised corrugated cladding (ibid.). It is located in the original vehicle compound and may have been a garage (ibid.).

The rest of the buildings currently on the site are of modern origin. The base was largely taken over by the Admiralty on 28th January 1946, with the exception of the south-western end of the RNSD land which was retained by the US Navy until 1949 (Francis 1997). The site was used by the Royal Navy as a stores depot until its closure on 31st March 1997 (ibid.). The division

between the RNSD and SEF sites belongs to the post-war period, when the SEF land was used as a Support Engineering Facility (ibid.).

4.4 The Cartographic Evidence (Figures 14 to 26; Section 7.11)

The study of the historic maps has relied on the material held by the Devon Record Office and the West Country Studies Library. The work has focussed on the land encompassed by the proposed development sites. The research has also been confined to those maps which show this land at a sufficient scale to provide specific details about its past character.

4.4.1 The Late Eighteenth to Early Nineteenth Centuries (Figures 14 and 15)

The earliest depiction of the surroundings of the proposed development sites is provided by Benjamin Donn's map of AD 1765 (Figure 14). Although this provides no information about their past character, it does show the road system and some of the larger houses. The Topsham Road is depicted passing the houses at Seabrook (Figure 11, 83) and Weare (Figure 11, 80), with Old Rydon Lane running to the north of Newcourt House (Figure 11, 79). The lane to the east, between Topsham and Sandy Gate, coincides with the eastern boundary of the Study Area along Blue Ball Road and Clyst Road.

The Old Series one inch Ordnance Survey map of AD 1809, provides a little more detail (Figure 15). This shows the extent of the parkland surrounding Weare and Newcourt House, identified by the legend 'Higher Newcourt'. The Weare parkland encompassed the area now occupied by the RNSD and SEF sites. All of the other proposed development areas lay outside the two parks, on land which the surveyors drawings for the map show divided into fields. A copy of these drawings was not available for tracing and has therefore, not been reproduced in this report. However, the outline of the fields corresponds with the layout shown at a larger scale on later maps.

4.4.2 Pratt Residential, the Zindalina Site and the Area of the Northern Spine Road Link in AD 1813 (Figure 16)

The early nineteenth century character of the land to the north of Old Rydon Lane is depicted clearly on a map by Richard Coldridge produced in AD 1813 and copied by A. Law in AD 1835 (Figure 16). Old Rydon Lane, marking the southern edge of the tithing of East Wonford in the parish of Heavitree, appears on the southern edge of the traced extract. The area to the north was sub-divided into a series of small fields. Those corresponding with Pratt Residential and the Zindalina site have been shaded. At this time the field boundaries defining the perimeter of Pratt Residential were in place, while the field forming the south-western half of the site was divided into two. A series of long narrow plots lay to the north coinciding with the south-western side of the science park site and the area crossed by the northern spine road link. The Zindalina site corresponds with a small field to the east. The northern

boundary of this field coincides with the northern side of the Beech Cottage garden fence, while the railway has since cut across its eastern side.

4.4.3 The RNSD, SEF, Dart and Langdon Sites and the South-Western Spine Road Link in the Mid-Nineteenth Century (Figure 17)

The land coinciding with the RNSD, SEF, Dart and Langdon sites lies within the parish of Topsham and is shown in detail on the tithe map (Figure 17). This is undated, but would have been produced around the same time as the accompanying apportionments of AD 1842.

The RNSD and SEF sites lay within the Weare estate which at the time was owned by Sir John Duckworth. The land was divided into fields under a mixture of arable and pasture. The RNSD site coincides with 'Brick Field' (Figure 17, 571), most of 'Lower Lawn' (Figure 17, 573) and 'Four Acres' (Figure 17, 559), and with the south-eastern side of 'Garden Park' (Figure 17, 558). The names 'Lower Lawn' and 'Garden Park' are probably connected with the former use of the area as parkland, while 'Brick Field' might indicate a place where bricks were found, made or even refer to the colour of the soil.

The SEF site corresponds with the south-eastern side of 'Front Lawn' (Figure 17, 575), 'Middle Lawn' (Figure 17, 576), and 'The Sandpit' (Figure 17, 557); and with the north-western edge of 'Lower Lawn' (Figure 17, 573), 'Four Acres' (Figure 17, 559), and 'Garden Park' (Figure 17, 558). The lodge to Weare House was situated alongside the Topsham Road to the south-west of the SEF land, while the drive ran into and swept across the south-western end of the site. Again many of the field names seem to refer to the former land-use as part of the park around Weare House. 'The Sandpit' might indicate the presence of a quarry in the field and if this was the case it could be found within the SEF site.

The Dart site coincides with two small arable fields owned by Alexander Hamilton (Figure 17, 560 and 572). At the time he was also the landlord of the tenements (Figure 17, 568) and both houses with their yards and buildings at Seabrook Farm (Figure 17, 566 and 567).

The south-western spine road link runs to the north-west of the field boundary between 'Garden Park' (Figure 17, 558) and 'Seven Acres' (Figure 17, 561), which was also congruent with the property boundary between the Weare Estate and the Seabrook Farm lands of Alexander Hamilton to the south-east. The line of the route across the stream coincides with 'Third Moor' (Figure 17, 542) and 'Fourth Moor (Figure 17, 543), marking the fringes of the property owned by John Creswell Bawden and the Higher Newcourt Estate. All of the fields in the sweeping arc along the line of the stream were part of the Higher Newcourt Estate and include 'moor' in their names (Figure 17, 529, 530, 542, 543 and 544), probably indicating the character of the vegetation and the boggy nature of the ground in this area.

The Langdon site is quite difficult to recognize on the tithe map. At the time this land was part of a larger field to the east of Higher Newcourt House (Figure 17, 546), maintained as pasture and named in the apportionment as 'In the Park' (Figure 17, 547). The driveway leading to Lodge Cottage on Old Rydon Lane (Figure 17, 552) corresponds with the western boundary of the Langdon site. A woodland plantation was located at its northern end alongside Old Rydon Lane (Figure 17, 551), while another small plantation lay close to its southern corner (Figure 17, 548). All of this land was part of the Higher Newcourt Estate under the ownership of John Creswell Bawden.

4.4.4 Pratt Residential, the Zindalina Site and the Northern Spine Road Link in the Mid-Nineteenth Century (Figure 18)

Pratt Residential, the Zindalina site and the area crossed by the northern link road lay within the parish of Heavitree. The tithe map of AD 1844 is in very poor condition, but enough survives to indicate the field layout at the southern end of the parish (Figure 18). This had not changed since it was mapped in AD 1813 (Figure 16). The apportionments of AD 1842 do, however, provide details about land-use and ownership. All of the fields shown in Figure 16 were under arable cultivation in AD 1842. Pratt Residential coincides with 'Ten Acres' (Figure 18, 1424), 'Eight Acres' (Figure 18, 1425) and 'Six Acres' (Figure 18, 1427), all owned by John Ellis and tenanted by Richard Webber. The field occupied by the Zindalina site was un-named (Figure 18, 1421) and owned jointly by Richard Pidsley and Edward Hurdle who had let it to John Salter. The route of the northern spine road link crosses two of the long narrow plots known as 'Long Goard' (Figure 18, 1365) and 'Long Five Acres' (Figure 18, 1366). 'Long Goard' was owned by Francis Spicer and tenanted by William Reive, while 'Long Five Acres' belonged to Henry Manning and was farmed jointly by Thomas Swale and James Petherbridge.

The part of the map (Figure 18) coinciding with the site of Wynard's Cottage (Figure 11, 85) is missing. This means that it is uncertain whether or not the building was in place by AD 1844.

The pattern of land ownership and tenancy in this part of the parish and the layout of the fields suggests an origin in the Medieval period. The field boundaries aligned on Old Rydon Lane are approximately 200 metres long, which is roughly equivalent to a furlong (220 yards). A furlong traditionally marked the length of the furrows forming the cultivated strips of a Medieval open field. These were nominally 9.9 metres (11 yards) wide (although in practice the width was variable) providing an ideal cultivated area of approximately half an acre known as a selion (Rackham 1986). Individual strips or groups of strips were allotted to numerous people within a parish, which ultimately led to a complex pattern of land ownership. By the end of the Medieval period the landowners quite typically did not cultivate the strips themselves, but let them out to tenants and even sub-tenants (Rackham 1986). This is precisely the situation reflected in the tithe apportionments for the area of Heavitree to the north of Old Rydon Lane. Together these coincidences strengthen the case for suggesting that the system of land division documented

in the 1840's was founded on Medieval patterns of cultivation in what had been an open field.

4.4.5 The RNSD, SEF, Dart and Langdon Sites and the South-Western Spine Road Link Between AD 1889 and 1905 (Figures 19 to 20)

The First Edition Ordnance Survey map of AD 1889 provides a detailed view of the character of the area of the proposed development sites. The 25 inch edition has been used for this report since it shows the precise position of trees and ponds. None of the proposed development land had altered when the Second Edition Ordnance Survey map of AD 1905 was surveyed, and most of these later maps have, therefore, not been reproduced in this report.

By the end of the nineteenth century the character of the area of the RNSD and SEF sites had begun to change. 'Brick Field' (Figure 17, 571) and 'Lower Lawn' (Figure 17, 573) had been amalgamated (Figure 19, 261), although a line of trees still marked the position of the former field boundary (Figure 19). A triangular shaped pond is shown on the south-eastern side of the field (Figure 19, 261) in a position that would place it within the RNSD land. The field boundary between 'Four Acres' (Figure 17, 559) and 'Garden Park' (Figure 17, 558) had also been removed, although the north-western end was still marked by a row of three trees (Figure 19, 332). The ponds and buildings along the north-eastern edge of this field (Figure 19, 332) were located close to the stream beyond the RNSD and SEF sites. The course of the drive between Lower Lodge (Figure 19, 262) and Weare House had also been altered so that it ran along the southern edge of the SEF site.

The Dart site (Figure 19, 258 and 259) does not appear to have changed since the 1840's (Figure 17, 560 and 572). The south-eastern field boundary and pond in the field corner (Figure 19, 259) are outside the proposed development area.

As in the 1840's the line of the south-western spine road link runs to the north-west of the boundary between two fields (Figure 19, 332 and 255). The western edge of 'Third Moor' and 'Fourth Moor' (Figure 17, 542 and 543), marking the property boundary between the Weare and Higher Newcourt Estates, was still in place (Figure 19, between 332 and 334), but the eastern boundaries of these fields had been removed. The road line may clip the northern edge of a small pond shown in the south-eastern corner of one of the fields (Figure 19, 332).

By AD 1889 a new field boundary was in place to the east of the Langdon site (Figure 20, 380). The plantations shown on the tithe map (Figure 17, 548 and 551) had been removed, while a new plantation occupied the north-western corner of the site (Figure 20, 380). A large pond is also shown in this area alongside Old Rydon Lane. The position of the 'Stone' mapped within the field (Figure 20, 380) places it to the east of the Landon site on what is now the upper RNSD land. This is difficult to gauge from the First and Second

Edition maps, but becomes much clearer on the edition of AD 1933 (Section 4.4.7; Figures 23 and 24).

4.4.6 Pratt Residential, the Zindalina Site and the Northern Spine Road Link Between AD 1889 and 1905 (Figures 21 and 22)

By AD 1889 Wyndard's Cottage (Figure 11, 85) had been constructed on the southern fringes of Pratt Residential (Figure 21). The origins of this are uncertain since the part of the tithe map of AD 1844 (Figure 18) covering the site is missing.

The three fields coinciding with Pratt Residential (Figure 21, 590, 591 and 602) had not changed since AD 1813 (Figure 16). The eastern side of the Zindalina site was now defined by the railway (Figure 21, 663) which had been opened on 1st May 1861 (Figure 9, 59).

By AD 1889 one of the long narrow fields shown on the tithe map (Figure 18, 1365), crossed by the northern spine road link, had been amalgamated with the adjacent plot to the south-west (Figure 18, 1364; Figure 21, 592).

Pratt Residential and the land to the north remained unchanged in AD 1905, when the Second Edition Ordnance Survey map was issued. This edition has, therefore, not been reproduced for these areas. The Zindalina site was also unaltered, but Beech Cottage to the north of the proposed development had been constructed since AD 1889 (Figure 22).

4.4.7 The Proposed Development Areas in AD 1938 (Figures 23 and 24)

The next view of the area is provided by the Revised Ordnance Survey map of AD 1933 (with additions of AD 1938). By this stage all of the former field boundaries within the RNSD and SEF land had been removed and the area of both sites lay within the golf course of the Exeter Golf and Country Club (Figure 23). The Dart site was largely unchanged apart from the removal of the south-eastern boundary of the most northerly of the two fields (Figure 23).

The current boundaries of the Langdon site had been established by AD 1938 (Figure 23). A new fence line is also shown along its northern edge (Figure 23). A detail from the 25 inch revision of 1933 demonstrates that this enclosed the area surrounding the pond which was still in place at this time (Figure 24). The 'Stone' mapped near to the Langdon site in AD 1889 (Figure 20) is shown clearly in a location beyond its eastern boundary (Figures 23 and 24). The land coinciding with Pratt Residential, the Zindalina site and the northern spine road link remained unchanged (Figure 23).

4.4.8 The Proposed Development Areas in AD 1972 (Figures 25 and 26)

The only other set of maps available for the proposed development areas are the 1:10560 Ordnance Survey sheets revised in AD 1972. The first shows the

buildings on the RNSD and SEF sites (Figure 25). Some of the wartime structures are depicted as single blocks, presumably because of the small scale of the map (Figure 25).

The earlier boundary sub-dividing the Dart site into two fields (Figures 17, 19 and 23) had been removed between AD 1938 (Figure 23) and AD 1972 (Figure 24). The Second World War road leading between the RNSD site and the 'middle site' (Figure 12), followed by the south-western spine road link, remained unchanged (Figure 25).

Since AD 1938 (Figure 23) the Langdon site had been sub-divided by a new field boundary running across its centre (Figure 26). The boundary at its northern end shown in AD 1933 and 1938 (Figures 23 and 24) had been removed (Figure 26). The pond had been backfilled and a small building occupied the north-western corner of the site (Figure 26).

New buildings on the northern edge of Pratt Residential had been constructed, while the field boundary on the line of Wynard's Cottage had been removed (Figure 26). Apart from trees at the southern end of the Zindalina site, the proposed development areas to the north of Old Rydon Lane remained unchanged (Figure 26).

4.5 The Aerial Photographs (Figures 27 to 30; Section 7.12)

None of the aerial photographs held by the Devon Sites and Monuments Record focus on any of the proposed development land holdings. However, there are a series of photographs available in the National Monuments Record. English Heritage carried out a cover search within a one kilometre radius of SX 955 901, which encompassed all of the areas under consideration in this report. This produced 52 prints from 10 sorties in the vertical collection, 14 photographs in the specialist collection and five military obliques. A full list of these is provided in Section 7.12.

The work focussed entirely on the proposed development land-holdings and their immediate environs. All of the photographs of these areas were examined for archaeological features. Apart from two colour slides of the RNSD and SEF sites taken in 1998, none of the prints in the specialist collection focussed on the proposed development land-holdings. The photographs in the vertical collection proved to be the most informative.

The only features of potential archaeological origin showed on a photograph taken on 14th March 1967 (BKS/2822, frame 3025) in a field immediately north of Pratt Residential. English Heritage were unsure of the copyright holder and would not, therefore, provide a copy of this print. However, a rough transcription of the features was made by the author of this report and has been reproduced in Figure 27. This shows an oval enclosure of approximately 45 by 60 metres adjacent to the northern edge of Pratt Residential. A series of curvilinear and linear features extend to the north, some of which appear to define small fields. These are on the same axis as the

linear features and rectilinear enclosure recorded immediately to the north-west (Figure 10, 75). Although the origin of these crop or soil marks remains to be demonstrated, their morphology suggests an archaeological origin. The oval enclosure is most typical of the enclosed settlements constructed during later prehistory, similar to the one excavated to the north of the Tesco Superstore (Figure 4, Site J; Dyer 2003), while the field boundaries may be contemporary or later features.

A number of the post-war photographs show the layout of the American Navy base. This appears clearly on a print dated 13th April 1946 (Figure 28) shortly after the site had been taken over by the Admiralty. At this stage all of the Second World War buildings were still standing on the RNSD and SEF sites. The photograph also provides a clear view of the road linking the 'middle' site with the upper RNSD depot. It also shows the farm buildings on the northern edge of Pratt Residential, demonstrating that they had been constructed between AD 1938 when the area was last mapped (Figure 23) and the spring of AD 1946 when the photograph was taken. The photograph additionally shows the trees in the southern part of the Zindalina site (Figure 28), that were still in place in AD 1972 (Figure 26). These and the buildings on the northern edge of Pratt Residential appear on a later print of 25th June, 1955 at a larger scale (Figure 29).

Another photograph taken on this same day provides a detailed view of the RNSD and SEF sites (Figure 30). The supply base still retained its wartime character in 1955, although the removal of the accommodation huts alongside the Topsham Road had already begun.

4.6 The Site Walkover (Figure 31)

A site walkover was undertaken on 17th November, 2005. The work involved a brief assessment of the current condition of the Second World War buildings on the RNSD and SEF sites, which is discussed in Sections 4.3 and 5.1.3.

All of the proposed development areas were additionally checked for archaeological features. The only earthwork observed on any of the sites is a lynchet which crosses the south-western end of the RNSD land (Figure 31). This continues the line of the south-western edge of the Dart site. It does not correspond with any of the field boundaries on the historic maps, suggesting that it pre-dates the 1840's. A row of trees coinciding with the lynchet is, however, shown on the First Edition Ordnance survey map of AD 1889 (Figure 19, crossing plot 261). It is just possible that this line marks the position of a former field boundary that had been removed during the earlier part of the nineteenth century or before.

The absence of other archaeological earthworks on the RNSD and SEF sites is not surprising, since any that might have existed would have been flattened when the wartime base was constructed. This would also have affected any features on the line of the south-western spine road link, which follows the Second World War road.

Long-term arable cultivation on the Dart site, Pratt Residential, the Zindalina site and the fields to the north of Pratt Residential will have removed any above ground traces of past settlement and land-use. The absence of earthworks on these sites is, therefore, to be expected and does not affect their potential for containing buried archaeology.

The Langdon site was certainly under pasture in the mid-nineteenth century and appears under the same land-use regime on the post-war aerial photographs. While it may have been less disturbed that the other proposed development areas, phases of arable cultivation or of ploughing to improve pasture are still a possibility. This means that the absence of earthworks on the site is inconclusive and does not rule out the possibility that buried archaeology may be present.

4.7 The Geophysical Survey

The preliminary results of the geophysical survey suggest that there are a series of linear features crossing the south-western part of Pratt Residential. These include a possible bank and ditch on the line of the former post-Medieval field boundary first mapped in AD 1813 (Figure 16). The other linear features are all positive anomalies, probably ditches, that may define the boundaries of an early field system associated with the enclosures to the north (Figure 10, 75; and Figure 27). Two possible pits have been identified in the south-eastern part of the field.

5 DISCUSSION

5.1 The Archaeological Potential of the Proposed Development Areas

The known distribution indicates that the proposed development areas are situated in an archaeologically sensitive zone. The principal concern raised by the available evidence is the potential for the occurrence of significant buried prehistoric and Roman remains on the proposed development land. The potential of the Second World War buildings on the RNSD and SEF sites is appraised separately (Section 4.3).

An analysis of the distribution suggests that the archaeological potential varies across the Newcourt area. For this reason the Group A sites, comprising the south-western spine road link and the RNSD, SEF and Dart plots, are assessed separately from the Group B sites, which include the northern spine road link, Pratt Residential and the Langdon and Zindalina land.

5.1.1 The RNSD, SEF and Dart Sites and the South-Western Spine Road Link

The situation of much of this proposed development land on the gravel terraces overlooking the River Exe is one which is known to have been a

favoured location for prehistoric settlement. Locally this is further enhanced by the apparent intensity of activity in the area between the Rivers Exe and Clyst. These trends alone raise the archaeological potential of the RNSD, SEF and Dart sites.

The flint scatter immediately to the south-east on Seabrook Farm (Figure 5, 1; Figure 6, 23 to 26) provides a clear indication of a significant prehistoric presence on the adjacent land. The known distribution appears to encroach on the south-eastern edge of the Dart site, while the records suggest that the rest of this land-holding was not investigated. This means that the distribution of worked flint across the Dart site cannot be determined from the available evidence.

The recovery of similar finds at Lower Wear and on the edge of the golf course to the north-west (Figure 5, 10; Figure 6, 22) increases the chances that prehistoric activity encompassed the development land. Even if this is the case, there is very little reason to predict the likely presence of a significant site of Mesolithic date. Although activity during this period clearly encompassed the Exe Valley (Figure 5, 1 to 3), the low numbers of microliths point to the sporadic use of the area. Moreover, those examples recovered during excavation did not correlate with contemporary buried archaeological features (Jarvis and Maxfield 1975). This in itself is hardly surprising since much of the evidence for the Mesolithic comprises worked flint from the topsoil or superficial contexts. Buried features, such as hearths and shallow pits, are a rarity and tend to be found on the larger or more frequently used camps. There is certainly no evidence for this type of site within the Study Area.

It is probable that the bulk of the assemblage from Seabrook Farm (Figure 6, 23 to 26) is contemporary with the Neolithic and Bronze Age flint work from sites to the north-east and north-west (Figure 5, 7 to 10). This is also most likely to be the case with all the other un-phased worked flint from the Study Area (Figure 6, 20 to 22 and 27 to 30). Such finds have very different archaeological implications than the earlier material of the Mesolithic.

Surface scatters of worked flint and particularly concentrations within a more general distribution can be related to buried features. The late Neolithic pits excavated on the line of the M5 (Jarvis and Maxfield 1975) provide a clear example of this within the Study Area (Figure 5, 2). It is worth stressing that early prehistoric sites of this type relate to a period characterised by ephemeral settlements, when the nature of society and the complex changes that were taking place are poorly understood. Such sites are, therefore, regarded as highly significant because of their potential contribution to current knowledge.

Although none of the ring ditches recorded in the Study Area (Figure 5, 4, 5, and 11 to 15) is adjacent to the Group A sites, their topographic settings and the circumstances of their discoveries do raise concerns that others may exist on the proposed development land. The two southernmost examples occupy similar positions to the Group A sites on slopes overlooking the Exe Valley (Figure 5, 14 and 15). These and a third ring ditch to the north (Figure 5, 13)

were identified from aerial photographs, while the other sites in the northern part of the Study Area were only found during archaeological excavations (Figure 5, 4, 5, 11 and 12). The wartime base on the RNSD and SEF sites was constructed before most of the photographs were taken, so that any features that might be present would have been obscured by the buildings. Similarly most of the photographs focussing on the Dart site were shot in the summer when the crop was advanced, at a time when archaeological features would not have been visible from the air.

Under these circumstances relatively substantial features such as ring ditches would remain undetected. In effect their possible occurrence within the proposed development areas cannot be ruled out using the available evidence. Furthermore, the density of worked flint in the surrounding area could denote the presence of ritual sites in the vicinity. Elsewhere it has been noted that flint scatters often concentrate on the land around burial or ceremonial monuments.

The proximity of the Roman road between Exeter and Topsham (Figure 7, 31) does have a direct bearing on the likely existence of Roman remains in the proposed development areas. All of the convincing evidence for Roman settlement (Figure 7, 34 and 35) and related activity in the Study Area was found close to this important route. This suggests that the south-western ends of the RNSD and SEF sites are the most likely locations for similar sites. This potential is increased by the discovery of the coin on the opposite side of the Topsham Road (Figure 7, 38). While this may represent an isolated find lost by chance, it is notable that coins were found (Figure 7, 36 and 37) close to the Roman farmstead and the enclosure to the south-east (Figure 7, 34 and 35). This association might be part of a pattern whereby coins tend to denote nearby occupation.

The potential presence of a Roman settlement towards the south-western ends of the RNSD and SEF land increases the likelihood that a contemporary field system would have extended north-eastwards across these areas, also encompassing the Dart site. Indeed, an analysis of the surviving field layout has led to the suggestion that Roman fields may have coincided with the northern parts of the RNSD and SEF land (Exeter Archaeology 1996a), although the evidence for this is entirely circumstantial.

It should also be stressed that the Topsham Road only follows the approximate line if its Roman predecessor. There is a remote possibility that this early route could have run across the south-western ends of the RNSD and SEF land, although this is fairly unlikely given that the sites are set back by 60 metres from the modern road.

By contrast with these earlier periods, the local distribution suggests that the Group A sites have a low potential for containing significant buried remains of Saxon, Medieval, Tudor or post-Medieval date. There is no evidence for Saxon settlement in the Study Area, while the nearest known site of Medieval occupation is Weare House (Figure 8, 48). This was a manor house of high status and there little reason to suppose that associated settlement would have

extended onto the proposed development land. By the post-Medieval period occupation seems to have focussed on scattered mansions and farmsteads. All of those in the southern half of the Study Area (Figure 10, 79, 20, 82, 83, 84; Figure 19, 262) lie outside the RNSD, SEF and Dart sites and are nowhere near to the south-western spine road link. This is also true of the nineteenth century agricultural buildings shown on the historic maps to the north-east of these areas (Figure 19, 332).

The field name 'Brick Field' used on the Topsham tithe map for a plot coinciding with the south-eastern corner of the RNSD land (Figure 17, 571), may have archaeological implications. It could denote the site of an earlier building or refer to an area where bricks were made in the past.

Post-Medieval features connected with land-use might well survive within the proposed development areas. The field boundaries on the historic maps are likely to have been marked by ditches. These might contain dateable finds providing new evidence for the origin of the boundaries, although this is very unlikely. In general, field ditches were maintained and kept clean so that they tend only to contain material relating to the final phases of their use. For this reason they have a relatively low archaeological potential.

The lynchet identified during the site walkover at the south-western end of the RNSD site (Figure 31) is an earlier field boundary pre-dating the 1840's tithe map (Figure 17). Its alignment would certainly suggest that it was part of the post-Medieval layout, while the row of trees corresponding with the lynchet on the First Edition Ordnance Survey Map (Figure 19, across plot 261) imply that remnants of the field boundary were still in place in AD 1889. Archaeological investigation of this feature to recover dating evidence would be useful, given the uncertainties surrounding its origin.

At least one of the ponds shown on the First Edition Ordnance Survey map will almost certainly be found in a position corresponding with the south-eastern edge of the RNSD site (Figure 19, south-eastern side of field plot 261). A second pond to the north-east may also be clipped by the south-western spine road link (Figure 19, in the corner of field plot 332). Their potential for containing early dateable deposits is very low, since neither was positioned near to settlement. Moreover, both of these features were backfilled in the relatively recent past, the first between AD 1905 and 1933 and the second after AD 1933, and have little archaeological potential.

5.1.2 The Langdon Site, Pratt Residential, the Zindalina Site and the Northern Spine Road Link

The archaeological potential of the Group B sites for containing significant remains of prehistoric date is particularly high. The excavations to the north of the A379 (Figure 4, Sites F to N) have all identified features typical of settlement, burial and associated land-use, highlighting the importance of the area between the Rivers Exe and Clyst during prehistory. All of these significant remains occurred on sites where no archaeology had been recorded

until the recent field investigations in advance of development. This greatly increases the chances that current gaps in the distribution are the product of a lack of archaeological fieldwork, rather than representing zones that were little used in the past.

The absence of archaeological features from the aerial photographs of the Group B sites is similarly inconclusive. The post-war maintenance of the Langdon site under pasture would not have been conducive to the detection of such features from the air, while the results have been variable on the agricultural land to the north of Old Rydon Lane. Here, crop or soil marks close to the Group B sites (Figure 10, 75; and Figure 27) have only shown on occasional photographs taken under ideal conditions. They do not appear on most of the prints in the National Monuments Record (Section 7.12). This means that significant archaeological features could be present within the proposed development areas and remain undetected.

The findings of the geophysical survey have similar caveats. While this has clearly identified some features on Pratt Residential, it will not necessarily have picked up traces of all archaeological remains that might be present. The results of similar surveys within the Study Area have been very variable. There are a number of instances where negative or ambiguous readings have coincided with sites where excavation has identified significant, but truncated archaeological remains (eg. Site F; Exeter Archaeology 2002; Passmore 2002).

The local evidence suggests that the earliest activity in the vicinity of Pratt Residential, the Langdon and Zindalina sites and the northern spine road link is likely to have taken place during the Neolithic period. The only dateable features from nearby sites are scattered pits (Figure 5, 4 and 5). Remains of this type are fairly typical of the period and it is possible that further examples might exist within the proposed development areas. Such features are small and will not necessarily register on a geophysical survey.

The ring ditches of likely late Neolithic to Bronze Age origin to the north (Figure 5, 4, 5, 11 and 12), east (Figure 5, 13) and south (Figure 5, 14) occupy similar topographic settings. It is, therefore, possible that others might be found within the proposed development land. The apparent concentration of ring ditches to the north could indicate that this potential is slightly enhanced for the Group B sites, which might be located in an area used traditionally for burial. However, this is far from clear-cut. The known distribution may well be somewhat misleading, since some of the features interpreted as ring ditches could in fact be the eaves-drip gullies of prehistoric round houses, an alternative interpretation proposed for at least two of the recorded examples (Figure 5, 12; Bill Horner pers. comm.).

The potential for the occurrence of a ring ditch or ditches within the various proposed development areas is similar, with the exception of the south-western side of Pratt Residential. The geophysical survey has not identified a ring ditch in this area, significantly reducing the likelihood of one occurring unless it should prove to be truncated.

The worked flint recovered from locations to the east (Figure 5, 7; Figure 6, 29 and 30), west (Figure 5, 9; Figure 6, 20 and 21), south-west (Figure 5, 10; Figure 6, 22) and south of the Group B sites (Figure 5, 1; Figure 6, 23 to 28), demonstrates a notable Neolithic to Bronze Age presence in the surrounding landscape. The barbed and tanged arrowhead found to the north of Pratt Residential (Figure 5, 8) is almost certainly earlier than the rectilinear enclosure (Figure 10, 75). It may be an isolated find, but since the area has never been systematically field walked, it could equally be part of a flint scatter of late Neolithic to early Bronze Age date. If so, the potential for this extending across the line of the northern spine road link and onto Pratt Residential is high.

Very little worked flint appears to have been found on any of the sites to the north of the A379 (Figure 4, Sites F to N). This could well indicate that most of the traces of settlement in this area date to a time when flint was no longer being used as the principal raw material for tools. This would suggest that the bulk of the evidence for prehistoric occupation in the northern part of the Study Area (Figure 5, 6; Figure 6, 17, 18 and 19) is either of late Bronze Age (800 to 600 BC) or Iron Age date (600 BC to AD 43). The settlement of this area certainly includes a securely dated middle Iron Age component (Figure 5, 12).

The undated enclosures may well be part of a broadly contemporary settlement pattern (Figure 10, 75 to 78). The distribution of these sites has a direct impact on the archaeological potential of the proposed development areas. The oval feature alongside the northern edge of Pratt Residential (Figure 27) is typical of an enclosed settlement of late Bronze Age to middle Iron Age date. A middle Bronze Age origin is also possible, although the morphology of the enclosure renders this less likely. The enclosure itself lies outside Pratt Residential and is not crossed by the route of the northern spine road link. However, settlement associated with enclosures of this type often extends beyond the boundary ditches. This greatly raises the archaeological potential of Pratt Residential and the northern spine road link.

This potential is further enhanced by the presence of the rectilinear enclosure, again just to the north of Pratt Residential (Figure 10, 75). The shape of this is more typical of a late Iron Age to early Roman enclosed settlement, although in this case a middle Bronze Age origin is equally possible. In this instance, it is slightly more likely that occupation would have been confined to the enclosure. However, the current route of the northern spine road link clips or runs very close to the eastern side of the boundary ditch.

The evidence also suggests that the ditches of associated fields extend to the east, north-east and south of this enclosure. The northern spine road link crosses some of the elements that appear on aerial photographs. The preliminary results of the geophysical survey have identified linear features, probably ditches, that are potentially part of this system across the south-western side of Pratt Residential. Similar features may extend into the Zindalina and Langdon sites. Apart from providing information about the

character of early land-use, boundary ditches may also incorporate ritual deposits, while it is possible that associated wells and pits might be found in the corners of some of the fields.

At present the late Iron Age is not represented by any dated remains within the Study Area, while the character of Roman settlement and land-use away from the Topsham Road is poorly understood. There is no evidence for occupation on the line of the Charmouth Road (Figure 7, 32) or near to the recently discovered track (Figure 7, 33). The few excavated features to the north of the A379 seem to be connected with land-use and in any case the dating evidence is entirely circumstantial (Figure 7, 39 and 40). The furnace might be related to a nearby settlement (Figure 7, 41), but again its attribution to the Roman period is uncertain. The possible Roman origin of the post-Medieval fields to the north of Old Rydon Lane (Figure 7, 42; Exeter Archaeology 1996a) is equally questionable. Those corresponding with Pratt Residential and the land to the north seem more likely to encapsulate patterns of Medieval land-use (Section 4.4.4). They are certainly on a slightly different axis to the linear features identified by the geophysical survey in the south-western part of Pratt Residential. This leaves a single sherd of samian just to the west of this same proposed development area (Figure 7, 42).

The somewhat slight character of the existing evidence serves to underline the potential importance of the rectilinear enclosure. The sherd of samian indicates an early Roman presence in the vicinity. If the enclosure does prove to be of late Iron Age or Roman date it will fill a major gap in the local settlement pattern. Apart from its local importance a site of this type could also contribute to a regional understanding of the impact of the Roman invasion on native settlement and social organisation. The transition from the Iron Age to the Roman periods and the impact of the Roman army on the civilian population have been identified by English Heritage as a national research priorities (English Heritage 1997).

The archaeological potential of the proposed development areas for later periods is generally low. There is no evidence for Saxon, Medieval, Tudor or post-Medieval occupation on any of the sites in Group B, nor is there any reason to predict that it might have existed.

The possible shift of Old Rydon Lane and the parish boundary southwards does raise the possibility that the original course of the lane might run across the south-eastern side of Pratt Residential. However, the likelihood of this is mitigated by the results of the geophysical survey which did not identify a feature of this type.

Otherwise the layout of the fields and the patterns of land-ownership to the north of Old Rydon Lane suggest that the area was part of a Medieval open field (Section 4.4.4). Although this would have been cultivated in strips, the furlongs would not have been enclosed. The field boundaries shown on the nineteenth century and later maps across the proposed development areas are, therefore, of post-Medieval date.

Other post-Medieval features likely to exist on the Group B sites include the foundations of buildings on the northern edge of Pratt Residential. These were constructed between AD 1938 (Figure 23) and 1946 (Figure 28) and are not of archaeological interest. The pond first shown in AD 1889 (Figure 20, 380) will occupy the northern end of the Langdon site. This was backfilled at some stage between AD 1938 and 1972 and will largely contain modern debris. Traces of the nineteenth century field boundary (Figure 20, 380) and the small building, constructed between AD 1938 and 1972 (Figure 26), might also be found in the north-western corner of the site. Again neither feature is of any great age or archaeological significance.

5.1.3 The Potential and Condition of the Second World War Buildings on the RNSD and SEF Sites

The report prepared by Paul Francis (1997) concluded with an evaluation of the importance of the surviving structures and a series of recommendations. Since then the condition of the buildings has deteriorated significantly through a combination of vandalism, theft and weathering. Several are missing cladding panels, while others are being affected by rust (see 4.3 above for details). In addition a number have been partly or fully demolished in preparation for the Spine Road. The Inspector's decision following the Inquiry in 2003 for development on the RNSD site made no specific recommendations in relation to them.

5.2 The Impact of Previous Development and Land-Use on Potential Buried Archaeological Remains

The likely impact of previous development and land-use on potential archaeological remains varies with the areas under consideration. The proposed developments have therefore been appraised separately in the relevant sections below. There are, however, some general conditions affecting the survival of certain forms of archaeological evidence that are applicable to all of the sites.

The various excavations have demonstrated that bone does not tend to survive in archaeological deposits in the Study Area unless it is burnt or cremated. Similarly environmental sampling on the Tesco Superstore site (Figure 4, Site G) has suggested that there is little potential for recovering palaeo-environmental evidence from local sites (Dyer 2003). By contrast, the more durable artefacts made of worked flint, pottery, glass and various forms of metal do survive, but on the very truncated sites to the north of the A379 appear to be poorly represented (Figure 4, Sites F, G and H).

5.2.1 The RNSD and SEF Sites and the South-Western Spine Road Link

The construction of the US Navy Amphibious Base and its continued post-war use will certainly have had an impact on the condition of any potential

archaeological remains on the RNSD and SEF sites. This is likely to have had the greatest effect on superficial deposits and certainly will have flattened any earthworks that might have been present across most of the site. The lynchet in the south-eastern part of the RNSD land is an obvious exception, which demonstrates the presence of at least some undisturbed ground.

For the most part any archaeological remains that might exist on the RNSD and SEF sites will be buried below the current ground surface. Potential features will probably be cut from horizons at the base of the topsoil at a depth of approximately 0.45 metres or less. Any ephemeral archaeological deposits or shallow features at this level are likely to have been damaged or removed by previous ground works.

It is probable that the topsoil will have been stripped from the footprints of the wartime and later buildings, the road lines (including the south-western spine road link), and from below concrete and tarmac aprons and hard standings. All of the buildings which were accessible during the site visit have concrete floors, which might still be in place on the sites of the demolished second world war structures. The topsoil may survive in areas of grass between the standing and demolished buildings, principally at the northern ends of the RNSD and SEF sites and near to the lynchet in the grass on the south-eastern side of the RNSD land.

The degree of truncation to horizons below the topsoil is more difficult to predict, but the surface indications suggest that it is likely to be variable. Several of the wartime buildings, particularly those at the south-western end of the RNSD site are set in terraces. Here any archaeological features will have been truncated or even removed. However, such damage is likely to be fairly confined, with the land between buildings being less disturbed.

The prefabricated character of the wartime structures would suggest that they are unlikely to be associated with deep foundations. These will more probably support the wall lines of the modern buildings on the SEF site. Any archaeological features coinciding with such foundations or with service trenches and drains will have been severely truncated or destroyed. However, damage of this type will be restricted to the modern trenches, leaving large areas of both the RNSD and SEF sites relatively intact. Any deeper archaeological features below the line of the south-western spine road link may also have survived, although in a truncated form.

Earlier land-use on the RNSD and SEF sites and along the route of the south-western spine road link will also have had an impact on potential archaeological remains. The RNSD and SEF land was part of the golf course before the Second World War and it is quite likely that bunkers may have been located within this area. Even if this is the case, the truncation or destruction of any archaeological deposits will be confined to several very small zones.
Similar patterns of destruction would be encountered if an early quarry were to be found at the northern end of the SEF site. The field name ‘Sandpit’ used to describe this area in the 1840’s (Figure 17, 557) points to the presence of a

quarry somewhere nearby. However, it may not coincide with the SEF site, since the nineteenth century field extended beyond this modern land-holding.

Some truncation may also have occurred in areas that were cultivated in the past. The precise history of nineteenth century and earlier land-use on the RNSD and SEF sites and along the line of the south-western spine road is unknown. The Topsham tithe map (Figure 17) and apportionment indicate arable cultivation in the south-eastern and northern parts of the RNSD land, in the northern part of the SEF site and at the south-western end of the spine road link. This may well have disturbed the interface horizon and any archaeological remains between the topsoil and underlying deposits. However, the level of disruption is likely to be negligible since modern agricultural machinery will never have been used in any of these locations.

5.2.2 The Dart Site

The Dart site has been under long-term arable cultivation. This type of land-use was recorded in the 1840's (Figure 17) and has continued up until the present day. Modern ploughing is particularly destructive and will certainly have removed any earthworks that might have existed on the site. It is also likely to have truncated potential archaeological features cut from horizons below the topsoil, at depths of about 0.45 metres or less.

However, the results of the excavations on the line of the M5 motorway (Figure 4, Site B; Jarvis and Maxfield 1975) demonstrate that a complex palimpsest of features can still survive under similar conditions, albeit in truncated condition. The site lay on Terrace Gravel and Alluvium and had been a market garden under continuous cultivation for many years (Jarvis and Maxfield 1975). The depths of the late Neolithic pits varied between 0.15 and 0.63 metres, while the Roman pits were more deeply cut to between 0.4 and 1.1 metres (ibid.). The two Roman wells were more than four and five metres deep, while the depths of the boundary ditches varied between 0.31 and 0.63 metres (ibid.). The postholes were rather shallower at between 0.04 and 0.30 metres, while stakeholes averaged 0.10 metres (ibid.).

5.2.3 The Langdon Site

There is no evidence for arable cultivation on the Langdon site over the last two hundred years or so. This means that potential buried archaeological remains should survive in excellent condition.

Confined damage is likely in the areas of the nineteenth century plantations at the northern and southern ends of the site (Figure 17; and Figure 20, 380). Tree roots will have caused some mixing of horizons, while more severe disruption will have resulted from the removal of stumps following felling. Any earlier deposits on the site of the pond alongside Old Rydon Lane (Figure 20) will have been destroyed.

5.2.4 Pratt Residential and the Northern Spine Road Link

The available evidence suggests that the area of Pratt Residential and the Northern Spine Road link has been under long term arable cultivation, from at least the Medieval period. This will certainly have removed all traces of any earlier earthworks that might have existed. It is also likely to have truncated potential buried archaeological remains cut from the base of the topsoil around 0.6 metres or less. The degree of truncation tends to be particularly severe on the Dawlish Sandstone and Heavitree Breccia, where the interleaved deposits of soft sand are particularly vulnerable to erosion.

This has been noted on during several archaeological investigations in the area to the north and north-west. At Pynes Hill the features varied in depth between 0.08 and 0.56 metres (Figure 4, Site F; Passmore 2002). The more robust remains on the Tesco Superstore site (Figure 4, Site G), such as the ring ditches and boundary ditches, were only between 0.25 and 0.5 metres deep (Pearce and Weddell 1994). On the site to the north (Figure 4, Site J) the ditch of the oval enclosure varied in depth between 0.08 and 0.3 metres, while the pits ranged between 0.07 and 0.70 metres and the postholes between 0.06 and 0.36 metres (Dyer 2003).

5.2.5 The Zindalina Site

The Heavitree tithe map (Figure 18) and apportionments indicate that the Zindalina site was under arable cultivation in the 1840's. As with Pratt Residential, this may have begun as early as the Medieval period. Subsequent land-use is uncertain, but the evidence does suggest that the area had been taken out of cultivation by the mid-twentieth century. By AD 1946 trees had been planted at the southern end of the site (Figure 28) that were still in place in AD 1972 (Figure 26). The rough grassland currently on the site is consistent with a field that has been uncultivated in recent times.

Less intensive or a lack of modern cultivation on the Zindalina site is likely to have resulted in a lesser degree of truncation. Potential archaeological remains would probably be better preserved than on Pratt Residential and the route of the northern spine road link. As on the Langdon site the removal of felled tree stumps will have caused localized destruction, while tree roots may also have disrupted sub-soil horizons.

6 CONCLUSIONS AND RECOMMENDATIONS

The distribution of known archaeological remains demonstrates that the area between the Rivers Exe and Clyst was densely occupied during prehistory. Although there are ephemeral traces of Mesolithic activity, most of the remains span the 4000 year period between the beginning of the Neolithic and the end of the Iron Age.

The establishment of the legionary fortress at Exeter within ten years of the Claudian invasion and the subsequent development of the Roman town has also left its mark on the local landscape. The road linking Exeter with the supply base and port at Topsham appears to have been an important focus for new settlements, apparently occupied by people who were initially exploiting the new economic opportunities offered by the occupying forces of the Roman army.

By the late Saxon and Medieval period the character of this area, which had become peripheral to the main focus of settlement, was transformed. Much of the land lay close to the manorial and later parish boundaries, where the evidence suggests that it was used mainly for agricultural purposes. By the post-Medieval period this form of land-use was supporting an emerging pattern of small estates and farmsteads.

The particular history of the Study Area indicates that the proposed development sites are located in an archaeologically sensitive landscape. The local distribution and the circumstances of previous discoveries suggests that significant prehistoric remains could exist on any of these land-holdings. The Roman evidence indicates a tighter focus on the sites closest to the Topsham Road, where there is an increased likelihood of finding important remains of this date. More specifically, features that probably represent enclosed settlements and associated fields of the prehistoric or early Roman period touch on the fringes and cross the most northerly of the proposed developments.

There is good reason to suppose that a complex range of potential archaeological features could survive on the proposed development sites, albeit in truncated condition. Zones where previous development or land-use may have led to the total destruction of any archaeological deposits are likely to be limited in extent.

The local evidence amply demonstrates the archaeological potential of the proposed development sites and supports the recommendations for targeted field evaluation made by the Exeter City Archaeology Officer. Apart from Pratt Residential and the northern spine road link, where specific and significant features of likely archaeological origin are known to exist, it is not possible to use the available records to determine whether archaeological remains are actually present on any of the sites. Nor is it possible to determine the extent, character, significance, date or condition of any features or deposits which might exist. This information is essential if an appropriate strategy is to be developed to mitigate the effects of the proposed developments on any archaeology.

For the most part the known distribution is of little help in identifying specific targets for field evaluation. It is possible, however, to highlight certain zones within some of the proposed development sites where there is an increased likelihood of encountering significant archaeology.

All of the land within the RNSD and SEF sites has an equal potential for containing prehistoric remains, although the south-eastern side of the RNSD land closest to the Seabrook Farm flint scatter (Figure 4, Site C) may be particularly sensitive. Significant traces of Roman settlement are most likely to be located at the south-western end of the RNSD and SEF sites, where there is also a remote chance of identifying the true line of the Roman road. Any Roman features further to the north-east would more probably be associated with land-use. The uncertainties surrounding the date of the lynchet in the south-eastern part of the RNSD site mark it as an obvious target for field evaluation. Similarly, evaluation may determine whether the name 'Brick Field' in the 1840's (Figure 17, 571) identifies the site of an earlier building or local industry at the south-western end of the proposed development.

The whole of the Dart land-holding has an equally high potential for containing significant prehistoric remains, although the south-eastern corner closest to or encompassed by the known flint scatter (Figure 6, 23) may be most sensitive. Potential Roman features on the site are more likely to be connected with land-use than settlement.

The archaeological potential of the entire area of the Langdon and Zindalina sites is similar. Here the main concern is the possibility of encountering an important, but previously unrecorded prehistoric site. There is also good reason to suppose that the field system associated with the enclosures to the north and north-west may have extended across these areas. The potential of any archaeological features that might exist within these two land-holdings would be enhanced by their likely survival in good condition. Neither site has been cultivated in recent times, which should have minimised the level of erosion and the associated truncation of any archaeological deposits.

Pratt Residential and the route of the northern spine road link encompass land which has a notably high archaeological potential. Even though archaeological features have been identified on and adjacent to these developments, their condition is entirely unknown. Nor is it certain that potential archaeological deposits will contain dateable artefacts.

The proximity of the oval and rectilinear enclosures to Pratt Residential greatly increases the likelihood of contemporary prehistoric or early Roman remains extending onto this development site. These could include traces of associated settlement or even ritual deposits, particularly in the northern part of Pratt Residential, closest to the two enclosures. The northern spine road link crosses an area of particular archaeological sensitivity, clipping the eastern ditch of the rectilinear enclosure and crossing the line of potentially contemporary field boundaries.

The contrasting morphology of the enclosures increases the likelihood that evidence of more than one phase of occupation would be found. Features resembling the ditches of a potentially contemporary field system, identified by the geophysical survey, are known to extend across the south-western part of Pratt Residential, while possible pits have also been identified in this area.

Those closest to the enclosures, where there is an increased chance of recovering dateable material, are likely to be the most productive.

There is no practical use for the former military buildings within a housing development. The buildings have deteriorated since the 1997 assessment and will continue to deteriorate at an increased rate and are at risk from further vandalism. The buildings were photographically recorded in July 1997 (Francis 1997, 4) and they are all of standard US type and construction. It is considered that no further recording of the buildings prior to their demolition is necessary.

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7.2 Gazetteer of Key Archaeological Investigations (Shown on Figure 4)

Site	SMR No.	NGR	Description
A	SX98NE134	SX 9600 8920	Exeter Road – dba and evaluation (Exeter Archaeology 1999; Sage 1999; Sage and Allan 2004, 35, No. 23)
B	SX98NE17	SX 9570 8900	M5 Topsham – area excavation (Jarvis and Maxfield 1975)
C	SX98NE125 SX98NE164 SX98NE165 SX98NE166	SX 9570 8950 SX 9550 8950 SX 9540 8960 SX 9560 8930	Seabrook Farm – surface collection (Sage and Allan 2004, 32, No. 4)
D	SX99SW/193	SX 9470 9040	Countess Wear or Pynes Hill (south) – geophysical and surface collection survey (Johnson 1996; Exeter Arch-aeology 1996b; Exeter Archaeology 2002)
E	NA	SX 9490 9070	Woodwater Park – DBA, geophysical survey and watching brief (Exeter Archaeology 1998 – reference from Exeter Archaeology 2002)
F	NA	SX 9520 9100	Pynes Hill (north) – geophysical survey and excavation (Exeter Arch-aeology 2002; Passmore 2002)
G	SX99SE168	SX 9545 9099	Tesco Stores Site, Digby Hospital – Archaeological evaluation and Excavation at SX 9545 9099 (Pearce and Weddell 1994);
H-K	SX99SE268	SX 9540 9100 SX 9538 9118	Geophysical survey,evaluation and excavation (Johnson 2000; Reed 2001; Dyer 2003).
L	NA	SX 9570 9138	Clyst Heath Nursery and Junior School – recent field investigations (Bill Horner pers. comm.)
M	NA	SX 9570 9160	Rydon Lane – dba and recent field investigations (Exeter Archaeology 2002; Johnson 2002; Andrew Pye pers. comm.)
N	71004	SX 9550 9200 SX 9552 9198	St. Peter's High School – geophysical survey and recent field investigations (Oxford Archaeotechnics 2003; Bill Horner pers. comm.)
P	SX99SE266	SX 9620 9150	Bishops Court Quarry – watching brief (Manning and Sage 1998)
R	NA	SX 9640 9105	Sandy Park – recent field investigations (Andrew Pye pers. comm.)

7.3 Gazetteer of Dated Prehistoric Sites (Shown on Figure 5)

Site	SMR No.	NGR	Description
1	SX98NE165	SX 9550 8940 SX 9550 8950	Two mesolithic microlith fragments from the flint scatter in the Royal Albert Memorial Museum (Site C; collected by M. Wallser)
2	SX98NE17	SX 9570 8900	Mesolithic microliths and late Neolithic to early Bronze Age pits (Site B; Jarvis and Maxfield 1975)
3	SX98NE190	SX 9631 8945	Early Mesolithic microlith
4	SX99SE268	SX 9538 9118	Early Neolithic worked flint and pit containing pottery; early Bronze Age pottery; ring ditch; oval enclosure (Site J; Reed 2001; Dyer 2003)
5	SX99SE168	SX 9545 9099	Pits with late Neolithic to early Bronze Age pottery; 2 ring ditches (Site G; Pearce and Weddell 1994)
6	NA	SX 9552 9198	Bronze Age or Iron Age linear features and pits (Site N; Bill Horner pers. comm.)
7	SX99SE65	SX 9630 9050	Neolithic to Bronze Age worked flint
8	SX99SE114	SX 9560 9066	Late Neolithic to early Bronze Age arrowhead
9	NA	SX 9470 9040	Late Neolithic to early Bronze Age scraper (Site D; Exeter Archaeology 1996)
10	SX98NW207	SX 9470 8990	Late Neolithic to early Bronze Age flint scatter (Sage and Allen 2004, 32, No. 1)
11	NA	SX 9560 9140	Bronze Age ring ditch and cremation (Site M; Andrew Pye pers. comm.)
12	NA	SX 9570 9138	Two Bronze Age ring ditches or eaves drip gullies; and middle Iron Age pits (Site L; Bill Horner pers. comm.)
13	SX99SE109	SX 9618 9034	Bronze Age ring ditch seen as cropmark
14	SX98NE103	SX 9595 8995	Possible Bronze Age ring ditch seen as annular cropmark
15	SX99SW71	SX 9463 9027	Bronze Age ring ditch seen as cropmark
16	71518	SX 9594 8916	Bronze Age Looped Palstave (Sage and Allan 2004, 32, No. 6).

7.4 Gazetteer of Un-phased Prehistoric Sites (Shown on Figure 6)

Site	SMR No.	NGR	Description
17	SX99SE168	SX 9545 9099	Prehistoric boundary ditch, pits and four post structure (Site G; Pearce and Weddell 1994)
18	SX99SE268	SX 9538 9118	Prehistoric ditches, pits and postholes (Site J; Reed 2001; Dyer 2003)
19	NA	SX 9520 9100	Prehistoric ditches, postholes and pits (Site F; Passmore 2002)
20	NA	SX 9490 9070	Worked flint from topsoil (Site E; Exeter Archaeology 2002)
21	NA	SX 9470 9040	Scatter of worked flint (Site D; Exeter Archaeology 1996b)
22	SX98NW/197	SX 9495 8990	Scatter of worked flint
23	SX98NE165	SX 9540 8960	Worked flint forming part of larger scatter on Seabrook Farm (Site C; collected by M. Wallser)
24	SX98NE164	SX 9550 8950	Worked flint forming part of larger scatter on Seabrook Farm (Site C; collected by M. Wallser)
25	SX98NE/166	SX 9560 8930	Worked flint forming part of larger scatter on Seabrook Farm (Site C; collected by M. Wallser)
26	SX98NE/125	SX 9570 8950	Worked flint probably forming part of larger scatter on Seabrook Farm (Site C; collected by M. Wallser)
27	SX98NE/41	SX 9580 8910	Scatter of worked flint from M5
28	SX98NE17	SX 9570 8900	Worked flint and chert collected from spoil heaps (Site B; Sage and Allan 2002, 32, No. 3)
29	SX99SE203	SX 9640 9070	Scatter of worked flint
30	NA	SX 9640 9105	Worked flint from topsoil (Site R; Andrew Pye pers. comm.)

7.5 Gazetteer of Roman Sites (Shown on Figure 7)

Site	SMR No.	NGR	Description
31	SX98NE/42 SX98NW/79	SX 9584 8893 SX 9484 8987	Roman road from Exeter to Topsham
32	SX99SE/214	SX 9569 9182	Roman road from Exeter to Charmouth
33	NA	SX 9570 9185	Roman trackway (Site M; Andrew Pye pers. comm.)
34	SX98NE17	SX 9570 8900	Roman farmstead of first century date; second century boundary and a late third to fourth century cremation (Site B; Jarvis and Maxfield 1975)
35	SX98NE134	SX 9580 8903	Roman enclosure of mid second to mid third century date (Site A; Sage 1999; Sage and Allan 2004, 35, No. 23)
36	SX98NE177	SX 9577 8910	Roman coin (Sage and Allan 2004, 35, No. 22)
37	SX98NE167	SX 9570 8890	Five Roman coins
38	SX98NE174	SX 9503 8964	Roman coin
39	SX99SE168	SX 9545 9099	Roman or Medieval boundary ditch (Site G; Pearce and Weddell 1994)
40	SX99SE268	SX 9538 9118	Roman or post-Roman trackway and cultivation furrows (Site J; Reed 2001; Dyer 2003)
41	NA	SX 9560 9140	Roman or Iron Age furnace (Site M; Andrew Pye pers. comm.)
42	SX99SE263	SX 9500 9070	Field boundaries which may represent a survival of the Roman coaxial system (Exeter Archaeology 1996a)
43	SX99SE240	SX 9550 9040	Early Roman samian pottery

7.6 Gazetteer of Late Saxon, Medieval and Tudor Sites (Shown on Figure 8)

Site	SMR No.	NGR	Description
44	SX99SE100	SX 9592 9048	Old Rydon Lane described in tenth and eleventh century charters as the boundary of the Manor of Topsham (Bradbeer 1968)
45	SX99SW161	SX 9480 9055	Western end of Topsham parish boundary probably corresponding with a dyke mentioned in the Saxon charter
46	SX99SE260	SX 9615 9130	Apple Lane which may be of 'ancient origin'
47	SX98NE42	SX 9584 8893	Topsham Road in use during the Medieval period
48	SX98NE6	SX 9502 8998	Site of Medieval house (Bradbeer 19687; Exeter Archaeology 1996a, 22)
49	SX98NE192	SX 9597 8910	Medieval strip fields (Site A; Sage 1999)
50	SX98NE17	SX 9570 8900	Medieval ditch (Site B; Jarvis and Maxfield 1975)
51	SX99SE268	SX 9538 9118	A ditch and two Medieval pits (Site J; Reed 2001; Dyer 2003)
52	SX99SE30	SX 9650 9127	Battlefield – Battle of Clyst Heath
53	SX99SE210	SX 9520 9100	Battlefield burial site on Clyst Heath

7.7 Gazetteer of Post-Medieval Sites (Shown on Figure 9)

Site	SMR No.	NGR	Description
54	SX99SE215	SX 9560 9087	Buildings shown on early nineteenth century map (Exeter Archaeology 1996a, 11)
55	NA	SX9630 9095	Sandy Park Farm shown on tithe map of 1844 (Exeter Archaeology 1996a, 16).
56	SX99SE293	SX 9601 9171	Long narrow building on 1880's map
57	SX99SE264	SX 9510 9097	Site of Heavitree parish beacon
58	SX99SE265	SX 9525 9100	Possible site of former windmill
59	SX99SE104	SX 9606 9155	LSWR Exmouth Branch railway
60	SX98NE99	SX 9629 8953	Signal post on 1932 OS map
61	SX99SE168	SX 9545 9099	Nineteenth century hedge bank (Site G; Pearce and Weddell 1994)
62	SX99SE268	SX 9538 9118	Post-Medieval boundary ditches and pits (Site J; Dyer 2003)
63	SX99SE266	SX 9610 9150	Two eighteenth to nineteenth century ditches (Site P; Manning and Sage 1998)
64	SX98NE17	SX 9570 8900	Post-Medieval timber structure and other features (Site B; Jarvis and Maxfield 1975)
65	SX98NE67	SX 9503 8950	Fishpond on 1932 OS map
66	SX98NE68	SX 9495 8950	Pond on 1933 OS map
67	SX98NW213	SX 9601 9163	Clyst Heath Sand Quarry
68	NA	SX 9640 9160	Heavitree Sand Pit (Exeter Archaeology 1996a)
69	SX99SE29	SX 9641 9139	Bishops Court Sand Pit
70	NA	SX 9580 8980	Gravel pit shown on 1889 OS map (Exeter Archaeology 1996a, 26)
71	SX98NE99	SX 9615 8985	Boundary stone on 1938 OS map
72	SX99SE131	SX 9550 8990	Second World War US Naval amphibious supply base – Lower RNSD and SEF sites
73	SX99SE174	SX 9600 9020	Second World War US Naval amphibious supply base – Upper RNSD site
74	SX98SE173	SX 9560 9170	Second World War military camp

7.8 Gazetteer of Undated Cropmarks (Shown on Figure 10)

Site	SMR No.	NGR	Description
75	SX99SE114	SX 9560 9066	Rectilinear ditched enclosure associated with linear boundaries of possible field system
76	SX99SE108	SX 9630 9047	South-east corner of rectilinear ditched enclosure
77	SX99SE211	SX 9630 9000	Rectilinear enclosure
78	SX99SW/193	SX 9462 9050	Single ditched rectilinear enclosure 45 by 50 metres in extent (Site D; Johnson 1996; Exeter Archaeology 1996b)

7.9 Gazetteer of Listed Buildings, Buildings of Local Importance and Other Surviving Historic Structures (Shown on Figure 11)

Site	SMR No.	NGR	Description
79		SX 9565 9025	Newcourt House – late eighteenth century (Grade II)
80	SX98NE6	SX 9502 8989	Weare House – eighteenth to early nineteenth century (Grade II*)
81	SX99SE157	SX 9577 9122	Exe Vale (Digby) Hospital (including Digby House, chapel, lodge, water tower and gates) – AD 1882 to 1886 (Grade II)
82	SX98NE9	SX 9546 8924	Newport Lodge – eighteenth century toll house (Building of Local Importance)
83		SX 9538 8933	Seabrook House – eighteenth century (Building of Local Importance)
84		SX 9470 8995	Crossways Lodge (No. 403 Topsham Road – Building of Local Importance)
85		SX 9575 9045	Wynards Cottage – mid to late nineteenth century

7.10 List of Second World War Buildings Recorded on the RNSD and SEF Sites in 1997 (Francis 1997)

No.	Building Type	Site	Recommended Action (by Francis 1997)	Condition
21	Type A1 Hangar	RNSD	Move for re-use	Incomplete
32	Type A1 Hangar	RNSD	Move for re-use/retain	Incomplete
34	Type A1 Hangar	RNSD	Move for re-use/retain	Incomplete
39	Type A1 Hangar	SEF	Move for re-use	Good
45	Type A1 Hangar	SEF	Move for re-use	Good
30	Robins Hangar	RNSD	Move for re-use	Fair
35	Robins Hangar	RNSD	Move for re-use/retain	Good
60	Robins Hangar	RNSD	Move for re-use	Incomplete
62	Robins Hangar	RNSD	Move for re-use	Incomplete
29B	20 ft. Quonset hut	SEF	Retain	Demolished
36A	20 ft. Quonset hut	RNSD	Retain	Mostly demolished
19	40 ft. Quonset hut 100 ft long	RNSD	Move to museum	Incomplete
28	40 ft. Quonset hut 100 ft long	RNSD	Move to museum	Mostly demolished
29	40 ft. Quonset hut 100 ft long	RNSD	Retain	Demolished
31	40 ft. Quonset hut 100 ft long	RNSD	Retain	Fair
33	40 ft. Quonset hut 100 ft long	RNSD	Retain	Fair
38B	40 ft. Quonset hut 100 ft long	SEF	Move to museum	Demolished
41	40 ft. Quonset hut 100 ft long	SEF	None	Good
47	40 ft. Quonset hut 100 ft long	SEF	None	
59A	40 ft. Quonset hut 100 ft long	RNSD	Move to museum	Fair
18	40 ft. Quonset hut 200 ft long	RNSD	Move to museum	Demolished
20	40 ft. Quonset hut 200 ft long	RNSD	Move to museum	Partly demolished
20A	40 ft. Quonset hut 200 ft long	RNSD	Move to museum	Partly demolished
27	40 ft. Quonset hut 200 ft long	RNSD	Move to museum	
36	40 ft. Quonset hut 200 ft long	RNSD	Retain	Fair/good
34A	Carnegie transit shed	RNSD	Retain	Good
21B	Carnegie transit shed	RNSD	Move to museum	Incomplete
37	Illinois transit shed	RNSD	Retain	Incomplete
38	Illinois transit shed	SEF	Retain	Demolished
29A	16 ft. nissen hut	RNSD	Retain	Demolished
21A	24 ft. nissen hut	RNSD	None	Fair
24	24 ft. nissen hut	RNSD	None	
25	24 ft. nissen hut	RNSD	None	
37A	MOW standard hut	RNSD	Retain	Fair
34B	Open shed	RNSD	None	Fair

7.11 Historic Maps and Schedules

AD 1765	Benjamin Donn's map of the County of Devon (West Country Studies Library)
AD 1809	Old Series Ordnance Survey map (Devon Record Office and West Country Studies Library)
AD 1813	Map of the tithing of East Wonford in the parish of Heavitree – copy made by A. Law in AD 1835 of Richard Coldridge's map of AD 1813 (Devon Record Office)
n.d.	Undated tithe map of the parish of Topsham (Devon Record Office)
AD 1842	Topsham tithe apportionments (Devon Record Office)
AD 1844	Tithe map of the parish of Heavitree (Devon Record Office)
AD 1842	Heavitree tithe apportionments (Devon Record Office)
AD 1889	Ordnance Survey First Edition, Sheets LXXX.11, LXXX.12 and LXXX.15 – 25 inch version (West Country Studies Library)
AD 1905	Ordnance Survey Second Edition, Sheets LXXX.11, LXXX.12 and LXXX.15 – 25 inch version (West Country Studies Library)
AD 1933	Ordnance Survey Revised Edition, Sheets LXXX.11 – 25 inch version (West Country Studies Library)
AD 1933	Ordnance Survey Revised Edition, Sheets LXXX.15 – 25 inch Version (Devon Record Office)
AD 1933	Ordnance Survey Revised Edition (with additions of 1938) – six inch version (Devon Record Office)
AD 1972	Ordnance Survey Revised Edition, SX98NE and SX99SE – 1:10560 version (West Country Studies Library)

7.12 Aerial Photographs Consulted

Vertical Collection (black & white prints)

Sortie No.	Library No.	Frame Nos.	Date	Scale
RAF/GHQ/122	8758	2	18/05/1941	1:12000
RAF/106G/UK/1412	250	3281-3283	13/04/1946	1:9800
RAF/CPE/UK/1987	625	5231-5236	12/04/1947	1:4800
RAF/CPE/UK/2144	675	5019-5024	10/06/1947	1:5500
RAF/540/1579	1641	8-13	01/04/1955	1:5500
RAF/540/1579	1641	40-43	01/04/1955	1:5500
RAF/540/1649	1673	41-47	25/06/1955	1:5000
RAF/540/1649	1673	85-93	25/06/1955	1:5000
RAF/543/2332	2166	62-63	16/07/1963	1:12300
RAF/543/2332	2166	97-99	16/07/1963	1:12300
BKS/2822	2343	2761-2762	14/03/1967	1:10000
BKS/2822	2343	3025	14/03/1967	1:10000
MAL/69091	5534	34-35	22/11/1969	1:10560
OS/92196	13965	125	14/06/1992	1:5300

Specialist Collection

Index No.	Accession No.	Frame Nos.	Date	Film Type
SX9489/2	DAP 5501	02	23/07/1985	Black & white
SX9589/1	DAP 5501	03	23/07/1985	Black & white
SX9589/2	NMR 15892	10	27/04/1998	Colour slide
SX9589/3	NMR 15892	11	27/04/1998	Colour slide
SX9589/4	NMR 18024	05	27/04/1998	Black & white
SX9589/5	NMR 18024	06	27/04/1998	Black & white
SX9589/6	NMR 18024	07	27/04/1998	Black & white
SX9690/1	DAP 8465	7a	26/06/1984	Black & white
SX9690/2	DAP 5501	04	23/07/1985	Black & white
SX9690/3	DAP 6722	10	26/06/1989	Black & white
SX9690/4	DAP 6722	11	26/06/1989	Black & white
SX9690/5	DAP 6722	12	26/06/1989	Black & white
SX9690/6	DAP 6719	02	24/06/1989	Black & white
SX9690/7	DAP 6719	03	24/06/1989	Black & white

Military Obliques

Index No.	Accession No.	Frame Nos.	Date	Film Type
SX9589/8	RAF 30150	PSFO-0048	03/10/1960	Black & white
SX9589/9	RAF 30150	PSFO-0049	03/10/1960	Black & white
SX9589/10	RAF 30150	PSFO-0050	03/10/1960	Black & white
SX9490/9	RAF 30150	PSFO-0051	03/10/1960	Black & white
SX9490/10	RAF 30150	PSFO-0051	03/10/1960	Black & white

JOHN MOORE HERITAGE SERVICES

AN ARCHAEOLOGICAL DESK-BASED ASSESSMENT

OF

THE NEWCOURT AREA – LOWER RNSD SITE AND LAND ALONGSIDE OLD RYDON LANE AND THE A379, TOPSHAM

NGR SX 955 901 centred

Volume II - Figures

On behalf of

Davies Light Associates

January 2006

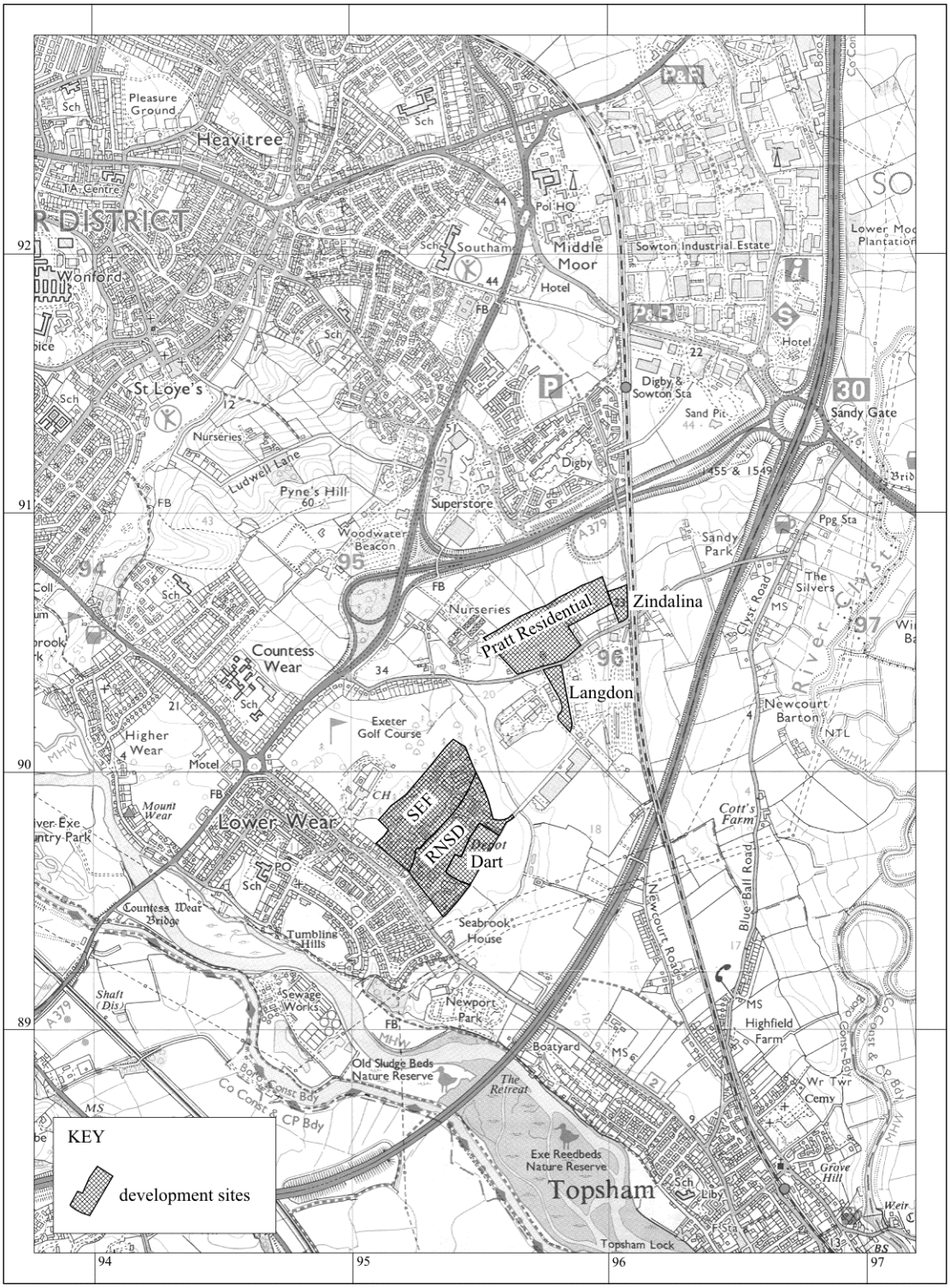

Figure 1: Site Location (scale at 1 to 25 000)

Figure 2: The RNSD and SEF Sites and the South-Western Spine Road Link (scale at 1 to 5000)

Figure 3: The Langdon Site, Pratt Residential, The Zindalina Site and Northern Spine Road Link (scale at 1 to 5000)

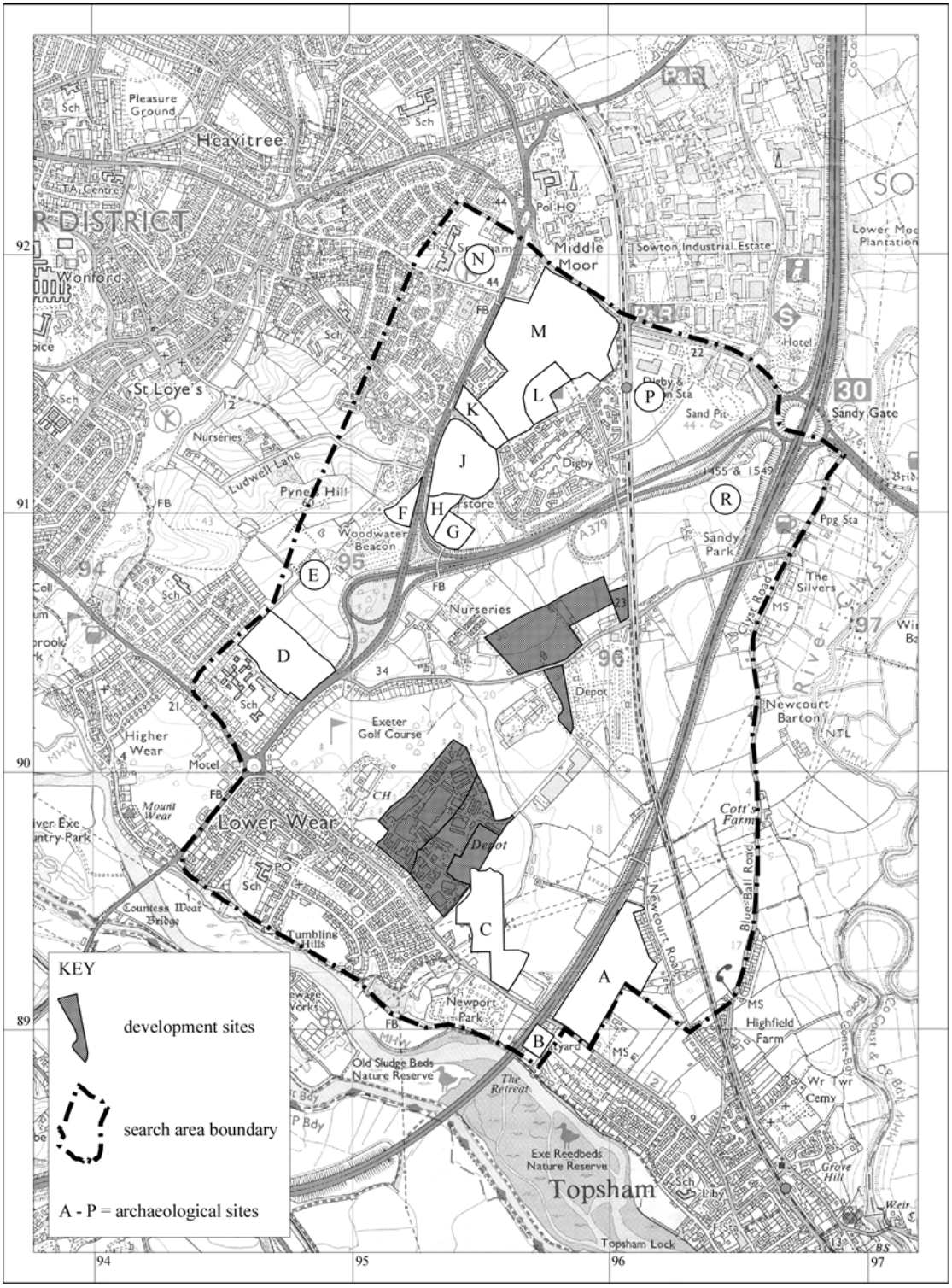

Figure 4: The Location of Key Archaeological Investigations (scale at 1 to 25 000)

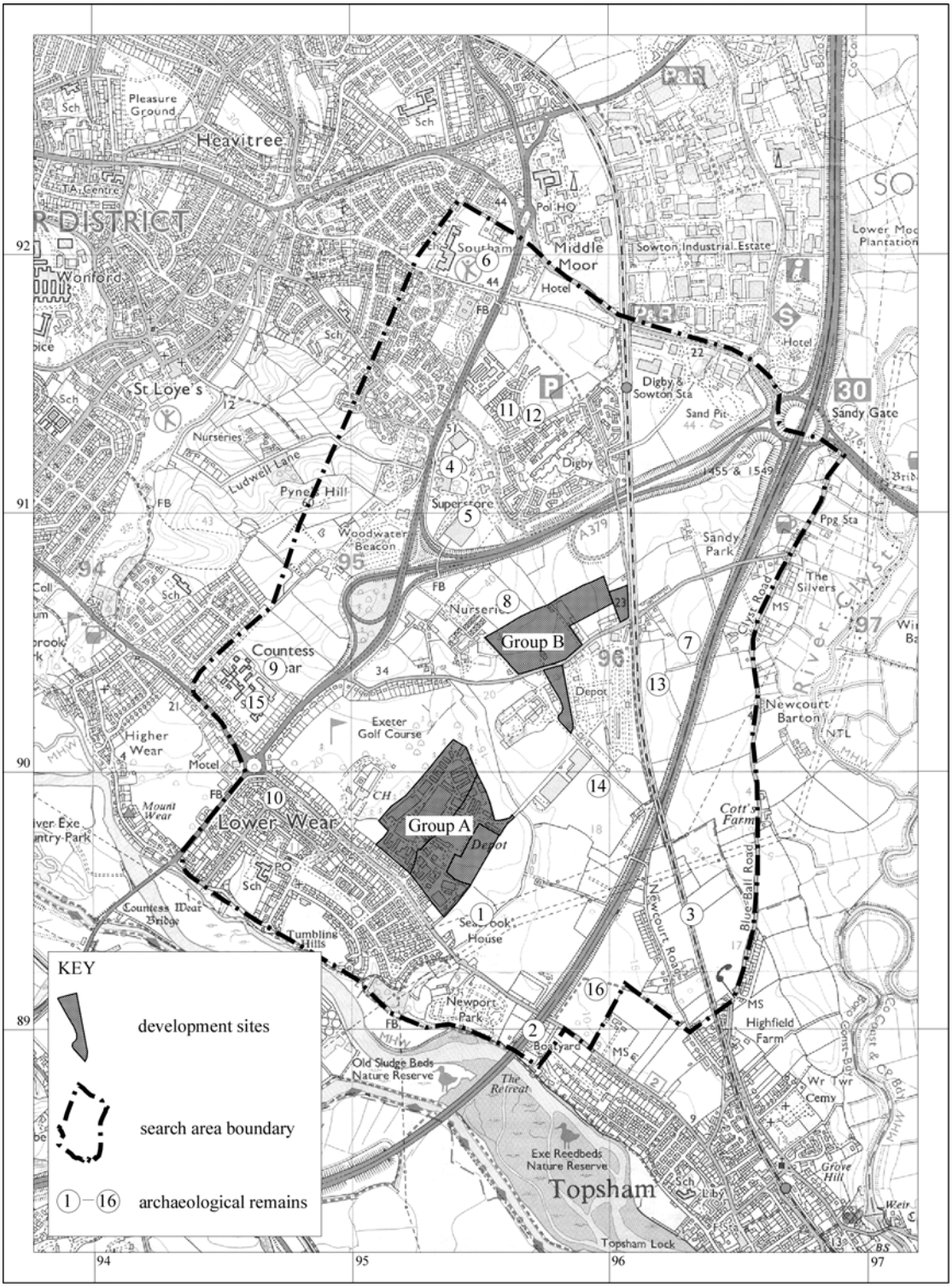

Figure 5: The Known Distribution of Dated Prehistoric Sites (scale at 1 to 25 000)

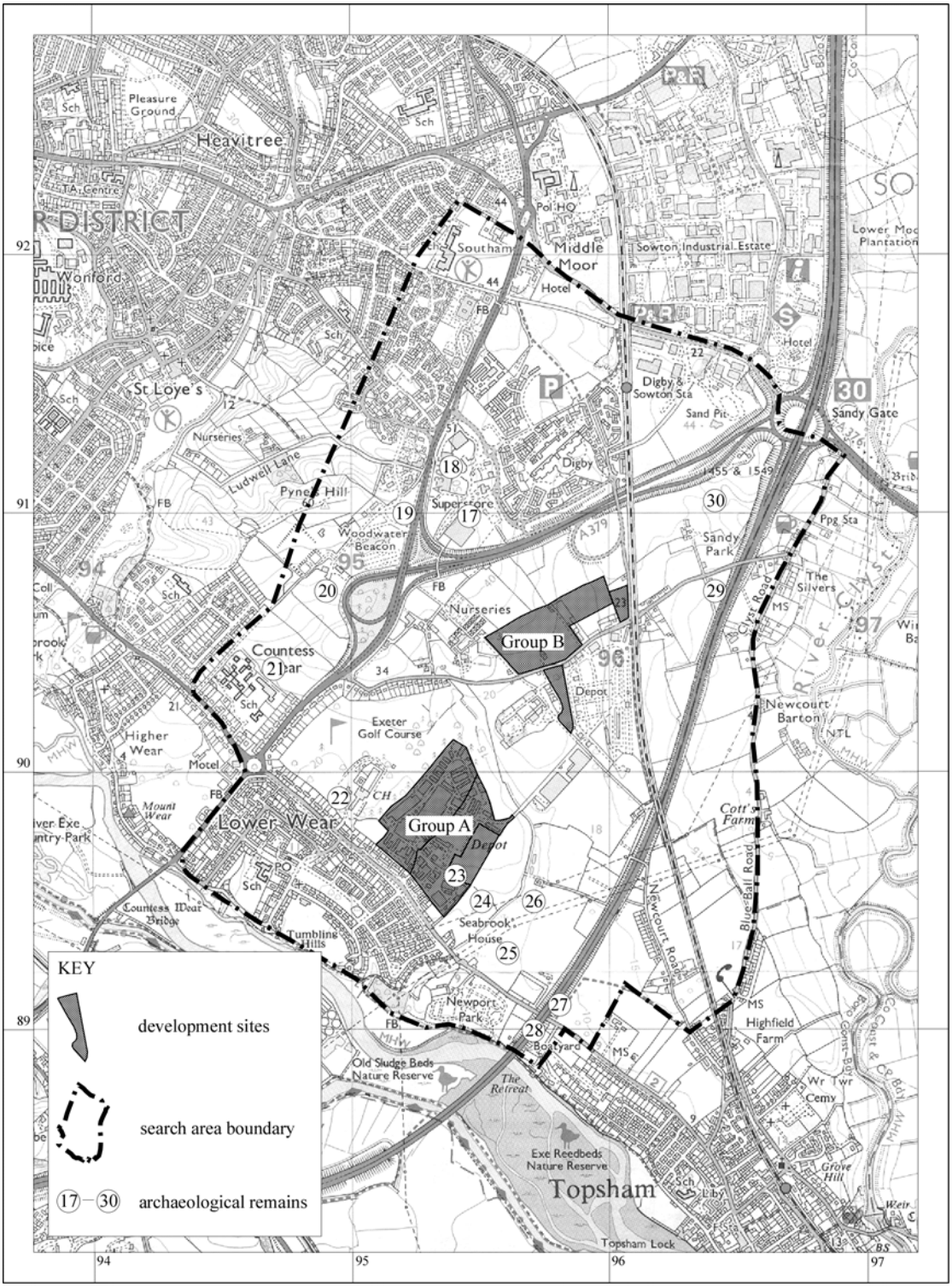

Figure 6: The Known Distribution of Un-phased Prehistoric Sites (scale at 1 to 25 000)

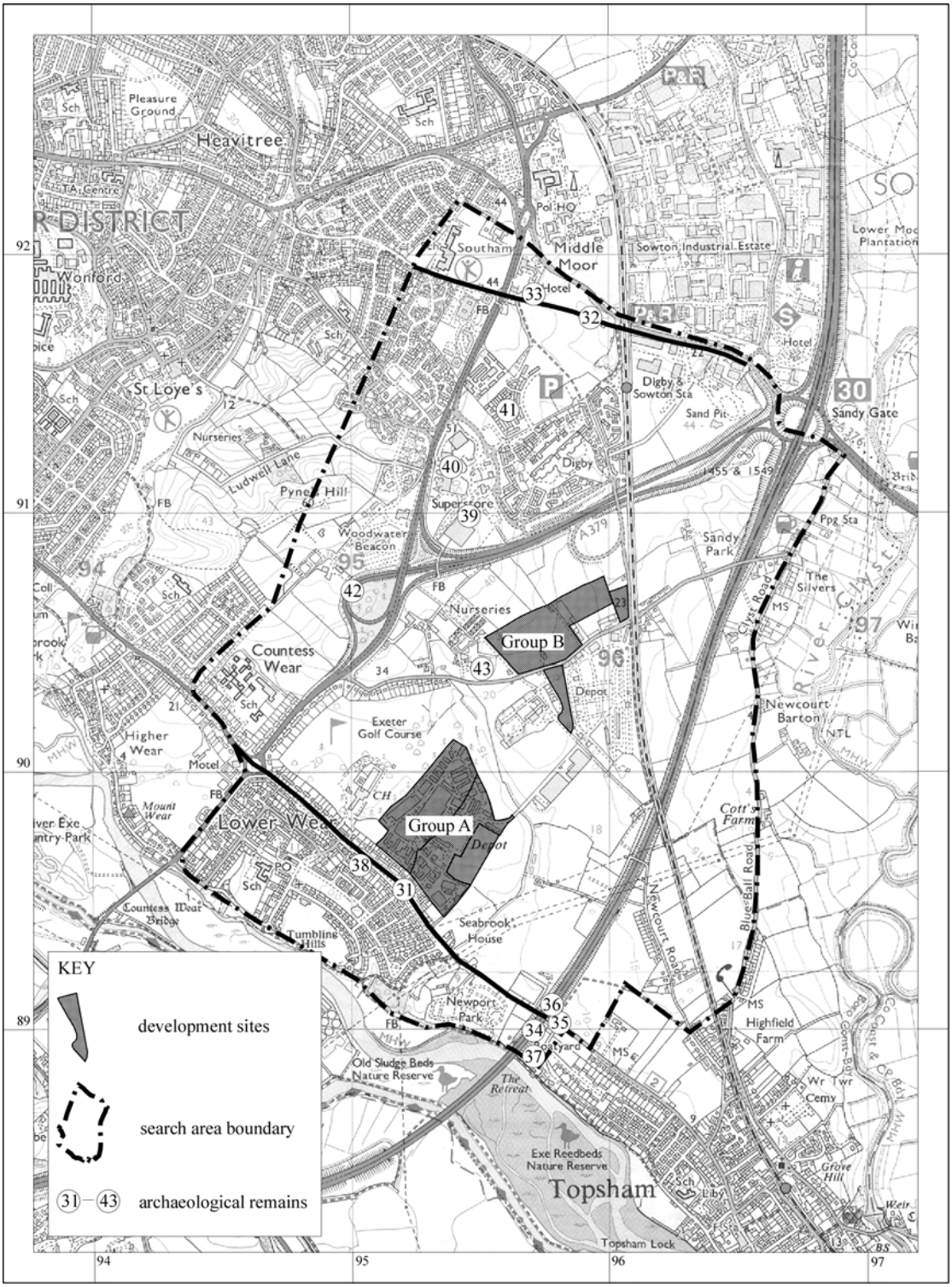

Figure 7: The Known Distribution of Roman Sites (scale at 1 to 25 000)

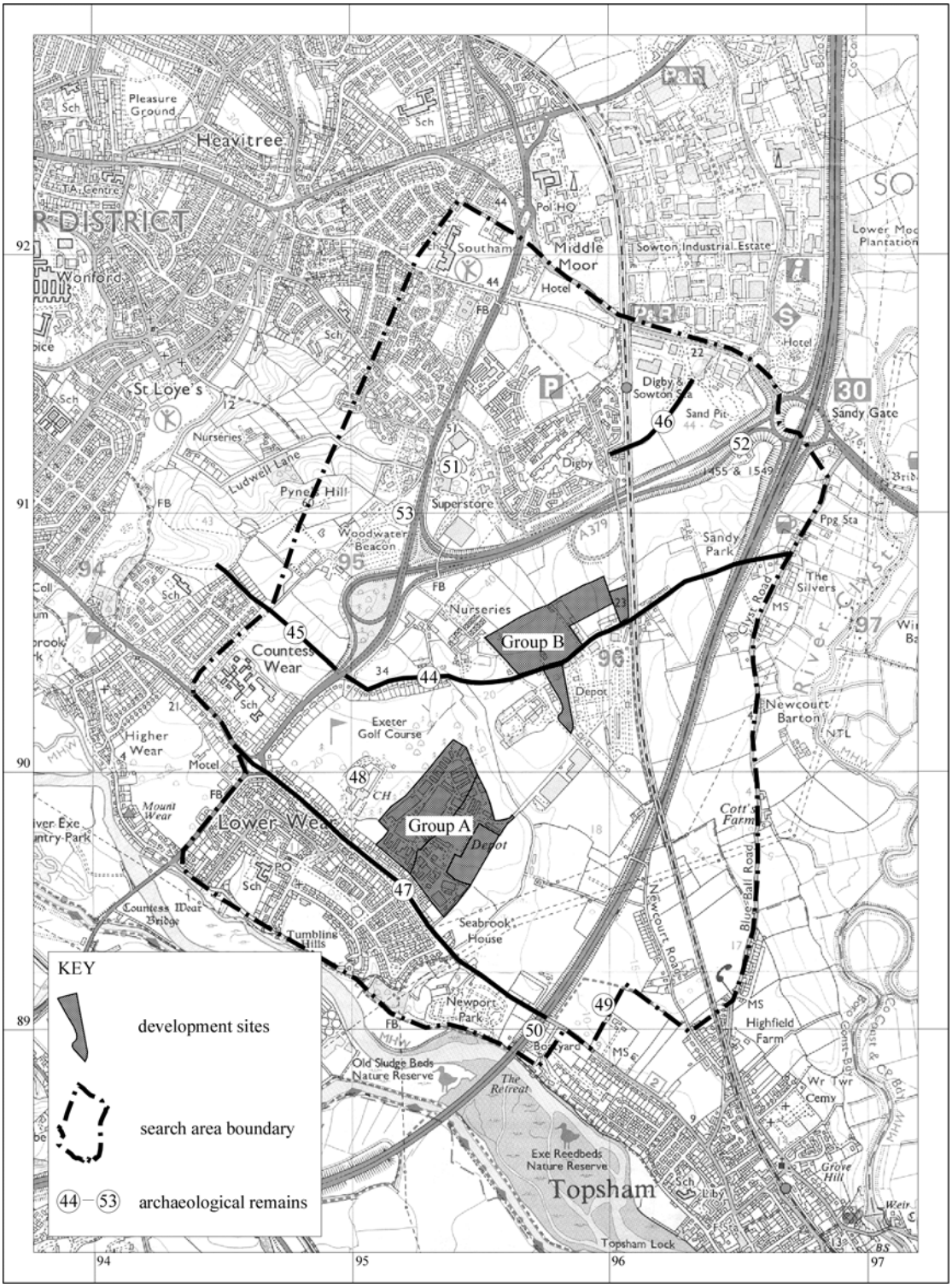

Figure 8: The Known Distribution of Late Saxon, Medieval and Tudor Sites (scale at 1 to 25 000)

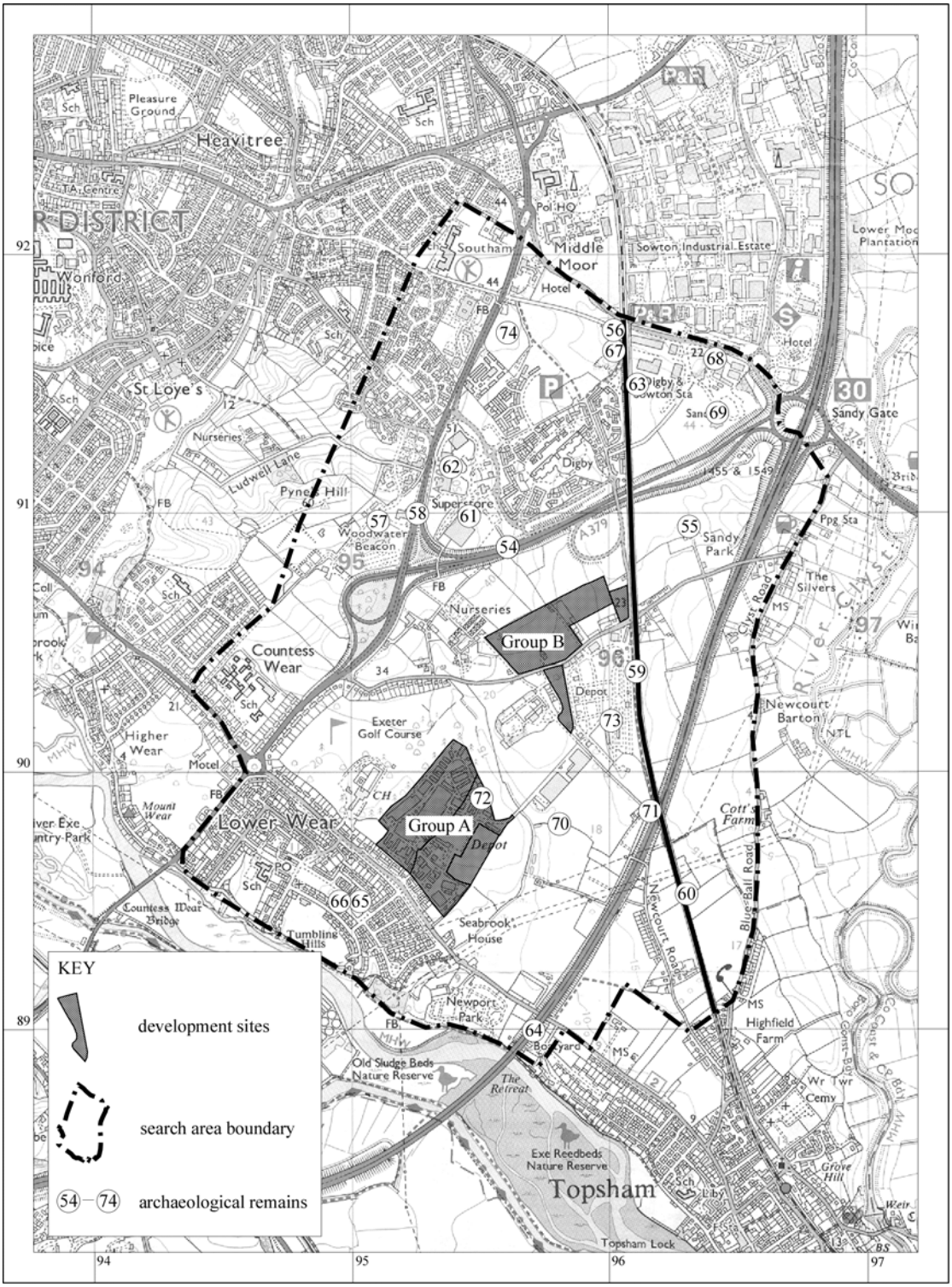

Figure 9: The Known Distribution of Post-Medieval Sites (scale at 1 to 25 000)

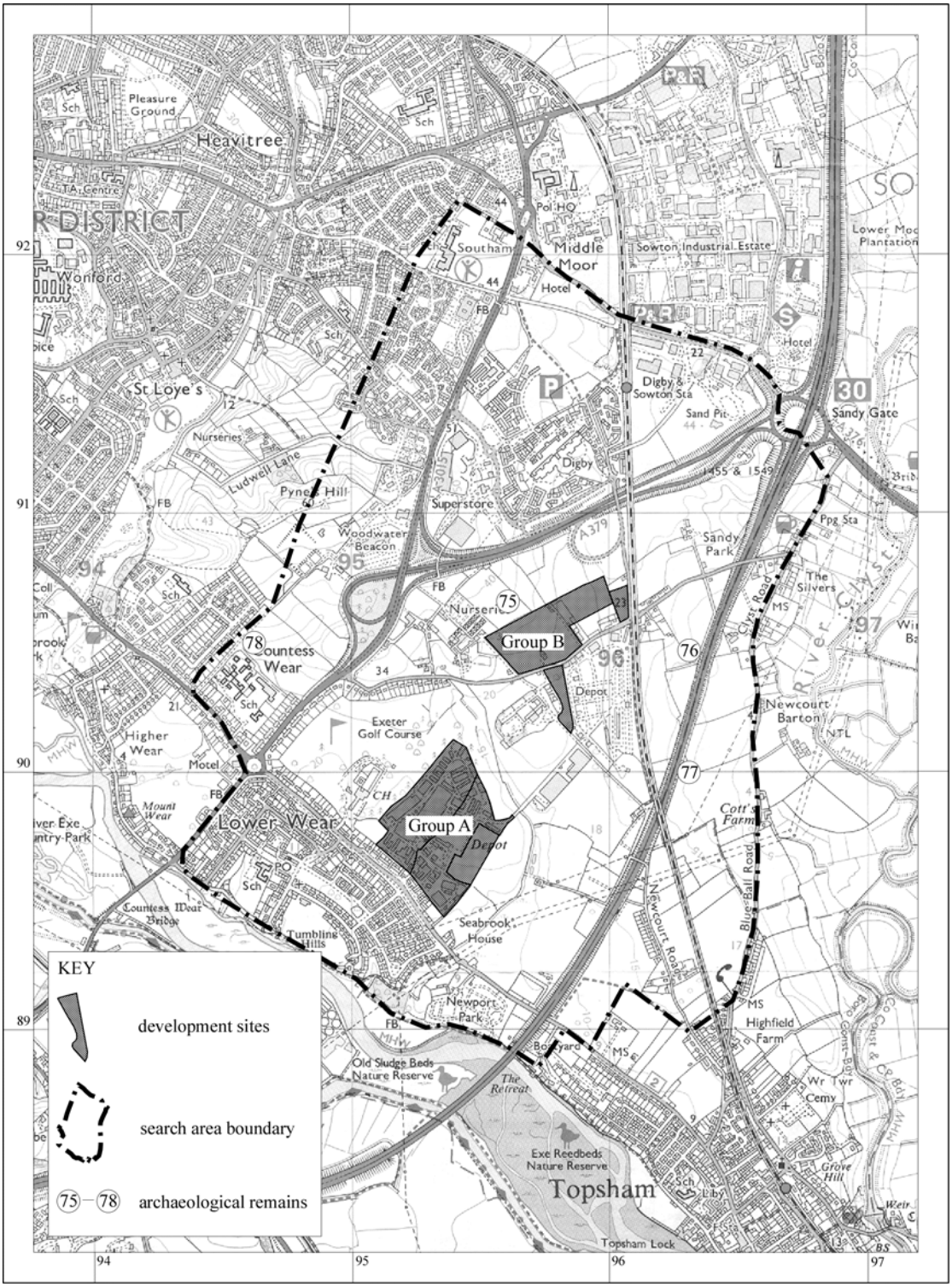

Figure 10: The Known Distribution of Undated Crop marks (scale at 1 to 25 000)

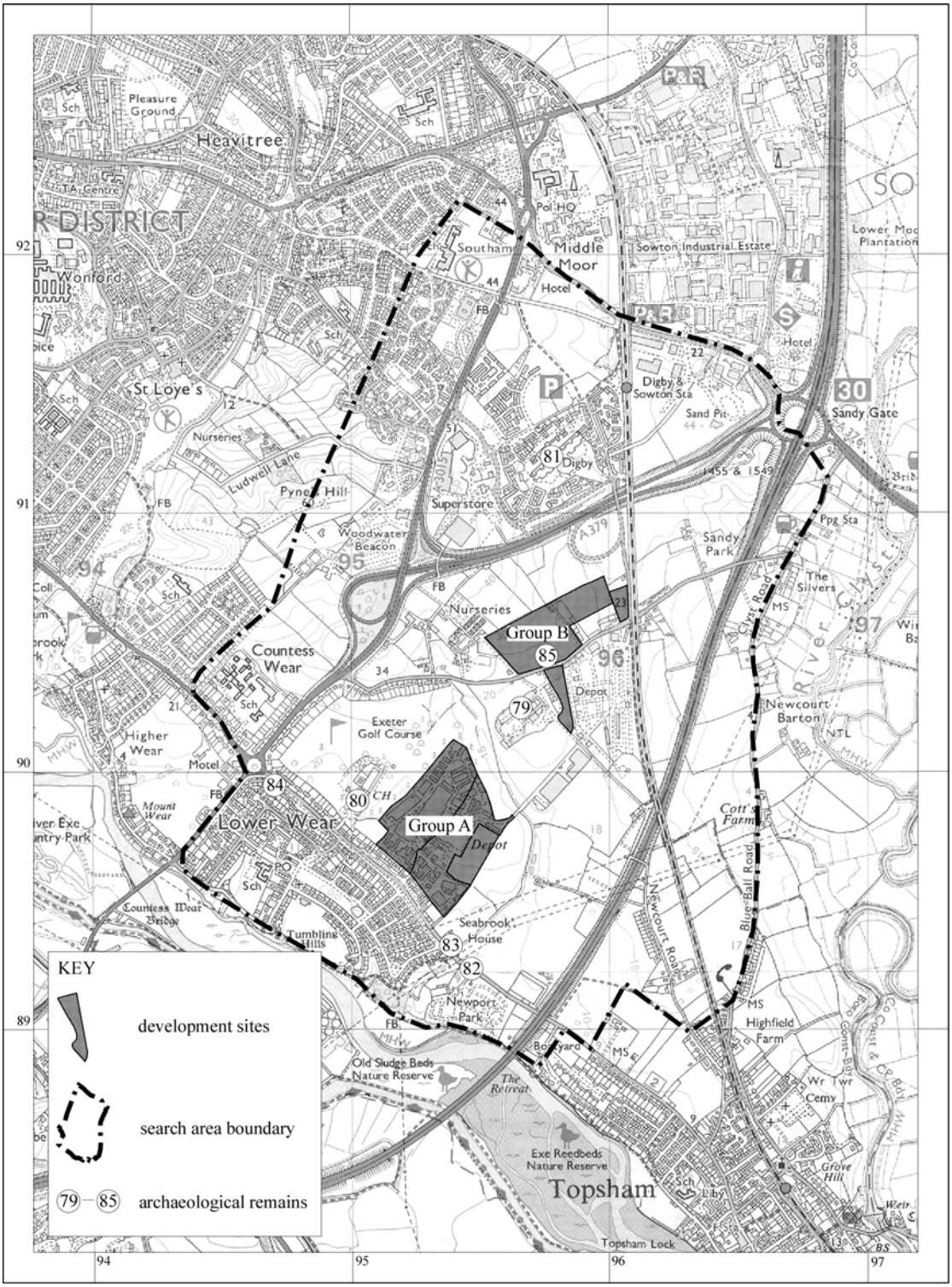

Figure 11: The Distribution of Listed Buildings, Buildings of Local Importance and Buildings of Historic Interest (scale at 1 to 25 000)

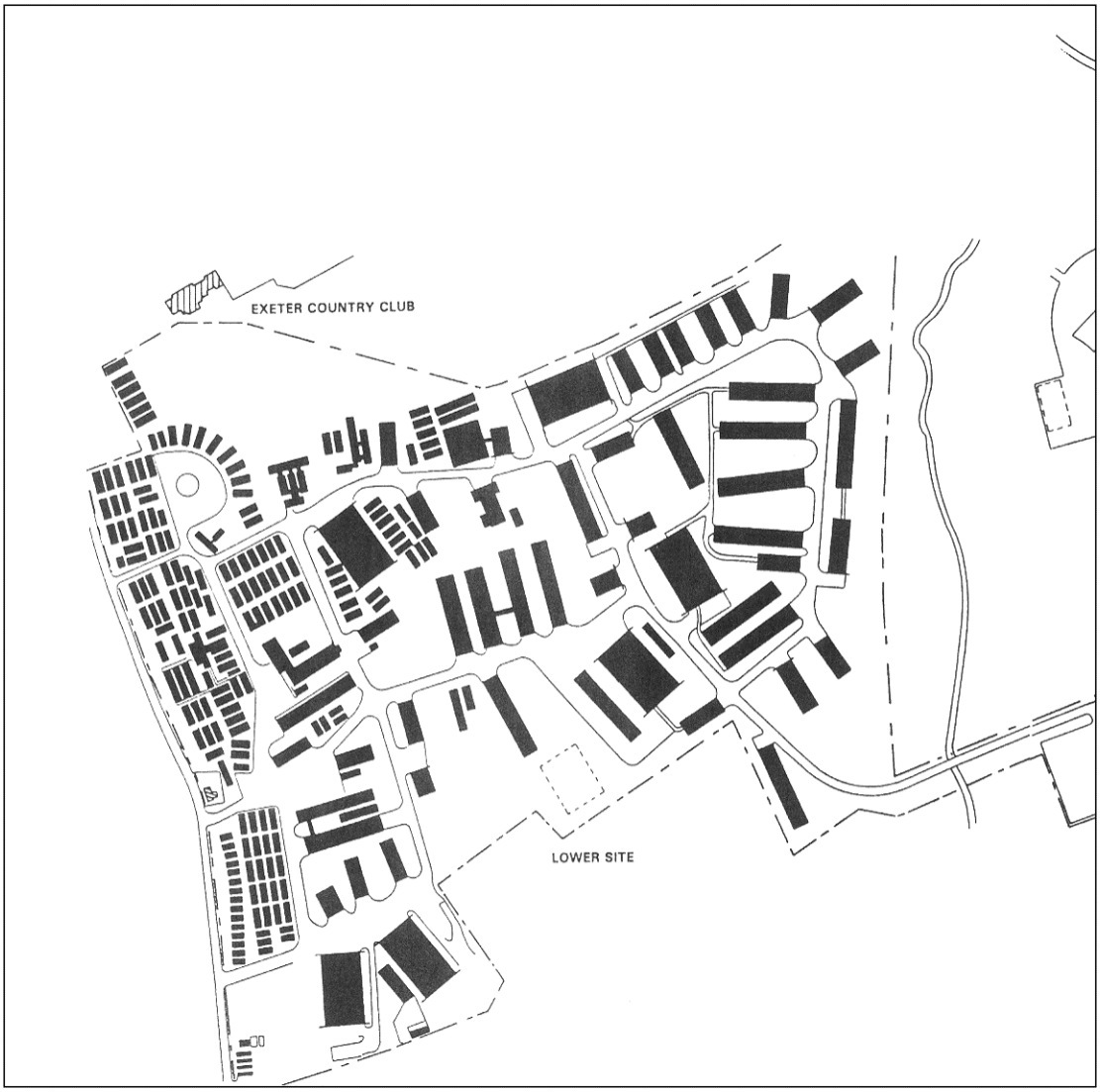

Figure 12: The Layout of the US Navy Amphibious Supply Base in July 1944 (from Francis 1997; not to scale)

Figure 13: The Second World War Buildings Surviving on the RNSD and SEF Sites in 1997 (scale at 1 to 5000)

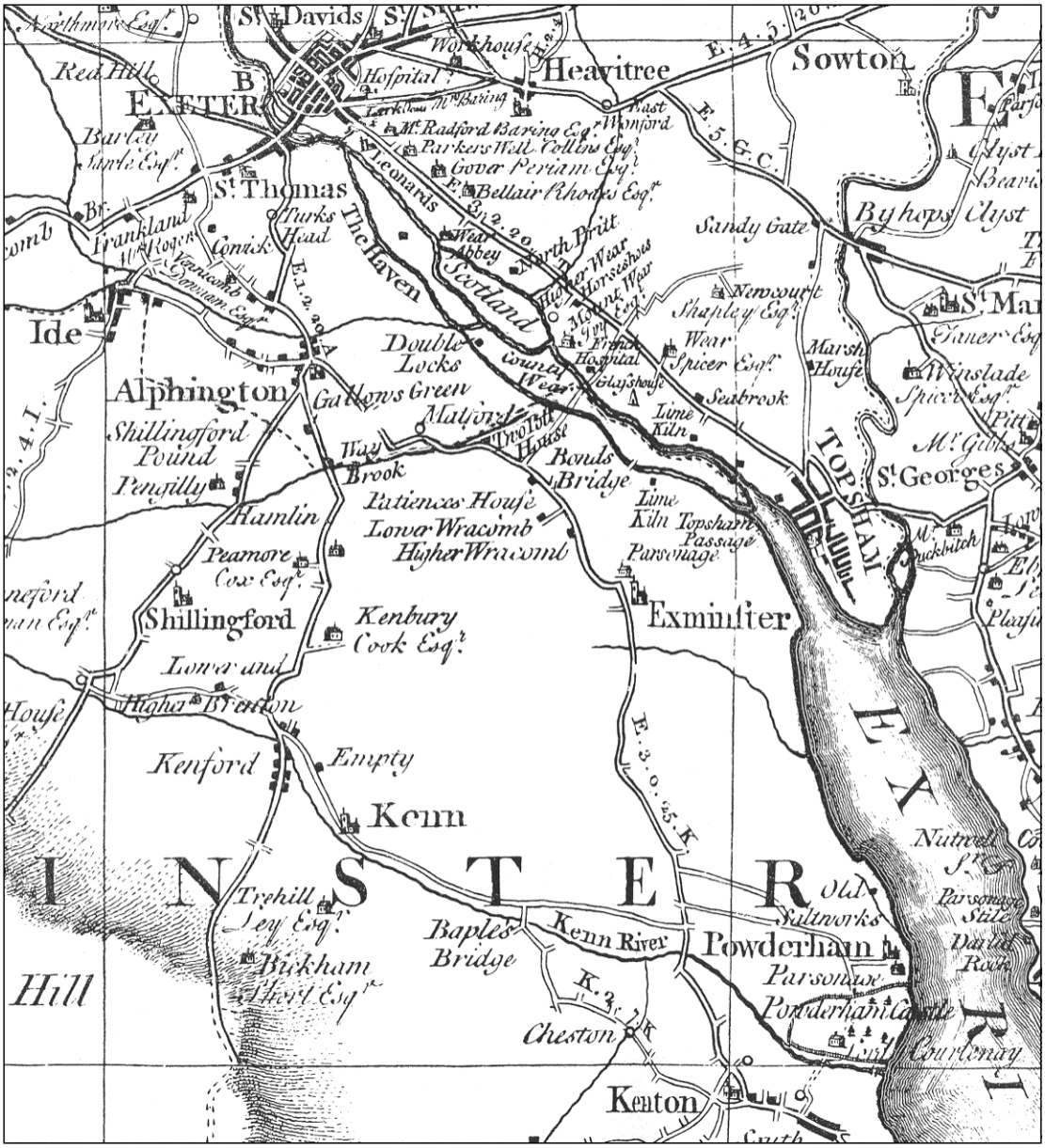

Figure 14: Extract from Benjamin Donn's map of AD 1765 (not to scale)

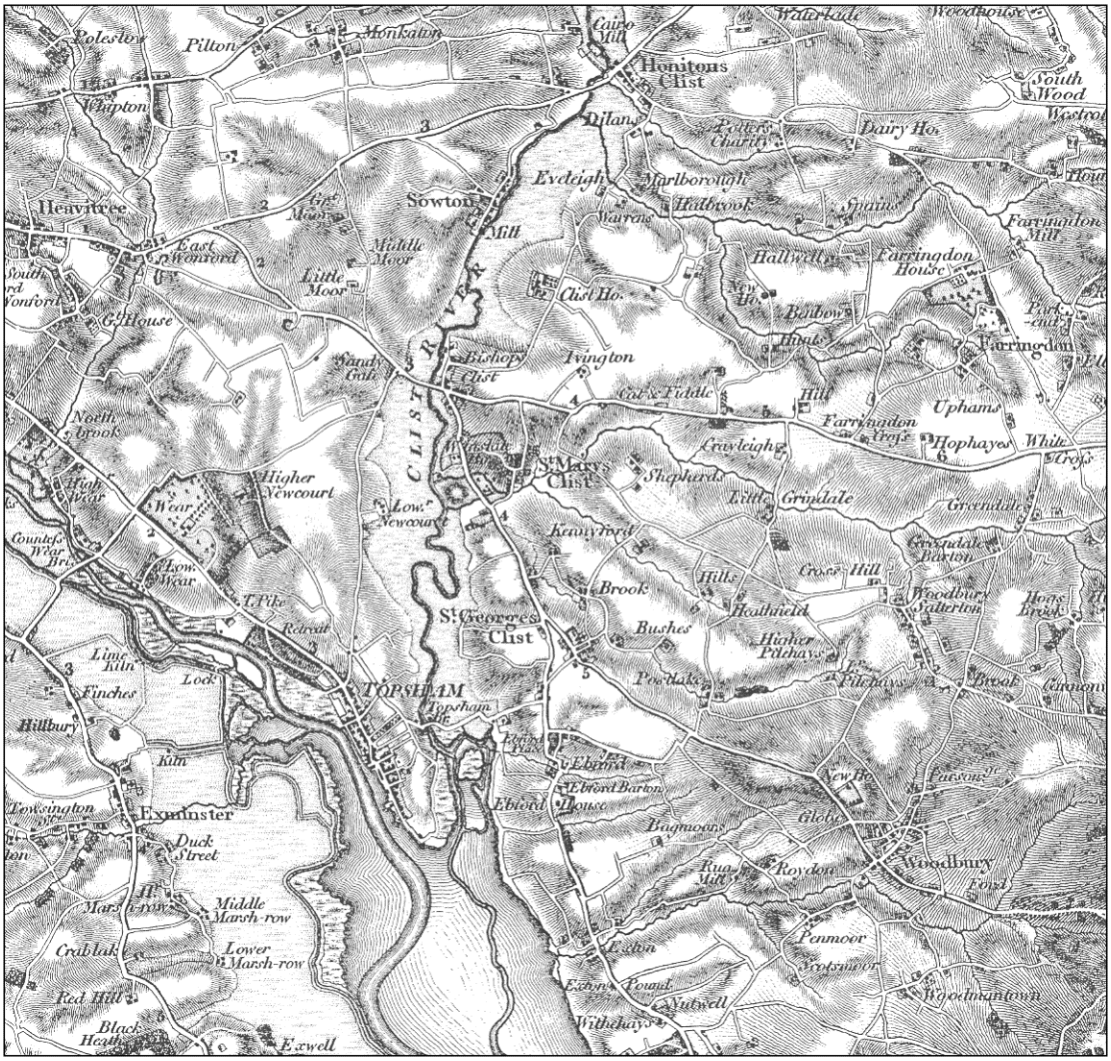

Figure 15: Extract from the Old Series Ordnance Survey Map of AD 1809 (not to scale)

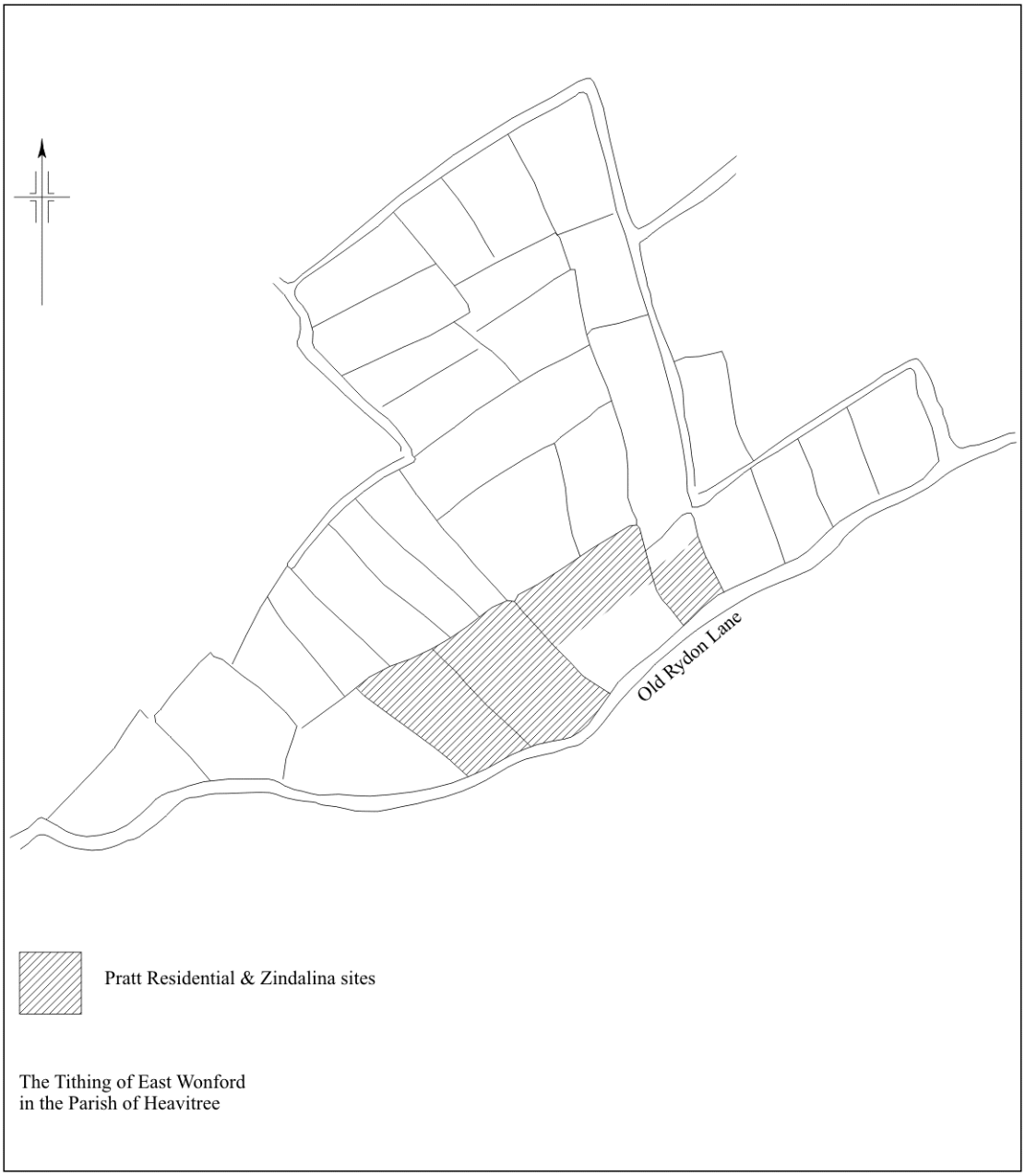

Figure 16: Extract from a Map of the Tithing of East Wonford of AD 1813 (not to scale)

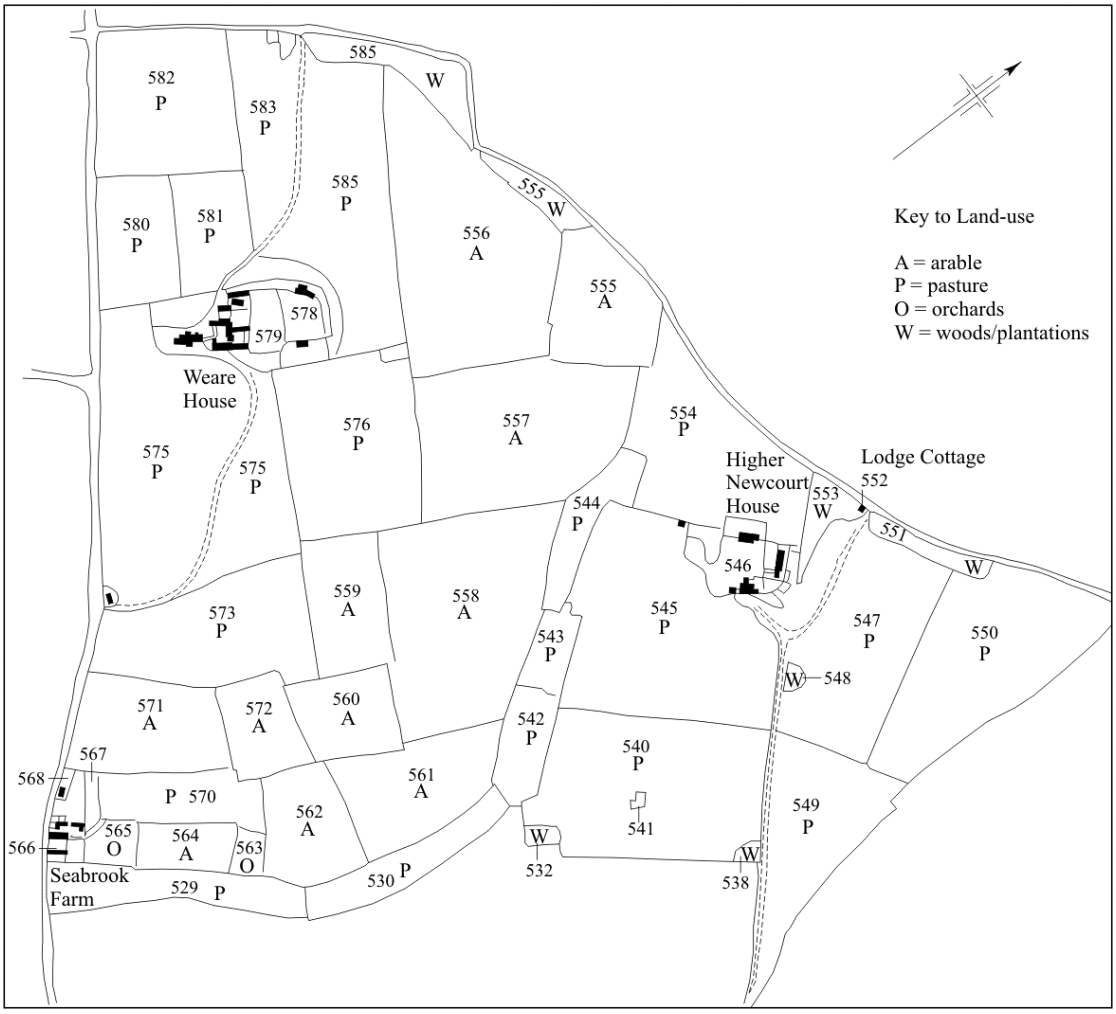

Figure 17: Extract from the Topsham Tithe Map of the Early 1840's (not to scale)

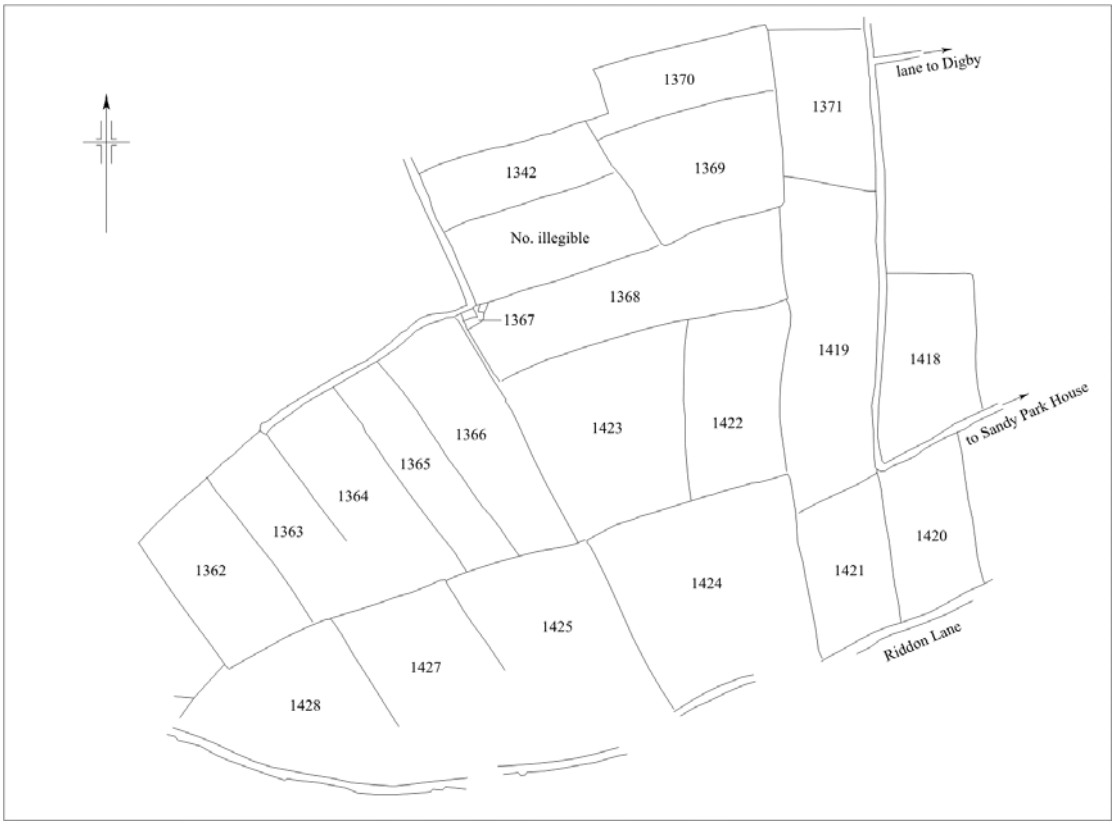

Figure 18: Extract from the Heavitree Tithe Map of AD 1842 (gaps correspond with areas missing from the original; not to scale)

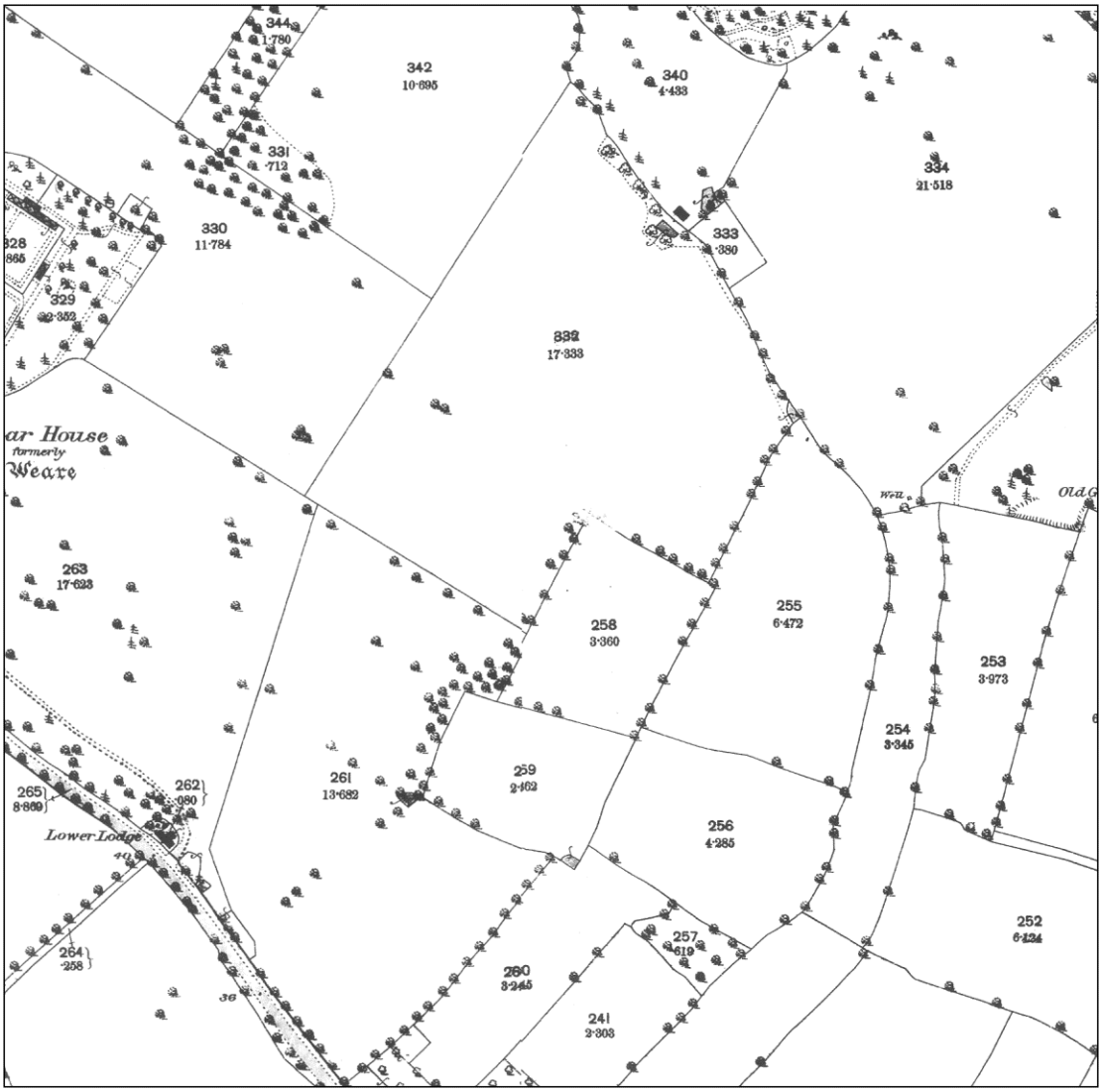

Figure 19: Extract from the First Edition Ordnance Survey Map of AD 1889, Sheet LXXX.15 (not to scale)

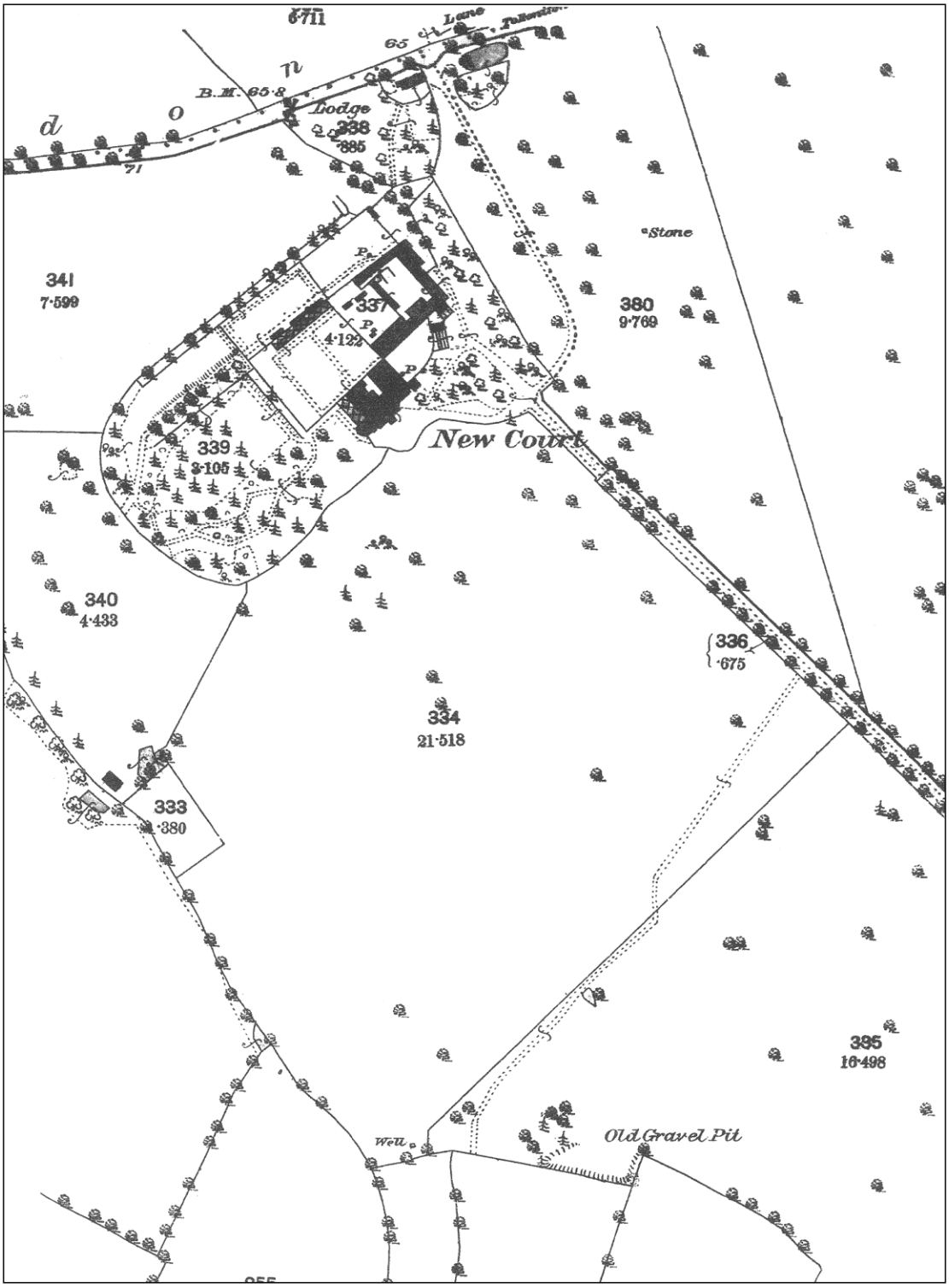

Figure 20: Extract from the First Edition Ordnance Survey Map of AD 1889, Sheet LXXX.15 (not to scale)

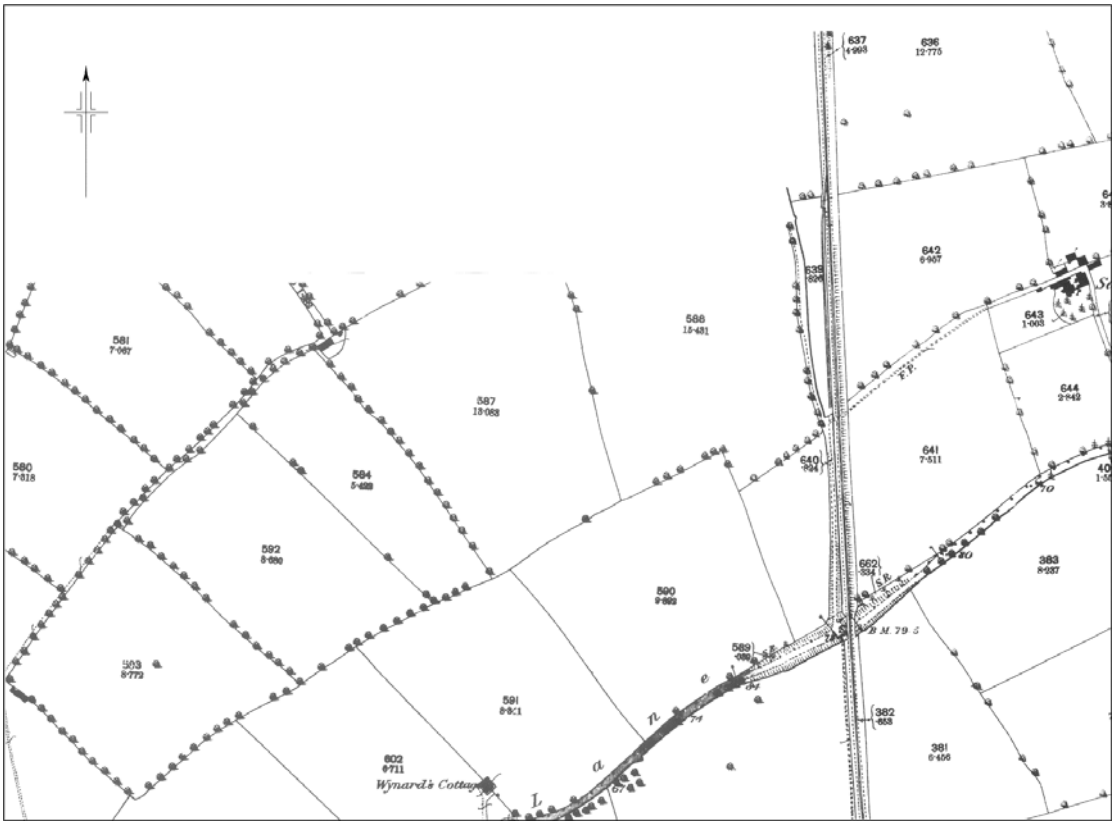

Figure 21: Extract from the First Edition Ordnance Survey Map of AD 1889, Sheets LXXX. 11 and LXXX. 12 (not to scale)

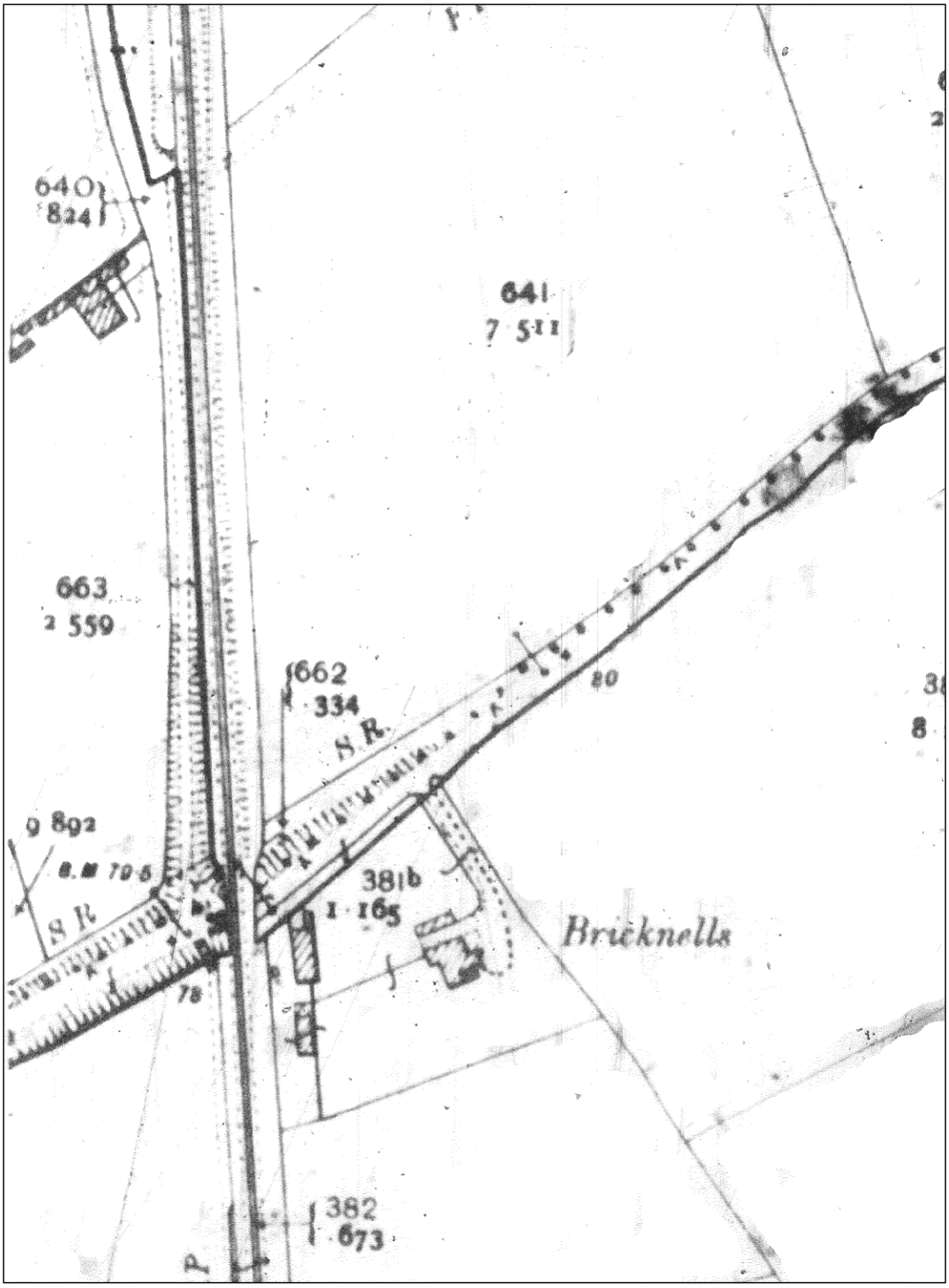

Figure 22: Extract from the Second Edition Ordnance Survey map of AD 1905, Sheet LXXX. 12 (not to scale)

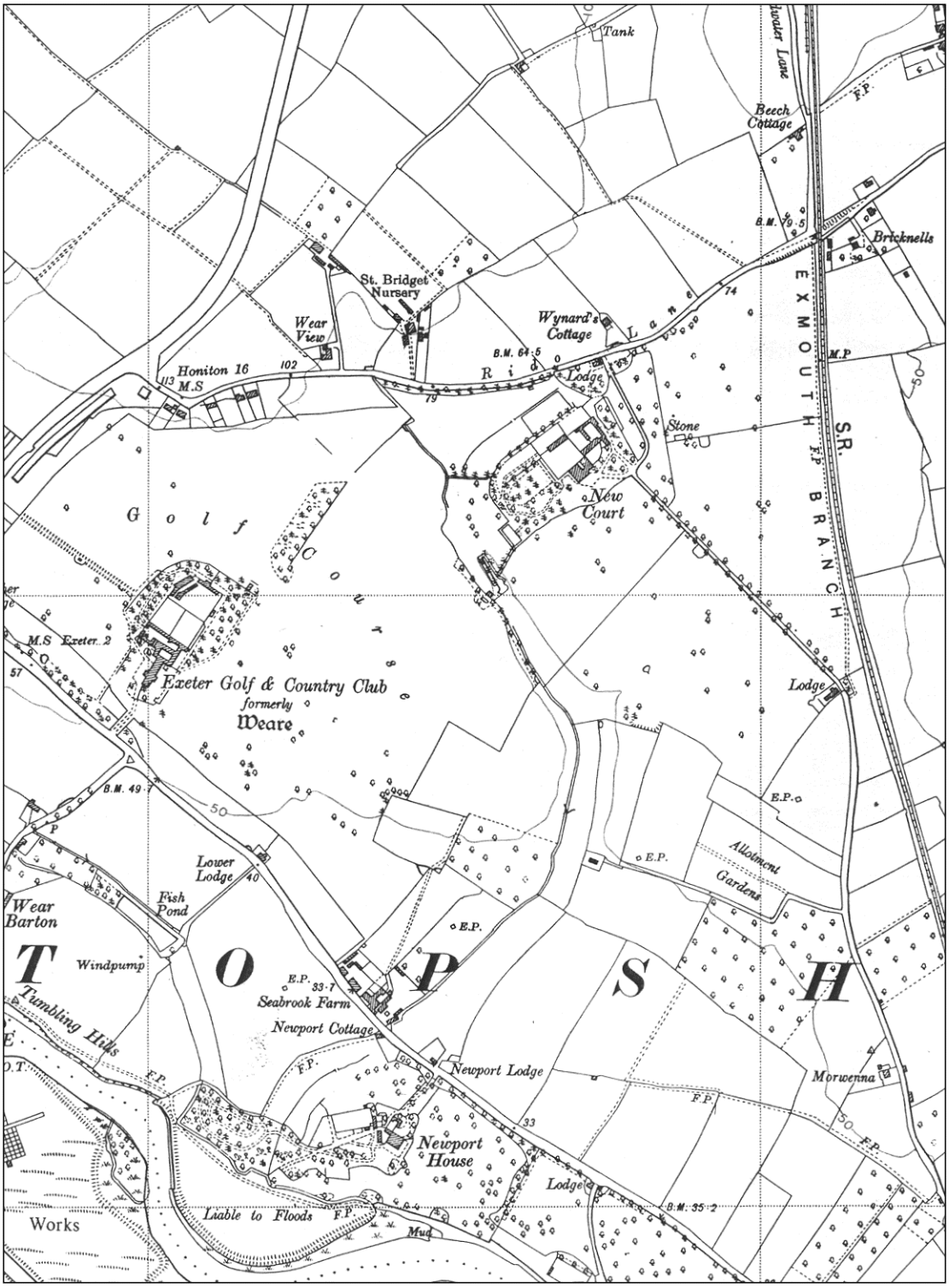

Figure 23: Extract from the Ordnance Survey Map Revised in AD 1933, with additions of AD 1938 (not to scale)

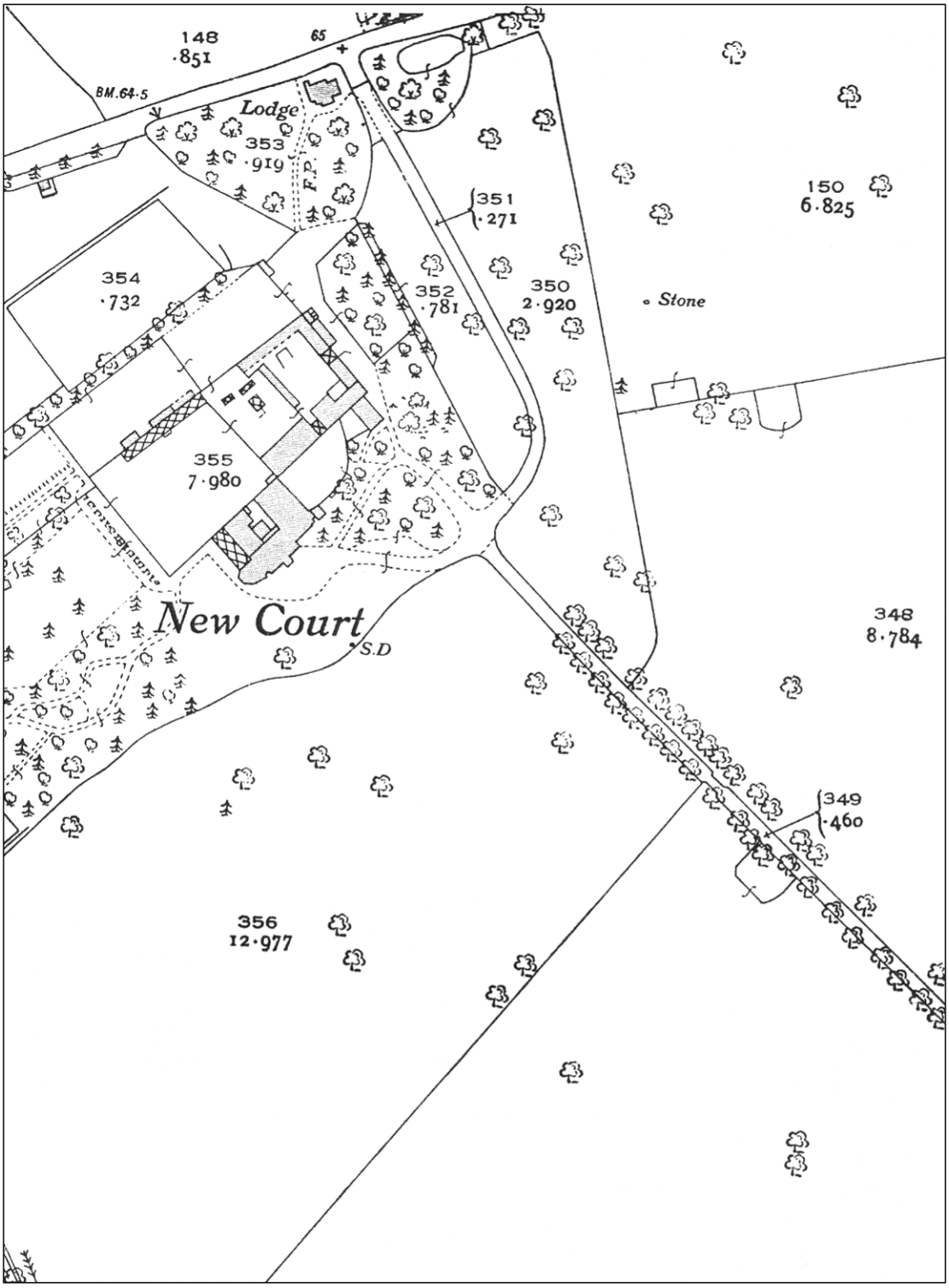

Figure 24: Extract from the Ordnance Survey Map Revised in AD 1933, Sheet LXXX. 15

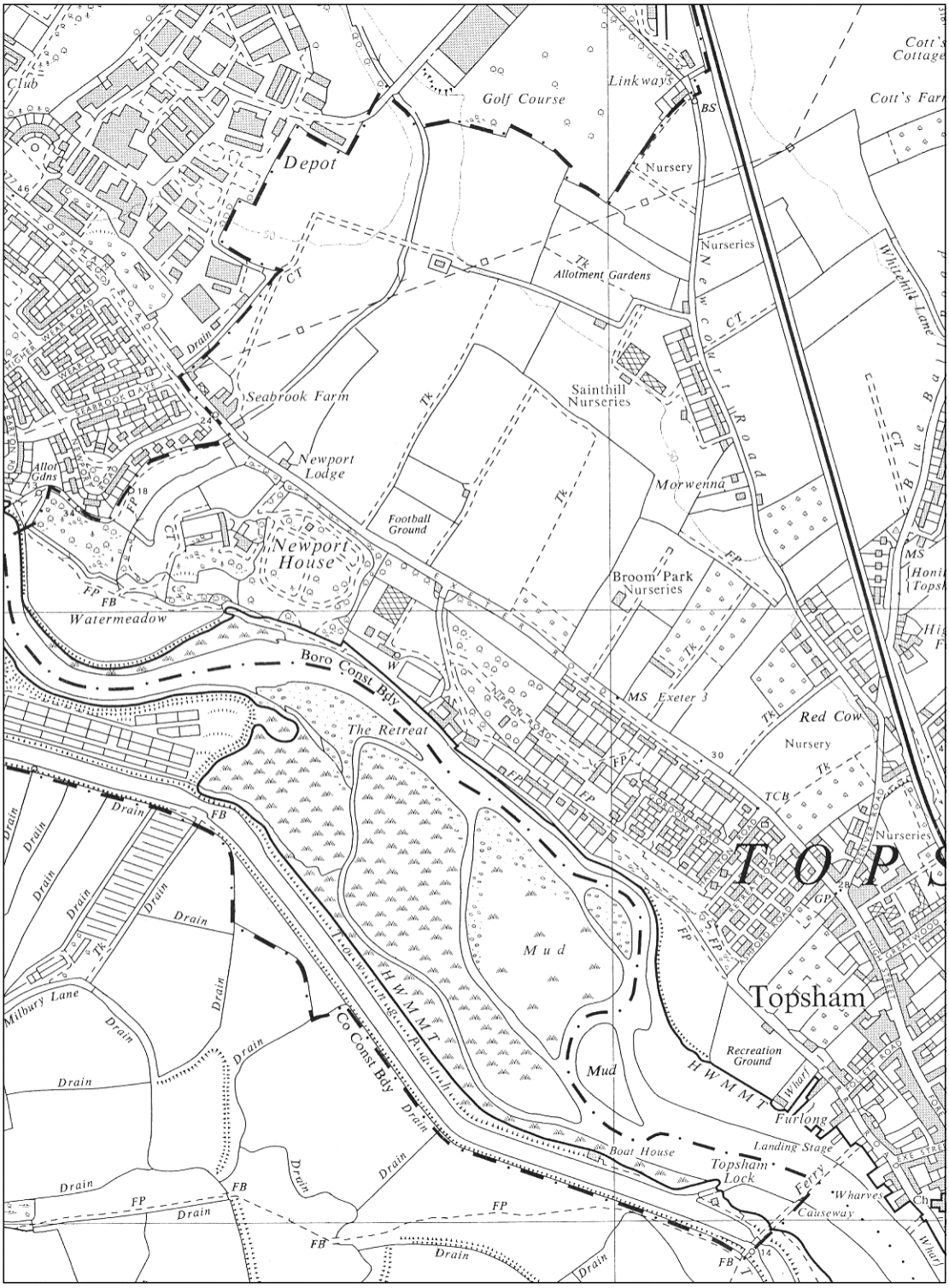

Figure 25: Extract from the Ordnance Survey map Revised in AD 1972, SX98NE (not to scale)

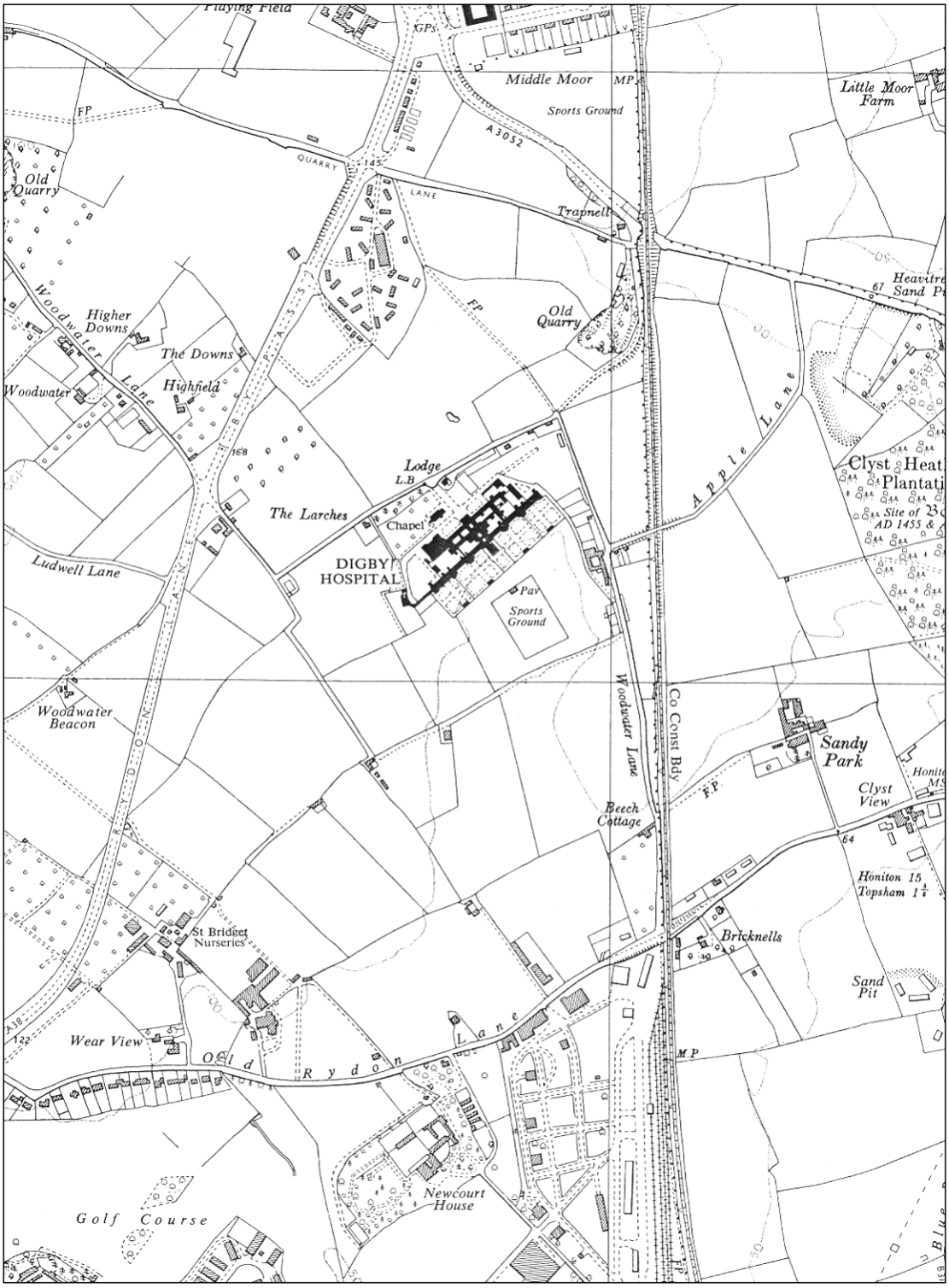

Figure 26: Extract from the Ordnance Survey map Revised in AD 1972, SX99SE (not to scale)

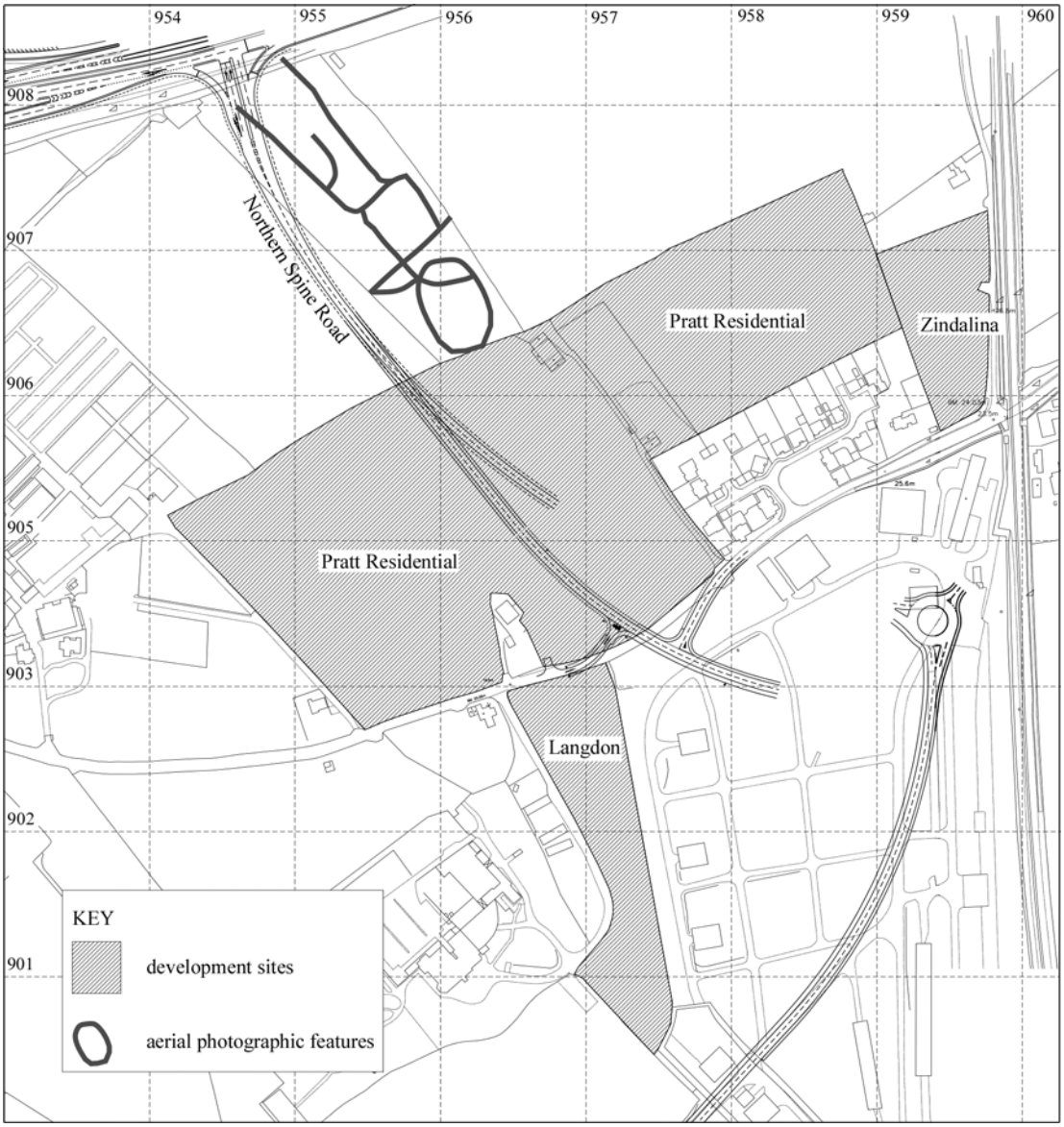

Figure 27: Rough Transcription at 1 to 5000 of Features to the North of Pratt Residential (from aerial photograph BKS2822, frame 3025)

Figure 28: Aerial Photograph taken on 13th April 1946 (RAF/106G/UK/1412, frame 3282)

Figure 29: Aerial Photograph taken on 25th June 1955 (RAF/540/1649, frame 88)

Figure 30: Aerial Photograph taken on 25th June 1955 (RAF/540/1649, frame 90)

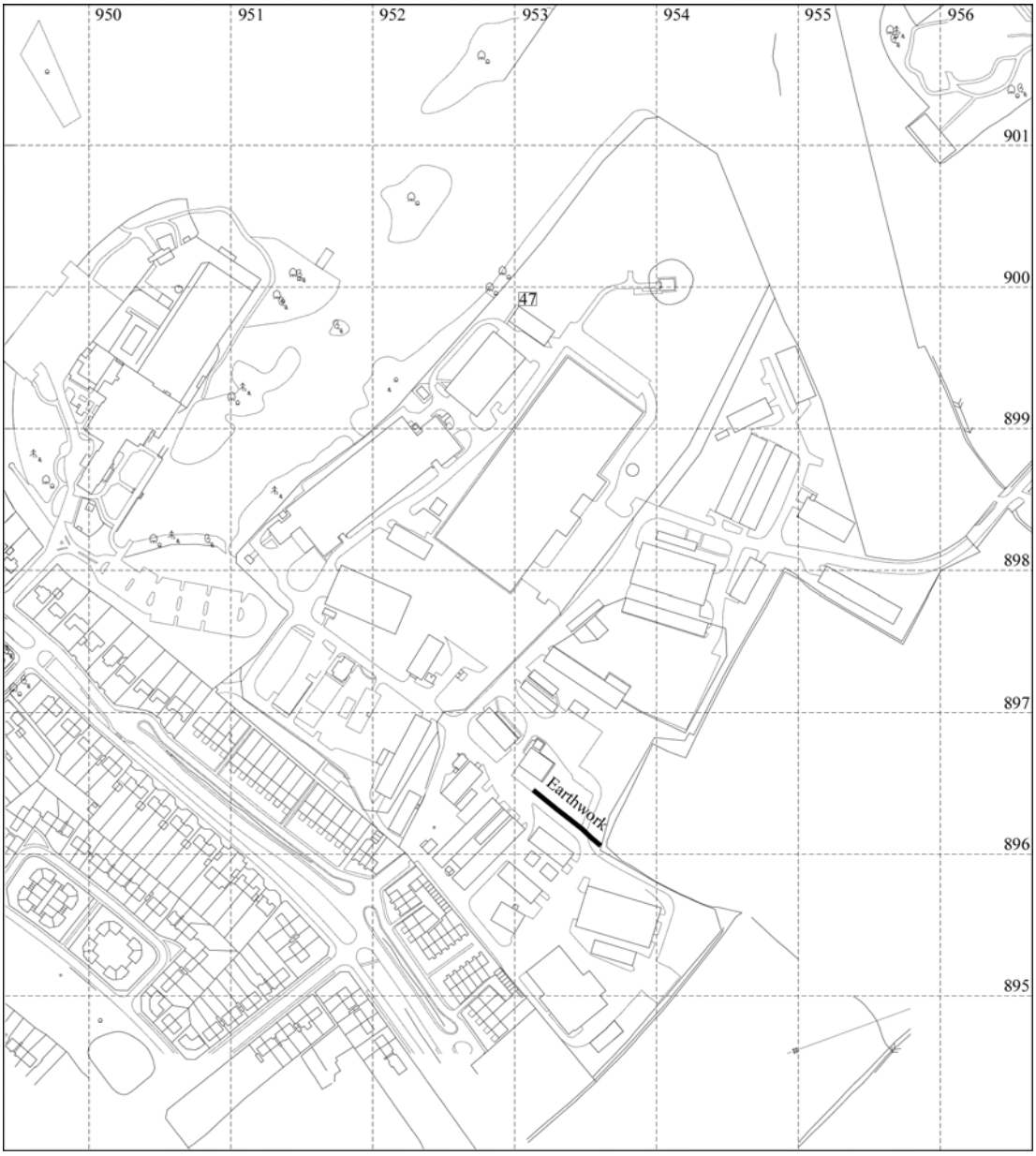

Figure 31: Location of the Earthwork Noted on the RNSD Land during the Site Walkover (scale at 1 to 5000)