APPENDIX 4.1:

EIA SCOPING OPINION REQUEST DOCUMENTS (JANUARY 2013)

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John Byrne
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18 January 2013

Dear John,

South West Milton Keynes SDA

I write further to our meeting late last year at which we discussed the Consortium's emerging proposals for development of the SWMK SDA. In furtherance of those proposals this letter is a formal request for a Scoping Opinion pursuant to Part IV Section 10 (1) of the Town & Country Planning (Environmental Impact Assessment) Regulations 1999 in respect of a proposed planning application for the development of:

- Up to 1,855 new dwellings (including affordable housing);
- A local centre;
- A Primary School;
- Approximately 7 ha of employment land;
- Substantial new green infrastructure;
- An extension of the Snelshall St V1 grid road.

Enclosed with this letter is the following documentation:

- SWMK Scoping Report;
- Drawing SWMK03/002/B Site Context Plan;
- Drawing SWMK03-003 Red Line Boundary;
- Drawing SWMK03/003/B Illustrative Masterplan.

The accompanying report supports the Consortium's formal request for a Scoping Opinion under the EIA Regulations to be issued relating to the proposed development.

Should you have any queries, please do not hesitate to contact me.

Yours sincerely

Mark Hyde BA (Hons) BTP MRTPI AIEMA
Director

Encs: as above.

SOUTH WEST MILTON KEYNES

ENVIRONMENTAL IMPACT ASSESSMENT SCOPING REPORT

January 2013

Prepared by: Brian Flynn MA MRTPI

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ACCOMPANYING PLANS:

Drawing SWMK03/002/B Site Context Plan

Drawing SWMK03-003 Red Line Boundary

Drawing SWMK03/003/B Illustrative Masterplan

1. INTRODUCTION

1.1 This Scoping Report sets out the likely scope of an Environmental Impact Assessment (EIA) process for the proposed mixed use development at South West Milton Keynes. The site is located within the administrative boundary of Aylesbury Vale District Council, but is immediately adjacent to the Milton Keynes Council boundary.

1.2 Regulation 13 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2011 allows an applicant that intends to submit an EIA application to seek a 'scoping opinion' from the relevant local planning authority. The purpose of this Scoping Report is to obtain a formal opinion from Aylesbury Vale District Council on what should be included in the Environmental Statement for the planning application. It forms the basis for discussion with the relevant authorities and consultees on the scope of the Environmental Statement.

1.3 Regulation 13 requires the following information to be submitted with the scoping opinion, as follows:

- a plan sufficient to identify the land;
- a brief description of the nature and purpose of the development and of its possible effects on the environment; and
- such other information or representations as the person making the request may wish to provide or make;

1.4 This Scoping Report contains the required information and identifies the potential environmental impacts associated with the proposed development so that these issues can be assessed as part of the EIA process.

1.5 It is worth noting at the outset that the proposed development is a significantly revised scheme to that submitted in April 2010 – AVDC Application Ref. 10/00891/AOP. The application site area is smaller and the quantum of development has been substantially reduced.

1.6 The 2010 application related to a mixed use sustainable urban extension for 5,311 dwellings. The application was subject to a Scoping Opinion and a full Environmental Statement was prepared for the application. This means that a substantial amount of detailed environmental information already exists for the site; in some cases this baseline evidence remains relevant with minor updating, whereas other time sensitive evidence such as ecology will need to be updated for this Environmental Statement.

1.7 A substantial amount of environmental information was gathered from statutory agencies when the Environmental Statement for the previous scheme was prepared and discussions were held with those same organisations e.g. Environment Agency, Highways Agency, Buckinghamshire County Council, Aylesbury Vale District Council and Milton Keynes Council. We anticipate that similar discussions will take place for this proposed development as the project progresses.

1.8 The proposed development is described in full in **Section 3**.

1.9 The context of the site is shown on Drawing SWMK03/002/B; and a site location (red line boundary) plan is provided on Drawing SWMK03-003. A draft illustrative master plan showing the proposed disposition of uses within the application site and the associated draft land use budget is provided on Drawing SWMK03/003/B.

2. OUR APPROACH TO ENVIRONMENTAL IMPACT ASSESSMENT

2.1 The EIA is part of the design process. The aim of the EIA process is to identify 'significant' environmental effects during the construction and operational phase of the development and to reduce or remove the severity of those effects through the design process. Mitigation measures could be incorporated into the proposed development to address any 'significant' environmental effects. It is also possible that development could provide positive environmental effects by including enhancement measures.

2.2 The assessment process will involve the following stages:

i. to scope works to be assessed;
ii. to identify assumptions and deficiencies in available data;
iii. to identify sensitive receptors and resources;
iv. to identify the impact of development those receptors and resources;
v. to identify mitigation measures to address 'significant' effects; and
vi. to identify residual significant effects following mitigation.

Assessment Method and Terminology

2.3 The assessment process will use the term 'impact' to identify the change that a process will create over a specified period of time. For example, construction machinery will result in an increase in local noise levels while in use. This change is the impact of the activity. The term 'effect' will describe the outcome of the assessment of an impact upon a receptor. Following the same example, the impact of noise from the use of construction machinery would be assessed for its effect upon a receptor.

2.4 For any effect to be **'significant'** it must exceed a nationally recognised threshold. Where such norms do not exist, the experience of the assessor is used to determine the significance threshold. Effects falling below the threshold are termed 'non-significant effects.'

2.5 Above the threshold a simple matrix comparing the severity of the impact upon the sensitivity of the receptor will be used. The magnitude of the impact will wherever possible be based upon a measurable element but will also include factors such as duration, timing and seasonality. The sensitivity element will include the number and type of receptor.

2.6 The significance of the impact will be related to four terms, namely, 'Severe', 'Major', 'Moderate' and 'Low'. Individual specialisms have assessment guidelines developed by professional bodies, e.g. the Landscape Institute and IEEM. These guidelines utilise matrices for significance assessment, where appropriate these guidelines will be modified to provide the standardisation of terms used in this assessment.

2.7 All effects will be assessed for significance based on agreed mitigation measures being in place. Some impacts cannot be directly mitigated and therefore compensatory measures may be required to offset the predicted adverse effects. Where such measures are proposed these will be described and taken into account in the assessment of significant effects.

3. PROJECT DESCRIPTION

3.1 The application site is located to the south west of Milton Keynes, within Aylesbury Vale District. The principle of an urban extension to the south west of Milton Keynes has emerged from a series of studies over the last twenty years and which have consistently identified the site at SWMK as a suitable and sustainable location for development.

3.2 The overarching principle of the proposed development is that it should be viewed as an extension of MK, which reflects the City's design principles and standards. The draft description of the proposed development is as follows:

'Outline planning application with all matters reserved except for access for a mixed-use sustainable urban extension on 139 Ha of land to the south west of Milton Keynes, comprising the following:

- *up to 1,855 mixed tenure homes (C3) on 53 Ha of land;*
- *an employment area (B1, B2 & B8) of 7 Ha;*
- *a mixed use local centre of 1.23 Ha;*
- *provision of 2.5 Ha of land to provide education facilities comprising a primary school with ancillary early years provision;*
- *ground remodelling;*
- *multi-functional green infrastructure including: parkland, sports and recreational facilities; play areas, wildlife areas, a range of strategic open spaces including new landscaping and allotments; foul and surface water drainage networks (including SUDS and lakes);*

- *associated highway infrastructure (including an extension to the V1 grid road, primary streets, residential streets, pedestrian footpaths and cycle routes); and*
- *public transport infrastructure, car and cycle parking for all uses.'*

3.3 An overall draft land use budget for SWMK is included on Drawing SWMK03/003/B**.**

4. SITE LOCATION AND OUTLINE OF EXISTING CONDITIONS

4.1 The scheme, as shown on SWMK03/003/B, is located to the east of Whaddon Road, to the south of the A421 and to the north of the Oxford to Bletchley railway line. It is at the western edge of Far Bletchley,

4.2 The broader context for the site is provided by Milton Keynes to the north east and the Vale of Aylesbury with its dispersed settlement pattern to the south and west. Newton Longville is the closest settlement to the application site and lies approximately 0.5km to the south.

Current Condition

4.3 The site is primarily agricultural land and is broadly subdivided by the Weasel Lane ridge into two segments; north and south. The site is typified by gently undulating fields of differing sizes the majority of which are delineated by hedgerows and isolated trees.

4.4 The application site contains two groups of existing farm buildings – and surrounds the existing buildings and dwelling at New Leys and Dagnall House off Weasel Lane.

4.5 Weasel Lane – an unclassified track and bridleway – crosses the site in an east to west direction. A section of the Milton Keynes Boundary Walk also crosses the eastern part of the site, in a north to south direction, which provides a link to Newton Longville.

4.6 There are a number of small ditches and isolated ponds across the site which are associated with the current agricultural use of the site.

Future Baseline

4.7 As part of the overall assessment, it is important to determine likely future baseline conditions against which the impact of the proposed development will be assessed. In

order to do this it is necessary to take account of any changes which are likely to occur in the local land use within the surrounding area.

4.8 Aylesbury Vale District Council is in the process of preparing a Local Plan for the area – the Vale of Aylesbury Plan. Consultation took place on the draft Vale of Aylesbury Plan between December 2011 and January 2012. The Council then decided to split the Vale of Aylesbury Plan into three parts: Strategy; Delivery (Development Management); and, Allocations. In October 2012 the Council approved a pre-submission version of the Strategy Document. It is understood that the Council is now waiting for the Government to revoke the South East Regional Strategy before formally consulting on the Strategy Document. In due course the Council will prepare and consult on the Delivery and Allocations document. It is clear that the policy context in Aylesbury Vale will change during the design and delivery phase of the project.

4.9 Newton Longville and its environs is not planned to change dramatically during the delivery phase of this project. However, the land to the north of SWMK, known as Tattenhoe Park has an extant and implementable planning permission and adopted development brief for a range of 1,310 mixed tenure homes, similarly there is extant planning permission for close to 2,000 dwellings at Newton Leys east of Newton Longville. As appropriate these changes will be considered as part of the assessment.

4.10 The agricultural land within the study area is under the control of the prospective applicants. As such, it is unlikely that the current land use will change significantly ahead of the proposed development.

5. PROPOSED SCOPE OF EIA

5.1 The 'significant' topics that require consideration as part of the assessment process are:

- Archaeology and Cultural Heritage;
- Agricultural Land;
- Ecology (flora and fauna);
- Landscape Character and Visual Resources;
- Hydrology and Drainage;
- Traffic, Movement and Access;
- Air Quality;
- Noise;
- Socio-Economic Issues;
- Services and Utilities; and
- Interactive and Cumulative Impacts.

5.2 For each of these topics we highlight the potential impacts, the potential resources or receptors that may be affected, potential mitigation measures and the assessment methodology.

Archaeology and Cultural Heritage

Potential Impacts

5.3 The proposed development has the potential to affect the setting of Newton Longville.

Resources or Receptors

5.4 The Milton Keynes and the Buckinghamshire Historic Environment Records (HER) have been studied. A geophysical survey of the site has been undertaken. This comprised a recorded magnetic susceptibility survey of the whole site followed by a c. 20% sample detailed gradiometer survey. This revealed foci of anomalies that have been

interpreted as indicating the presence of former prehistoric/Romano-British settlement/occupation and the extensive remains of former medieval ridge and furrow.

Design Mitigation

5.5 The prehistoric/Romano-British remains recorded within the site are considered to be of local significance and therefore are not a constraint on the design of the proposed development. However, the presence of these remains will be taken into account in the design of the proposed scheme.

Potential Significant Effects

5.6 It is concluded that at this stage that due to the topography of the site and previously undertaken work in this area there is the potential for remains of Prehistoric and Roman activity within the site.

5.7 It is considered that the potential for further as yet unrecorded remains cannot be discounted, although these finds are not likely to preclude development.

5.8 Newton Longville formerly the three hamlets of London End, Westbrook End and Moor End were part of the Manor of Neutone which was gifted to Walter de Gifford shortly after the Battle of Hastings.

5.9 During the Medieval era a great deal of building took place and indeed some of the older properties in the village are from this era of settlement expansion. Consequently, it is considered that the potential for medieval finds cannot be discounted, although these finds are not likely to preclude development.

Outline of Assessment Methodology

5.10 The information gathered from the HER and the geophysical survey data will be used to assess and define any significant impacts on potential archaeological or cultural

heritage resources by the proposed development and to recommend appropriate more detailed mitigation strategies where, following discussions, they are considered to be appropriate.

Agricultural Land

Potential Impacts

5.11 The potential impacts of the proposal on agricultural land include:

- the loss of agricultural land as a national or local resource;
- the impact on farm viability;
- severance of land;
- temporary impacts due to construction dust on a sensitive crop;
- effect on land drainage patterns; and
- degradation and loss of soil resource.

Resources or Receptors

5.12 The site has been subject to an Agricultural Land Classification (ALC) survey which was carried out on behalf of the Ministry of Agriculture, Fisheries and Food (MAFF – now replaced by DEFRA). This assessment found that the site comprises predominately Grade 3b land i.e. non "best and most versatile agricultural land" with patches of Grade 3a.

5.13 There are gaps in the MAFF survey of the site and these relate to areas where access could not be obtained at the time of survey, including limited areas of woodland / hedgerow along Weasel Lane, residential homes, the converted farm complex and the raised embankments and cuttings abutting the railway.

5.14 The development of the site will affect the existing farming businesses.

5.15 Sub-surface field drains could be present in some areas and these will need to be investigated.

5.16 No crops, including soft fruit, within or within the environs of the site are highly sensitive to dust.

Design Mitigation

5.17 The site boundary follows existing field boundaries and so avoids the fragmentation of any single field into smaller units.

5.18 A soil management strategy will be included as part of the ES with the aim of beneficially reusing the soil resource within the development. There will be a particular emphasis on conserving the topsoil.

Potential Significant Effects

5.19 A preliminary assessment of the likely significant impacts on agriculture indicates that effects may include a small loss of “best and most versatile agricultural land” and the loss of arable and pasture land to the occupying farm businesses.

Outline of Assessment Methodology

5.20 The existing MAFF ALC survey which covers the entire site will be relied upon.

5.21 Initial interviews with the managers of occupying farm businesses have indicated that three farming business will be affected. However, all of this is either on insecure tenancies, is insignificant in terms of the percentage of land lost from their total farmed area or has a minimal impact on a contracting farm business. The assessment will consequently include details relating to the size and nature of the agricultural enterprises utilizing the site and the effect upon them of the loss of the site. Both the ALC and farming circumstances baseline assessments and the assessment of effects will be undertaken in accordance with the guidance set out in the National Planning Policy Framework (2012).

Ecology

Potential Effects

5.22 The proposed development has the potential to directly affect habitats and species and also indirectly affect populations, found within and utilising the site. Similarly, the proposal has the theoretical potential to affect protected, notable or biodiversity action plan species.

Resources and Receptors

5.23 A substantial amount of ecological survey work was undertaken for the previous application, including an initial desk study, a full season of fieldwork and consultation with relevant environmental organisations. Therefore, the ecological potential of the site is already well known, although the existing data will be reviewed and updated in 2013 for this application.

5.24 The desk survey collated and reviewed baseline ecological data to identify known ecological constraints such as statutory or non-statutory designations, or known sites for protected species. This information will be reviewed and where necessary, organisations re-consulted to ascertain up-to-date information.

Consultees included:

- Environment Agency (West Area Office);
- Buckinghamshire & Milton Keynes Environmental Records Centre;
- Buckinghamshire Badger Group;
- Buckinghamshire Bat Group;
- Buckinghamshire Bird Recorder Group; and
- BSBI Vice-County Recorder.

5.25 Natural England's "Nature on the Map" and the Multi-Agency Geographical Information for the Countryside (MAGIC) websites were used, as recommended by Natural England. In addition, background information concerning any protected, rare or notable species within the vicinity of the site will be reviewed on the National Biodiversity Network (NBN) database.

5.26 Habitat survey work has been updated and followed the Extended Phase 1 survey methodology, as recommended by Natural England, whereby the habitat types present are identified and mapped, together with an assessment of the species composition of each habitat.

5.27 Hedgerows on key areas of the site have been the subject of an initial assessment under the Hedgerows Regulations 1997 in order to assess whether hedgerows would be likely or unlikely to qualify as 'important' under the 'Wildlife and Landscape' Regulations. 25 of the 42 hedgerows identified were found to qualify, mainly due to their location adjacent to public rights of way.

5.28 Faunal activity was recorded during the previous survey work with specific attention paid to any potential use of the site by protected species, species listed under Section 41 of the NERC Act as species of principal importance for the purpose of conserving biodiversity, or other notable species. In addition, specific survey work was undertaken for the presence of Great Crested Newt, Badger, bats, breeding and over-wintering birds and common reptiles.

5.29 A number of different habitats were identified within the site including: semi-improved grassland, improved grassland, recolonizing ground, scrub, hard standing, buffer planting, grassland, arable, water bodies, hedgerows, woodland, mature trees and buildings.

5.30 The nearest statutory designated nature conservation site is Howe Park Wood SSSI, which lies some 1.5km to the north of the site. The nearest non-statutory nature conservation sites are:

- the County Wildlife Sites of Thrift, Broadway and Salden Wood (CWS), which lie to the north and south of the application site;
- the Biological Notification Sites of the disused railway to the south west and the south of the site;
- the Milton Keynes Woodland Corridor (MKWC) of Bottledump Roundabout and northwards along the North Buckinghamshire Way; and
- the Milton Keynes Wetlands Corridor (MKWC) along the Tattenhoe Brook to the north of the site.

Potential Significant Effects

5.31 Based on the previous survey work, the potential effects appear to be limited to those on the CWS and BNS sites which abut the northern and southern boundaries of the application site and to Great Crested Newt which is known to use a pond located adjacent to the north of the proposal area. Further survey work is ongoing and may identify other features, habitats or species of interest. To assess the level of effects, a formal ecological appraisal will be undertaken as part of the Environmental Impact Assessment process.

Outline Assessment Methodology

5.32 The approach to the ecological assessment will be based upon the principles set out in the 'Guidelines for Ecological Impact Assessment in the United Kingdom' published by the Institute of Ecology and Environmental Management (IEEM), Guidelines for Baseline Ecological Assessment' which is produced by the Institute of Environmental Assessment in conjunction with more recent publications such as 'Biodiversity and Environmental Assessment: A Good Practice Guide for Road Schemes' (Bryon, H 2000),

Developing Naturally (Oxford, M 2000), A handbook for 'Scoping Projects' (Environment Agency, 2002) and recent journal articles published by the IEEM.

5.33 The overarching philosophy of the adopted approach in these publications and the intended ecological assessment of the proposal is:

- to avoid significant reductions in biodiversity; and
- to enhance biodiversity where practicable.

Hydrology and Drainage

Potential Impacts

5.34 Development of the site will alter the way in which water can infiltrate or run off the land. Potential impacts include:

- reduction in existing water quality;
- changes in local drainage patterns;
- impact on habitat (see also ecology);
- affect on flow rates within surface watercourses; and
- increased theoretical potential for localised flooding.

Resources and Receptors

5.35 The EIA will include a Flood Risk Assessment which examines the effect of the proposed development on the existing hydrology and drainage of the site, in particular Tattenhoe Brook.

Design Mitigation

5.36 Following consultation with the Environment Agency and the Internal Drainage Board, the development will incorporate a variety of sustainable drainage systems. These will attenuate peak flows of surface water out from the site, by promoting appropriate SuDS measures within the area.

5.37 They will also improve the quality of water discharged from the development to protect the downstream water quality environment, by guarding against the risk of accidental spillages and treating where necessary the surface water outflows from the site.

Potential Significant Effects

5.38 Potentially significant effects upon Tattenhoe Brook and flood risk have been identified. Hydrology and Drainage are therefore scoped into the EIA process.

Outline of Assessment Methodology

5.39 A hydrology baseline will be collated based upon desk study of existing hydrological data, consideration of Milton Keynes Council's Supplementary Planning Guidance on this issue and discussions with the Environment Agency and the Internal Drainage Board. Additionally, it will use an approved methodology, such as the Flood Estimation Handbook.

5.40 The assessment will consider the effects of the proposed development on surface and groundwater flows and water quality during construction and operation. Where adverse effects are identified, mitigation measures will be recommended to minimize these effects.

5.41 If appropriate, a Code of Practice will be developed, specifying any measures that should be implemented during construction. These measures will include detention basins within the site and a strategically sited downstream storm water attenuation lake and pollution control systems.

Landscape Character and Visual Resources

Potential Impacts

5.42 Development of the site will change the landscape and visual character of the area. It will therefore represent a potential impact in terms of change to the landscape and visual amenity of the area.

Resources and Receptors

5.43 The site and the surrounding agricultural land fall within the Bedfordshire and Cambridgeshire Claylands character area (No. 88) as defined by the Countryside Agency and English Nature Character Map of England (1996).

Design Mitigation

5.44 The overall design will seek to incorporate appropriate measures to limit construction and operational impacts to sensitive landscape and visual receptors.

Potential Significant Effects

5.45 There are potential significant effects of the development in terms of the visual and landscape issues and these have been scoped into the EIA process.

Outline of Assessment Methodology

5.46 The impact assessment methodology to be used in the preparation of this study will be based on the following guidance:

- 'Guidelines for Landscape and Visual Impact Assessment – Second Edition', Landscape Institute (LI) and Institute of Environmental Management and Assessment (IEMA) 2002 – the Guidelines are due to be updated shortly and the latest advice will be referred to in the EIA;
- 'Landscape Character Assessment', The Countryside Agency and Scottish Natural Heritage (CAX 84) 2002; and

- 'Preparation of Environmental Statement/Planning Projects that require Environmental Assessment; Good Practice Guide', DoE 1995.

5.47 The extent of the Zone of Visual Influence (ZVI) was determined for the previous application through the use of computer software with external publicly accessible viewpoints towards the site assessed and recorded. This has provided a first level sieve in determining the viewpoints against which the impact will be assessed.

5.48 Sensitive viewpoint locations are to be agreed with Aylesbury Vale District Council. Where appropriate, photomontages of prospective views will be produced as part of the EIA.

Traffic, Movement and Access

Potential Impacts

5.49 The proposed development of approximately 1,855 dwellings with ancillary employment, educational and community facilities will generate additional traffic both during the construction and operational phases.

Resource or Receptors

5.50 Receptors include residential properties in the Newton Longville, Mursley, Far Bletchley, Tattenhoe and Tattenhoe Park. In relation to the local highway network receptors will include the following:

- Whaddon Road;
- Drayton Road;
- A421 (H8);
- A5 (T) A4146 junction;
- Stoke Hammond By-pass;
- Snelshall Street (V1);

- Tattenhoe Street (V2);
- Fulmer Street (V3);
- Childs Way (H6);
- Chaffron Way (H7);
- Standing Way (H8);
- Groveway (H9);
- Bletcham Way (H10);
- Junction 13 of the M1 motorway;
- the local redway system; and
- local footpaths.

Design Mitigation

5.51 The final design of the scheme will be public transport focused, (seeking to encourage modal shift – the strategy will include linking any public transport solutions, with facilities in Milton Keynes), incorporate measures to reduce the impact of the road traffic generated and seek to maximise the use of non-motorised forms of movement.

Potential Significant Effects

5.52 The proposed development has the potential to have a significant effect on the local highway network. In order to determine the level of such an effect, a transport assessment will be undertaken.

Outline of Assessment Methodology

5.53 Existing traffic baseline data will be obtained from the Milton Keynes Council strategic model. This is standard practice as the model has been developed to cover the area of influence of the development.

5.54 The assessment methodology for predicting generation of traffic by the proposed development will be agreed with the appropriate highways authorities. The work will be undertaken in line with the Guidance on Transport Assessments and mitigation measures will consider the Council's requirements in terms of the operation of road junctions and the highway network.

Air Quality

Potential Impacts

5.55 The potential impacts of the proposed development on air quality are:

- Dust complaints and elevated concentrations of airborne particles (PM^{10}) during construction;
- Increased concentrations of nitrogen dioxide (NO_2) and PM^{10} arising from the development traffic; and
- The suitability of the site for sensitive uses given the high traffic flows on the nearby A421 and the Bletchley landfill site.

Resource or Receptors

5.56 The receptors will include sensitive uses such as homes and schools.

Design Mitigation

5.57 The final design of the scheme will be orientated around a public transport strategy, the disposition and density of development will reflect sensitive areas of the site, with particular regard to the A421 and the Bletchley Landfill Site.

Potential Significant Effects

5.58 The proposed development has the potential to have a significant effect upon the amenities of the residents and school children in close proximity of the A421 and the Bletchley Landfill Site.

5.59 In order to determine the level of such an effect, an impact assessment will be completed.

Outline of Assessment Methodology

5.60 The assessment will rely on existing air quality baseline data available for the area. The impact of the construction of the proposed development will be assessed qualitatively, drawing on long term wind speed, wind direction and rainfall data and the location of highly and medium sensitive receptors. This will be with respect to the construction activities to assess the risk of dust complaints and baseline PM^{10} concentrations, to assess the risk of the short term national air quality objective being exceeded.

5.61 The impact of the operation of the proposed development will be assessed by predicting the change in concentrations of NO_2 and PM^{10} at existing and proposed sensitive receptors as a result of the development traffic. In addition a qualitative assessment of the likely impact of the Bletchley landfill site on the amenity of future residents and users of the proposed development will be assessed taking account of the local authority's odour complaints register, any hydrogen sulphide monitoring currently being undertaken by the Local Authority and discussions with the relevant Environment Agency site inspector.

5.62 The details of the assessment methodology for predicting air quality will be agreed with the air quality officers from Aylesbury Vale District Council and Milton Keynes Council and included within the EIA.

Noise

Potential Impacts

5.63 The proposed development includes noise sensitive uses such as residential and educational uses. Where these are situated in close proximity of the A421, Whaddon

Road or the East West rail link, the current topography has potential to create an environment that provides a sub-standard environment.

Resource or Receptors

5.64 Receptors include sensitive uses such as homes and schools within close proximity of the A421 and the East / West Railway.

Design Mitigation

5.65 The final design of the scheme will be orientated around a master plan layout, the disposition and density of development will reflect sensitive areas of the site, with particular regard to the A421 and the East / West railway.

5.66 In addition where opportunities are maximised in relation to public transport solutions and non-motorised user facilities some mitigation of traffic generation may be achieved.

Potential Significant Effects

5.67 The proposed development has the potential to have a significant effect upon the amenities of the residents and school children in close proximity of the A421 and the East West rail link, if it is reopened.

5.68 In order to determine the level of such an effect, an impact assessment will be completed.

Outline of Assessment Methodology

5.69 For the previous application existing noise baseline data was used and supplemented with site specific new data. The assessment methodology for predicting the impact of noise within the development will be agreed with the appropriate representative from Aylesbury Vale District Council and included within the EIA.

Socio-Economic Issues

Potential Impacts

5.70 The proposed development has the potential to affect local socio-economic issues in two ways. Firstly, the development will provide homes for new residents which will require places of employment and the use of community facilities such as schools, shops and health facilities. Secondly, the site will include new places of employment, a primary school and local shops and facilities which can be used by the planned and existing residents of the locality.

Resource or Receptors

5.71 The primary receptors are the planned and the existing communities in the vicinity of the site and existing community facilities in the vicinity of the site which includes those at Newton Longville, Tattenhoe Park and Far Bletchley.

Design Mitigation

5.72 The development will be designed as a sustainable extension to Milton Keynes with new facilities designed to serve the wider hinterland to limit the need for residents to travel to meet their daily needs.

Potential Significant Effects

5.73 It is considered that the proposed works have the potential to produce significant changes in the local socio-economic situation. Therefore this topic is scoped into the EIA process.

Outline of Assessment Methodology

5.74 The overall aim is to assess the impact of the scheme on the surrounding area, during both the construction and operational phases. The activities will involve:

- defining baseline conditions; and
- identifying relevant data and the existing situation. This will rely on a collation of published socio-economic data and site assessments.

Services and Utilities

Potential Impacts

5.75 The proposed development will generate additional demands on existing infrastructure and services. Additionally, during construction there may be the need to move or interrupt the existing infrastructure.

Resources or Receptors

5.76 Services that the development may have an effect upon include the existing power, telecommunications, water, foul water treatment and waste disposal infrastructure.

Potential Significant Effects

5.77 A potentially significant construction effect could be disruption to the normal operation of existing commercial premises while services to the site area are installed.

Design Mitigation

5.78 Relevant utility companies (Eastern Electricity, British Gas Transco, Anglia Water, British Telecom and NTL) will be consulted regarding the development proposal along with the Environment Agency, Internal Drainage Board, Aylesbury Vale District Council and Milton Keynes Council.

5.79 The British Pipeline Agency has a number of pipes that transect the site in a north / south orientation. The master planning of the site will seek to retain in situ these pieces of national infrastructure with appropriate safety distances.

Outline of Assessment Methodology

5.80 Through consultation with the relevant utility companies and authorities, the existing infrastructure baseline will be established. The impact of the proposed development and construction work upon the existing infrastructure capacity and operation will be assessed. Required improvements to the existing services to accommodate the proposed development can then be determined.

Interactive and Cumulative Impacts

5.81 This section will consider the predicted residual effects (after mitigation) of individual environmental components upon other aspects, including any cumulative effects. This process will be interactive throughout the EIA process and will depend in the findings of the different studies. Where interactive effects are identified they will also be appraised in relation to any appropriate mitigation proposals.

6. THE ENVIRONMENTAL STATEMENT

6.1 We set out below the likely structure of the Environmental Statement.

Application Site and Project Description

The Application Site

Outline of the Development Proposal

Objectives and Justification

Consideration of Alternatives

Design Philosophy

Elements of the Proposal

- housing
- employment
- educational provision
- mixed use areas
- community reserve sites
- structural public open space
- transportation infrastructure
- landscape and nature conservation
- parkland / retained agricultural land

Project Implementation

Ancillary Infrastructure and Works to Utilities

Site Management and Adoption

Construction Programme

Archaeology

Introduction

Assumptions and Technical Deficiencies

Guidance Documents

Methodology

- data assessment
- statutory and informal consultees

Significance Criteria

Existing Site Conditions

- existing features on site

Potential Impacts of the Proposal

Mitigation Measures

- additional mitigation measures

Residual Effects

Agricultural Land

Introduction

Assumptions and Technical Deficiencies

Guidance Documents

Methodology

- data assessment
- statutory and informal consultees

Significance Criteria

Existing Site Conditions

- existing features on site

Potential Impacts of the Proposal

Mitigation Measures

Residual Effects

Ecology

Introduction

Assumptions and Technical Deficiencies

Guidance Documents

Assessment Methodology

- desk study
- consultation
- habitat survey methodology
- faunal survey methodology

Significance Criteria

Existing Ecological Features

Existing Use of the Site by Wildlife

Ecological Evaluation

- principles of site evaluation
- designated site evaluation
- evaluation of habitats
- species evaluation – protected species

BAP species

Other species

Potential Impacts of the Proposal

- review of potential impacts and mitigation
- impacts on surrounding habitats
- impacts on other species
- overall impact assessment

Mitigation Measures

- Tattenhoe Brook

Residual Effects

Landscape Character and Visual Impact

Introduction

Assumptions and Technical Deficiencies

- Zone of Visual Influence

Guidance Documents

- policy and assessment analysis

Methodology

- data assessment
- statutory and informal consultees

Significance Criteria

Existing Site Conditions

- principal viewpoints
- existing landscape features on Site

Landscape and Visual Effects of the Proposed Development

Potential Impacts of the Proposal

Mitigation Measures

Visual Impact Impacts Tables

Construction Phase Impacts

Residual Effects

- on completion in 2026
- in 2046 – after 20 years

Hydrology and Drainage

Introduction

Assumptions and Technical Deficiencies

Assessment Methodology

Significance Criteria

Existing Conditions

- flooding
- surface water quality
- ground water

Potential Impacts of the Proposal

Possible Effects of the Impacts

Mitigation Measures

- SUDS
- BNS
- CWS

Sensitivity Tests

Residual Effects

Traffic, Movement and Access Issues

Introduction

Assumptions and Technical Deficiencies

- extent of the assessment
- traffic growth assumptions
- committed development assumptions
- trip attraction related to the proposed development

Guidance Documents

- standards and guidelines
- compliance with transport planning policy

Assessment Methodology

Significance Criteria

Existing Conditions

- existing access into and around the Application Site
- existing congestion in the vicinity of the Site
- existing public transport
- existing links to the National and local cycle network
- committed development in the vicinity of the Site

The Proposal

- new public transport routes
- cycling facilities
- pedestrian links

- links to the adjacent road system

Potential Impact of the Proposal

- on public transport
- cycle routes
- pedestrian links
- safe routes to school
- on the adjacent road system
- construction traffic
- other impacts

Mitigation Measures

Residual Effects

Air Quality

Introduction

Assumptions and Technical Deficiencies

Significance Criteria

Existing Conditions

- A421
- Whaddon Road
- East / West Railway

The Proposal

Potential Impacts of the Proposal

Mitigation Measures and Residual Effects

Noise

Introduction

Assumptions and Technical Deficiencies

Significance Criteria

Existing Conditions

- A421
- Whaddon Road
- East / West Railway

The Proposal

Potential Impacts of the Proposal

Mitigation Measures and Residual Effects

Socio-Economic Issues

Introduction

Assumptions and Technical Deficiencies

Significance Criteria

Existing Conditions

- population characteristics
- local economy
- unemployment
- travel to work patterns
- community facilities (inc health, social services and emergency services)
- educational facilities

The Proposal

- new residents
- new jobs
- new schools
- new local community facilities

Potential Impacts of the Proposal on Local and Wider Facilities

- employment opportunities
- educational opportunities
- local facilities
- wider facilities

Mitigation Measures and Residual Effects

Services and Utilities Issues

Introduction

Assumptions and Technical Deficiencies

Statutory Framework/Guidance Documents

Significance Criteria

Existing Conditions

- Eastern Electricity
- British Gas Transco
- Anglia Water (drinking water and foul water)
- Internal Drainage Board
- British Telecom
- British Pipeline Agency

Potential Impacts of the Proposal

Mitigation Measures

Residual Effects

Interactive and Cumulative Issues

Introduction

Key Residual Effects after Mitigation

- Archaeology
- Ecology
- Hydrology and Drainage
- Landscape and Visual Amenity
- Traffic, Movement and Access
- Air Quality
- Noise
- Socio-Economic Issues
- Services and Utilities

Interactive and Cumulative Effects

- Amenity
- Natural Resources
- Material Assets

6.2 In addition, the planning application will be supported by the following documents:

- Design and Access Statement;
- Statement of Community Engagement;
- Flood Risk Assessment;
- Retail Impact Assessment;
- Transport Assessment;
- Employment Assessment;
- Health Impact Assessment;
- Arboricultural Impact Assessment; and
- Energy Statement.

7. PROJECT PROGRAMME AND CLIENT TEAM

Project Programme

7.1 We have made the following assumptions about the timetable in terms of the delivery of the project.

- Submission of Planning Application – Summer 2013;
- Determination of Application – Spring 2015;
- Site Marketing – Autumn 2015;
- Project Start – Spring 2016;
- First Completions – Autumn 2016;
- Delivery over 10 years (at approximately 200 dwellings/year)
- Project Completion - 2026

EIA Project Team

7.2 The following consultants have been appointed for the EIA element of the planning process.

- Planning – Januarys
- Masterplanning – David Lock Associates
- Landscape Character & Visual Impact – FPCR Environment and Design Ltd
- Ecology – FPCR Environment and Design Ltd
- Arboriculture – FPCR Environment and Design Ltd
- Archaeology & Cultural Heritage – CgMs
- Transport – Pell Frischmann
- Flooding & Drainage – Pell Frischmann
- Noise – Pell Frischmann
- Air Quality – Pell Frischmann
- Services & Utilities – Pell Frischmann
- Energy – Pell Frischmann

- Agricultural Land – Kernon Countryside Consultants
- Socio-Economics – David Lock Associates

APPENDIX 4.2:

AVDC ES SCOPING OPINION (16TH SEPTEMBER 2013)

AYLESBURY VALE DISTRICT COUNCIL
Planning
Please ask for: Mark Aughterlony
Direct Line: 01296 585419
Switchboard: (01296) 585858
Minicom Line: (01296) 585055
Email: west@aylesburyvaledc.gov.uk

Our Ref: MA/13/11000/INF2
Your Ref: MJH

24 SEP 2013

AYLESBURY VALE DISTRICT COUNCIL

16 September 2013

Januarys
York House
7 Dukes Court
54-62 Newmarket Road
Cambridge
CB5 8DZ

Dear Mr Hyde,

RE: South West Milton Keynes SDA, Whaddon Road, Newton Longville, Bucks

I write further to your request for a scoping opinion received by this Authority on 21 January 2013.

As advised previously, a number of consultations were sought at the time of the receipt of your submitted scoping request. Regrettably, despite subsequent reminders, I have not received comments from any of these, save for AVDC's Contaminated Land Officer and the Environmental Health Officer, copies of which have already been provided to you.

I can therefore confirm that the scoping report dated January 2013 sufficiently outlines the matters that should be dealt with in the Environmental Impact Assessment.

If any further consultation responses are received I will forward them to you. I appreciate however that they will fall outside the statutory scoping timescale.

Yours sincerely

Bill Nicholson
Area Planning Officer (West)

South West Milton Keynes

Updated Environmental Statement Volume 2 - Appendices

Carter Jonas LLP

MAY 2020

APPENDIX 4.1:

EIA SCOPING OPINION REQUEST DOCUMENTS (JANUARY 2013)

ARCHAEOLOGICAL DESK BASED ASSESSMENT

SOUTH WEST MILTON KEYNES

ROB BOURN BA MA MIFA

NOVEMBER 2014

Planning • Heritage
Specialist & Independent Advisors to the Property Industry

ARCHAEOLOGICAL DESK BASED ASSESSMENT

SOUTH WEST MILTON KEYNES

LOCAL PLANNING AUTHORITY:
AYLESBURY DISTRICT COUNCIL

SITE CENTRED AT:
SP 832 322

ROB BOURN BA MA MIFA

NOVEMBER 2014

CONTENTS

LIST OF ILLUSTRATIONS

1.0 INTRODUCTION AND SCOPE OF STUDY

1.1 This archaeological desk-based assessment has been researched by Kate Page-Smith and prepared by Rob Bourn of CgMs Consulting on behalf of Hallam Land Management, Taylor Wimpey, Bellcross Homes, Gleeson Homes and Willam Davis Ltd.

1.2 The assessment considers land known as SWMK, south west of Milton Keynes, at grid reference SP 832 322 (approximate centre of study site) (Figs 1 & 2).

1.3 In accordance with government guidance on the historic environment and planning (NPPF Section 12) this assessment draws together the available archaeological, topographic and land-use information in order to clarify the archaeological potential of the site and assess nearby designated heritage assets.

1.4 The assessment comprises an examination of evidence held by the Buckinghamshire Sites and Monuments Record (SMR), the Milton Keynes HER, and incorporates published and unpublished material, and charts historic land-use through a map regression exercise.

1.5 As a result, the assessment enables relevant parties to assess the archaeological potential of the site and to consider the need for design, civil engineering, and/or archaeological solutions to the potential identified.

2.0 PLANNING BACKGROUND AND DEVELOPMENT PLAN FRAMEWORK

2.1 Government policy relating to the historic environment is contained in Section 12 of the National Planning Policy Framework (NPPF). Section 12, entitled *Conserving and enhancing the historic environment* provides guidance for planning authorities, property owners, developers and others on the conservation and investigation of heritage assets. Overall, the objectives of Section 12 of the NPPF can be summarised as seeking the:

- Delivery of sustainable development
- Understanding the wider social, cultural, economic and environmental benefits brought by the conservation of the historic environment
- Conservation of England's heritage assets in a manner appropriate to their significance, and
- Recognition of the contribution that heritage assets make to our knowledge and understanding of the past.

2.2 Section 12 of the NPPF recognises that intelligently managed change may sometimes be necessary if heritage assets are to be maintained for the long term.

2.3 Paragraph 128 states that planning decisions should be based on the significance of the heritage asset, and that level of detail supplied by an applicant should be proportionate to the importance of the asset and should be no more than sufficient to understand the potential impact of the proposal upon the significance of that asset.

2.4 *Heritage Assets* are defined in Annex 2 as: A building, monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions, because of its heritage interest. Heritage asset includes designated heritage assets and assets identified by the local planning authority (including local listing).

2.5 *Archaeological Interest* is defined as a heritage asset which holds or potentially could hold evidence of past human activity worthy of expert investigation at some point. Heritage assets with archaeological interest are the primary source of evidence about the substance and evolution of places, and of the people and cultures that made them.

2.6 *Designated Heritage Assets* comprise of: World Heritage Sites, Scheduled Monuments, Listed Buildings, Protected Wreck Sites, Registered Park and Gardens, Registered Battlefields and Conservation Areas.

2.7 *Significance* is defined as: The value of a heritage asset to this and future generations because of its heritage interest. This interest may be archaeological, architectural, artistic or historic. Significance derives not only from a heritage asset's physical presence, but also from its setting.

2.8 *Setting* is defined as: The surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral.

2.9 In short, government policy provides a framework which:

- Protects nationally important designated Heritage Assets
- Protects the settings of such designations
- In appropriate circumstances seeks adequate information (from desk based assessment and field evaluation where necessary) to enable informed decisions
- Provides for the excavation and investigation of heritage assets to be lost (wholly or in part) in a manner proportionate to their importance and the impact, and to make this evidence publicly accessible

2.10 In considering any planning application for development, the planning authority will be mindful of the framework set by government policy, in this instance the NPPF, by current Development Plan Policy and by other material considerations.

2.11 The Local Plan framework is provided by the Aylesbury District Local Plan (January 2004) which contains the following saved relevant policies:

POLICY GP.59

IN DEALING WITH DEVELOPMENT PROPOSALS AFFECTING A SITE OF ARCHAEOLOGICAL IMPORTANCE THE COUNCIL WILL PROTECT, ENHANCE AND PRESERVE THE HISTORIC INTEREST AND ITS SETTING.

WHERE RESEARCH SUGGESTS THAT HISTORIC REMAINS MAY BE PRESENT ON A DEVELOPMENT SITE PLANNING APPLICATIONS SHOULD BE SUPPORTED BY DETAILS OF AN ARCHAEOLOGICAL FIELD EVALUATION. IN SUCH CASES THE COUNCIL WILL EXPECT PROPOSALS TO PRESERVE THE HISTORIC INTEREST WITHOUT SUBSTANTIAL CHANGE.

WHERE PERMISSION IS GRANTED FOR DEVELOPMENT INVOLVING SITES CONTAINING ARCHAEOLOGICAL REMAINS THE COUNCIL WILL IMPOSE CONDITIONS OR SEEK PLANNING OBLIGATIONS TO SECURE THE EXCAVATION AND RECORDING OF THE REMAINS AND PUBLICATION OF THE RESULTS.

2.12 Milton Keynes Core Strategy (2013) policy CS19 covers the historic environment:

POLICY CS19 - THE HISTORIC AND NATURAL ENVIRONMENT

DEVELOPMENTS WILL PROTECT AND ENHANCE THE SIGNIFICANCE OF THE BOROUGH'S HERITAGE ASSETS, INCLUDING IMPORTANT ELEMENTS OF THE 20TH CENTURY NEW TOWN ARCHITECTURE. DEVELOPMENT PROPOSALS MUST CONSIDER THE CHARACTER, APPEARANCE AND SETTING OF SITES, BUILDINGS, STRUCTURES, AREAS, PARKS AND GARDENS AND LANDSCAPES THAT ARE OF HISTORIC, ARCHITECTURAL, CULTURAL, BIODIVERSITY OR ARCHAEOLOGICAL SIGNIFICANCE.

2.13 Relevant saved historic environment policies in the Milton Keynes Local Plan 2001-2011 (December 2005) are:

POLICY HE1 - PROTECTION OF ARCHAEOLOGICAL SITES

PLANNING PERMISSION WILL BE REFUSED FOR DEVELOPMENT PROPOSALS THAT WOULD HAVE AN ADVERSE IMPACT UPON A SCHEDULED ANCIENT MONUMENT OR ITS SETTING, OR UNSCHEDULED SITE OF LOCAL, REGIONAL OR NATIONAL IMPORTANCE OR THEIR SETTINGS.

WHERE DEVELOPMENT IS PROPOSED AFFECTING AN UNSCHEDULED SITE OF KNOWN ARCHAEOLOGICAL INTEREST THEN ARCHAEOLOGICAL INVESTIGATIONS WILL NEED TO BE CARRIED OUT TO ESTABLISH A MITIGATION AND/OR EXCAVATION STRATEGY PRIOR TO DEVELOPMENT BEING PERMITTED.

WHERE DEVELOPMENT IS PERMITTED, CONSENT WILL BE SUBJECT TO A LEGAL AGREEMENT AND/OR CONDITIONS, TO ENSURE THAT:

(i) ARCHAEOLOGICAL REMAINS ARE PRESERVED IN SITU; OR

(ii) IN APPROPRIATE CIRCUMSTANCES, PROVISION IS MADE FOR THE EVALUATION, EXCAVATION AND RECORDING OF BELOW AND ABOVE GROUND ARCHAEOLOGICAL REMAINS PRIOR TO AND DURING DEVELOPMENT, FOLLOWED BY POST EXCAVATION RESEARCH AND PUBLICATION OF THE RESULTS OF THE INVESTIGATION.

3.0 GEOLOGY AND TOPOGRAPHY

3.1 Geology

3.1.1 The solid geology of the area as shown on the BGS map sheet 220 (Leighton Buzzard) is Boulder Clay with a narrow band of alluvial deposits on both sides of a stream that cuts through the site.

3.2 Topography

3.2.1 The study site is in an area of gently rolling landscape lying between 120m OD and 90m OD. At the eastern end of the site, Weasel Lane runs approximately along the top of a ridge (at c. 118m OD) from which the land falls away to the south toward the former railway at c. 90m and more gently to the north toward the A421 (at c. 105m OD).

4.0 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

4.1 Timescales used in this report.

Prehistoric

Palaeolithic	450,000 – 12,000 BC
Mesolithic	12,000 – 4,000 BC
Neolithic	4,000 – 2,200 BC
Bronze Age	2,200 – 700 BC
Iron Age	700BC – 43AD

Historic

Roman	43 – 410 AD
Saxon/Early Medieval	410 – 1066 AD
Medieval	1066 – 1485 AD
Post-Medieval	1486 – 1800 AD
Modern	1800 – Present

4.2 Examination of data in the Buckinghamshire and Milton Keynes HERs and various published and unpublished sources, indicate that the study site itself contains very few recorded archaeological remains. This may be due to a lack of systematic archaeological survey within the area. However, archaeological remains in the vicinity of the study site are dominated by Roman, Saxon and Post-Medieval remains. This report, while considering all of the evidence, will concentrate on these periods but will draw upon relevant evidence for all periods. The location of sites referred to are shown on Fig. 3.

4.3 Prehistoric

4.3.1 Pre Iron Age remains are scarce in the general vicinity of the study site. Mesolithic worked flints have been recorded c. 1.1km to the (Site 1) and c. 1.5km to the southwest (Site 2) of the study site. A single Neolithic stone axe has been recorded c. 1.3km to the north west (Site 3). No other finds or features of pre Iron Age date have been recorded within c.1km radius of the study site.

4.3.2 The cropmark of a rectangular enclosure along with a possible ring ditch has been recorded at the eastern edge of the site (Site 4). Although this feature is undated it is likely to be Prehistoric in date.

4.3.3 Recent evaluation and excavation at Tattenhoe Park to the north of the site revealed the remains of a middle to late Iron Age open settlement (i.e. not defended) (Site 5). This comprised at least 21 roundhouses, an area of copper working and possibly grain storage. The settlement was partially enclosed in the late Iron Age.

4.3.4 Although the general lack of recorded pre Iron Age remains may be the result of low levels of systematic survey in the vicinity, it is suggestive of possibly a low level of activity during much of early Prehistory. However, in recent years archaeological investigations undertaken ahead of large scale developments in the Milton Keynes area has often revealed a higher than anticipated level of early Prehistoric remains. It is therefore considered possible that the site has a moderate potential for as yet unrecorded earlier Prehistoric remains.

4.3.5 The recent excavation of a large Iron Age settlement at Tattenhoe c. 400m to the north of the site is a clear indication that, while there are no known late Prehistoric remains within the site, the area was clearly occupied at the time. Therefore, the study site is considered to have moderate potential for as yet unrecorded Iron Age remains.

4.4 **Roman**

4.4.1 The study site is located immediately to the south the A421 which follows the route of a Roman road leading from the small town of *Magiovinium* (to the east) to Alchester (to the west). This road was part of what appears to have been a reasonably well-organised relatively dense occupation of the area. A geophysical survey of an area between the study site and the former Swanbourne Railway Sidings identified a small Roman settlement or farmstead comprising of ditched enclosures, pits and a possible hearth/kiln, all associated with a spread of Roman pottery and tile, c. 400m to the south east of the site (Site 6) (Fig. 4). Information from Buckinghamshire County Council indicates that this survey was subsequently extended with positive results but no report on this work has been made public. Therefore, the results of the geophysical survey are taken to be indicative of the minimum extent of these remains rather than the absolute extent.

4.4.2 A small Roman settlement/farmstead was recently recorded during evaluation and excavation works at Snellshall East, immediately to the north of the A421/ Buckingham Road roundabout (Site 7). This had been heavily truncated by ploughing and so was not fully understood but was interpreted as a settlement and its field system.

4.4.3 An unspecified quantity of pottery has been recorded within the site (Site 8). The nature of these findings is unclear but it is indicative of possible settlement. Further sherds of Roman pottery and a piece of tile have been recorded in the south eastern corner of the site beside the railway (Site 9). Again, the nature of these findings is unclear but it is indicative of possible settlement.

4.4.4 A pit containing Roman pottery and a 1st century coin was recorded during an excavation of an Anglo-Saxon cemetery ahead of the construction of the A421, c. 500m to the north east of the study site (Site 10). Whether this was a single isolated feature or was part of a larger Roman site is not known.

4.4.5 A 1st – 3rd century industrial site comprising a smelting hearth/kiln used for iron smelting, up to 2 timber framed buildings, pits, ditches, along with associated pottery, a coin and an inhumation burial, was recorded during the bulldozing of a former gravel pit and rubbish dump c. 1.2km to the south of the site (Site 11). This site is not fully understood as it is clear that the bulldozing of the site had resulted in significant damage to the remains. A probable settlement has also been recorded c. 600m to the north west of study site (Site 12) comprising a spread of pottery, tile, tegula, and a quern stone. The site has not been subject to intrusive archaeological investigation and therefore, the exact nature and extent of this site has not been fully established.

4.4.6 A number of isolated Roman finds have been recorded in the vicinity of the study site such as pottery c. 1.2km to the west (Site 13) and a 4th century coin c. 600m to the south (Site 14). Roman pottery sherds have been recorded c. 400m to the north east (Site 15) and c. 200m to the north (Site 16).

4.4.7 The presence of the Roman road and at least four probable settlement/farmstead sites in the immediate vicinity indicate that there was a significant Roman population present with known sites being c. 1km apart. There has been limited systematic archaeological investigation within the site. However, where there has been recent systematic survey in the immediate vicinity of the study site, a previously unsuspected Roman settlement site was recorded (Site 6). The presence of Roman pottery at a number of locations within and adjacent to the site are indicative that further settlement/farmstead sites may be present within the study site itself. The presence/absence, extent, etc. of any such sites are not known. Therefore, the study site is considered to have localised high potential for Roman remains (e.g. Sites 6, 8 & 9) and medium potential for further Roman remains, the location and significance of which is currently unknown within the rest of the site.

4.5 **Saxon - Early Medieval**

4.5.1 The study site is located away from the historic centres of the nearby villages which may have had Saxon origins. However, a metal detecting survey and an excavation ahead of the construction of the A421 at Bottle Dump Corner, immediately to the north of the central part of the study site, recorded the remains of an Anglo-Saxon cemetery (Site 10). Five adult inhumations burials, all aligned north-south were recorded along with grave goods comprising 2 spearheads, an iron knife, an unidentified copper object, an iron pin and, glass and amethyst beads. The grave goods were generally of 6th – 7th century date and therefore, the burials were pagan. The cemetery lies alongside the route of the Roman road and therefore it is possible that it has a direct associatiation with the road which would probably have still be in use in the 6th – 7th century. The only other records of Saxon/early Medieval finds in the vicinity of the study site is a single Edward the Elder penny (899-925 AD) (Site 16) and an early Medieval stud (Site 17).

4.5.2 The presence of the cemetery is a clear indication of a contemporary settlement somewhere in the vicinity of the study site. The location of such a settlement is unknown. It is therefore possible that this settlement could be within the study site. However, there is no evidence available to suggest that this is specifically the case. The full extent of the cemetery is not known, therefore it is possible that it could extend into the site. Therefore the area in the vicinity of cemetery is considered to have high potential for Saxon remains. The northern part of the site is also considered to have moderate potential for a Saxon settlement, although its existence and location is unknown. Therefore, although there is no direct evidence available, it is considered that the study site has moderate potential for Saxon remains.

4.6 **Medieval**

4.6.1 The study site was originally to the south east of Whaddon Chase which originated as a hunting chase possibly soon after the Norman Conquest and from c. 1242 became a hunting forest. The Chase persisted until it was enclosed in the early 19th century, however, it is clear that it was subject to partial and piecemeal enclosure prior to this. The north western corner of the site beside Thrift Wood lay within the Whaddon Chase but the rest of the site lay to the south east of the chase throughout the medieval and post medieval periods.

4.6.2 The earthwork of a moated site lies c.500m to the south west of the study site (Site 18). The site is presumed to be of Medieval date. It was formerly within a wood called Lodge Coppice and therefore, it may have contained the keeper's lodge.

4.6.3 Examination of aerial photographs of the site reveal the ploughed remains of large areas of ridge and furrow within the site (Fig. 5). An area of ridge and furrow, noted on the Bucks SMR as being locally important, has been recorded to the south of Bletchley Leys Farm. However, there is little trace of these earthworks on the ground and therefore they are presumed to have been ploughed down.

4.6.4 The location of the site within an essentially wooded environment which comprised part of a hunting chase/park and the general lack of Medieval finds or features located within 500m radius indicate that the study has low potential for Medieval remains.

4.7 **Post-Medieval**

4.7.1 The first map, which shows the site at a reasonable and nearly accurate scale, is a plan of the demesne of Salden dated 1599. The site is depicted as straddling the boundary with Bletchley lying partly within The Old Chace (i.e. Whaddon Chase) and Salden Fields. No detail of the site is shown.

4.7.2 Jeffery's Map of Buckinghamshire (1770) depicts the site as being in open countryside (Fig. 6). It shows no detail of the site except the road layout.

4.7.3 A plan of Newton Longville parish dated 1779, depicts the majority of the southen half of the site (Fig. 7). At this time, this portion of the site lay within Wood Field. The layout of the pre-enclosure field system is shown in some detail and basically accords with the layout of the ride and furrow noted from post WWII aerial photographs. No structures are shown.

4.7.4 Bryant's map of Buckinghamshire (1825) depicts the site much as Jeffery's map of 1770 did (Fig. 8).

4.7.5 The site was enclosed between 1813 and 1841 (depicted on the Newton Longville and Bletchley Inclosure maps – not reproduced here). The existing field boundaries reflect the enclosure layout albeit with many field boundaries removed.

4.7.6 The first edition OS 6" scale map (1885) depicts the site essentially the same as it is today (Fig. 9). The site remains unchanged throughout the succeeding editions of the

OS 6" scale maps until the 1938 OS map at which point the Swanbourne Railway Sidings are first shown (Fig. 10). The sidings had been closed and removed by 1977 by which time there had been some piecemeal hedgerow loss (Fig. 11). There has been some further piecemeal hedgerow loss since 1977 and the A421 was constructed in the 1990s (Fig. 2). Therefore, the site has remained largely unchanged from the when it was enclosed in the 19th century until the present day (Fig. 2).

4.7.7 The earthwork remains of possible water cultivation works have been recorded at the western end of the site (Site 14). However, there is some doubt as to authenticity of this report and the field has been ploughed leading to the destruction of these possible earthworks. A possible site of a Post-Medieval gallows lies within the site, of which there is no trace of today (Site 15).

5.0 SITE CONDITIONS AND THE PROPOSED DEVELOPMENT

5.1 Site Conditions

5.1.1 The site is currently a mixture of arable and pastureland containing a few agricultural buildings.

5.2 The Proposed Development & Potential Archaeological Impact

5.2.1 The proposed development comprises the construction of a residential scheme, neighbourhood centres, local centres, employment, schools, infrastructure, and open space.

5.2.2 The desk-based assessment has established that the site has moderate potential to contain late Prehistoric, Roman and Saxon settlement or associated remains. In places, the potential for Roman (e.g. to the north of the former railway sidings) and Saxon (to east of Bottledump roundabout) is high or even certain. The presence or absence of such remains has not been established and if such remains are present, their location is unknown. The geophysical survey of Site 6 has demonstrated that there are the remains of Roman settlements present within the vicinity of the site that have no visible above ground features.

5.2.3 If such remains are present, they may be impacted by earthmoving operations such as topsoil stripping, cutting foundations, and the construction of infrastructure. However, on the present evidence, it is considered unlikely that such remains, if present would be of more than local importance and therefore they will not require preservation in-situ. Therefore archaeology is not a constraint on principle of development. However, if the presence of such remains were to be established, it may be possible to accommodate preservation in-situ, depending on their importance and extent, by the use of open space allocation within the scheme. This would depend on the needs of the proposed scheme and the importance of any archaeological remains demonstrated to survive.

5.2.1 In the event that a planning application were to be submitted, it is considered likely that Buckinghamshire County Council may require further evaluation ahead of the determination of the application. If this were to be so, the first stage of such evaluation should be geophysical survey. Should such a survey record archaeological remains, a programme of evaluation trenching may be required. The timing of such a requirement would need to be negotiated with Buckinghamshire County Council.

6.0 SUMMARY AND CONCLUSIONS

6.1 The desk-based assessment has established that the site has the potential to contain late Prehistoric, Roman and possibly Saxon remains. Should as yet unrecorded remains be present within the site, they may be impacted upon by the proposed development. However, on the present evidence, the potential for such remains and the impact the proposed development may have upon them cannot be assessed.

6.2 In the light of the available evidence, it is considered unlikely that any as yet unrecorded remains that may be present will prejudice the principle of development. However, in the event of a planning application being submitted, it is considered likely that Buckinghamshire County Council may require further evaluation ahead of the determination of the application. If this were to be so, the first stage of such evaluation should be geophysical survey as this has been shown to be very successful to the south east of the site. Should such a survey record archaeological remains, a programme of evaluation trenching may be required. The timing of such a requirement would need to be negotiated with Buckinghamshire County Council

SOURCES CONSULTED

General

Julia Wise – Buckinghamshire County Council

Nick Crank – Milton Keynes Archaeological Officer

Buckinghamshire SMR

Milton Keynes SMR

Buckinghamshire County Records Office

British History Online

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Cartographic

1599 Salden Estate Map

1770 Jeffery's Map of Buckinghamshire

1779 Plan of the Parish of Newton Longville in the County of Bucks

1813 Bletchley Inclosure Map

1825 Bryant's Map of Buckinghamshire

1841 Newton Longville Inclosure Map

1841 Bletchley Tithe Map

1841 Newton Longville Tithe Map

1844 Whaddon Chase Inclosure Map

1885 OS 1:10,560 scale map

1900 OS 1:10,560 scale map

1926 OS 1:10,560 scale map

1938 OS 1:10,560 scale map

1958 OS 1:10,560 scale map

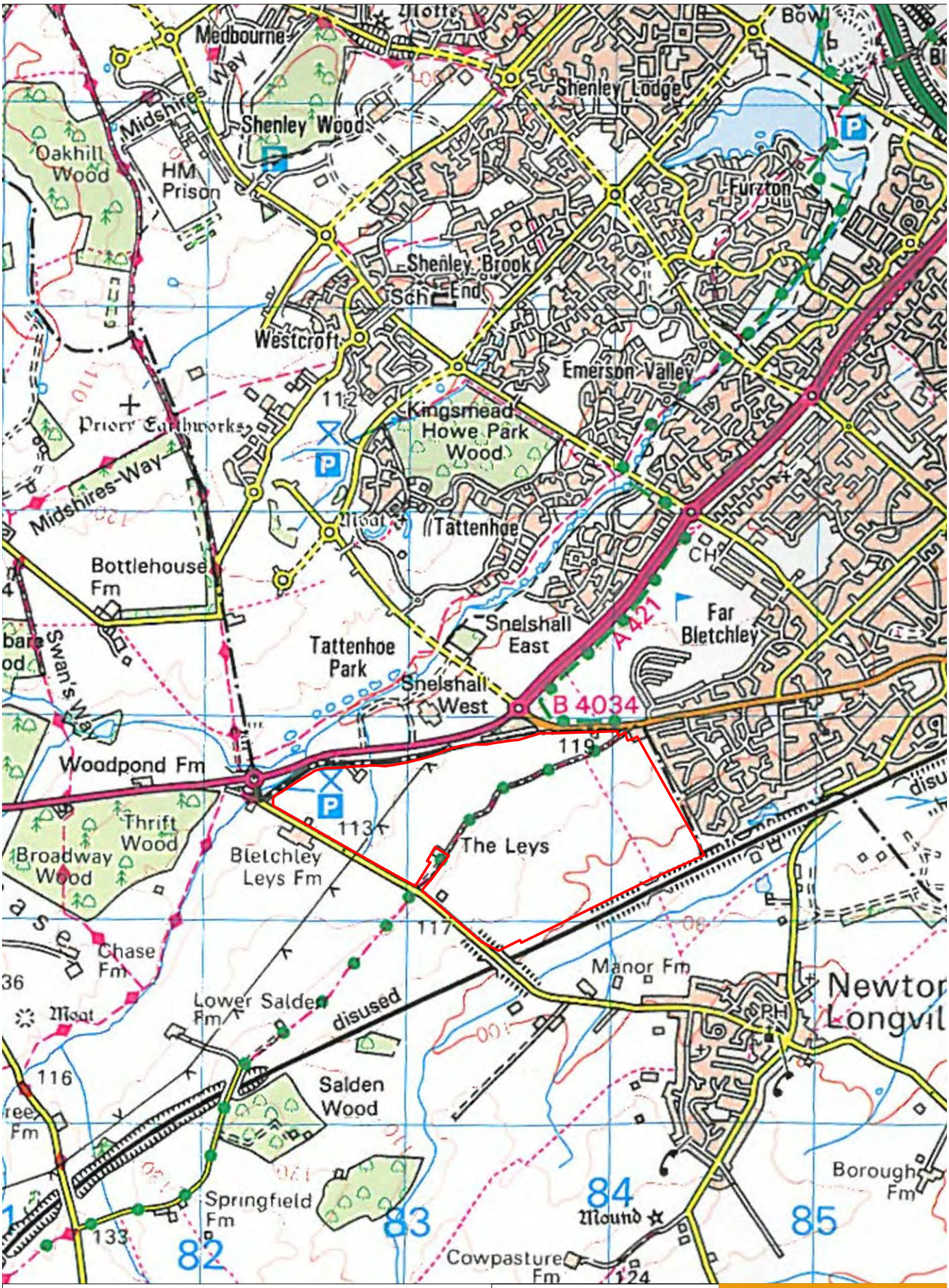
1968 OS 1:10,560 scale map

1977 OS 1:10,000 scale map

1990 OS 1:10,000 scale map

1999 OS 1:10,000 scale map

2007 OS 1:10,000 scale map



Site boundary

N

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Figure 1: Site Location

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0 250 m

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Figure 2: Site details

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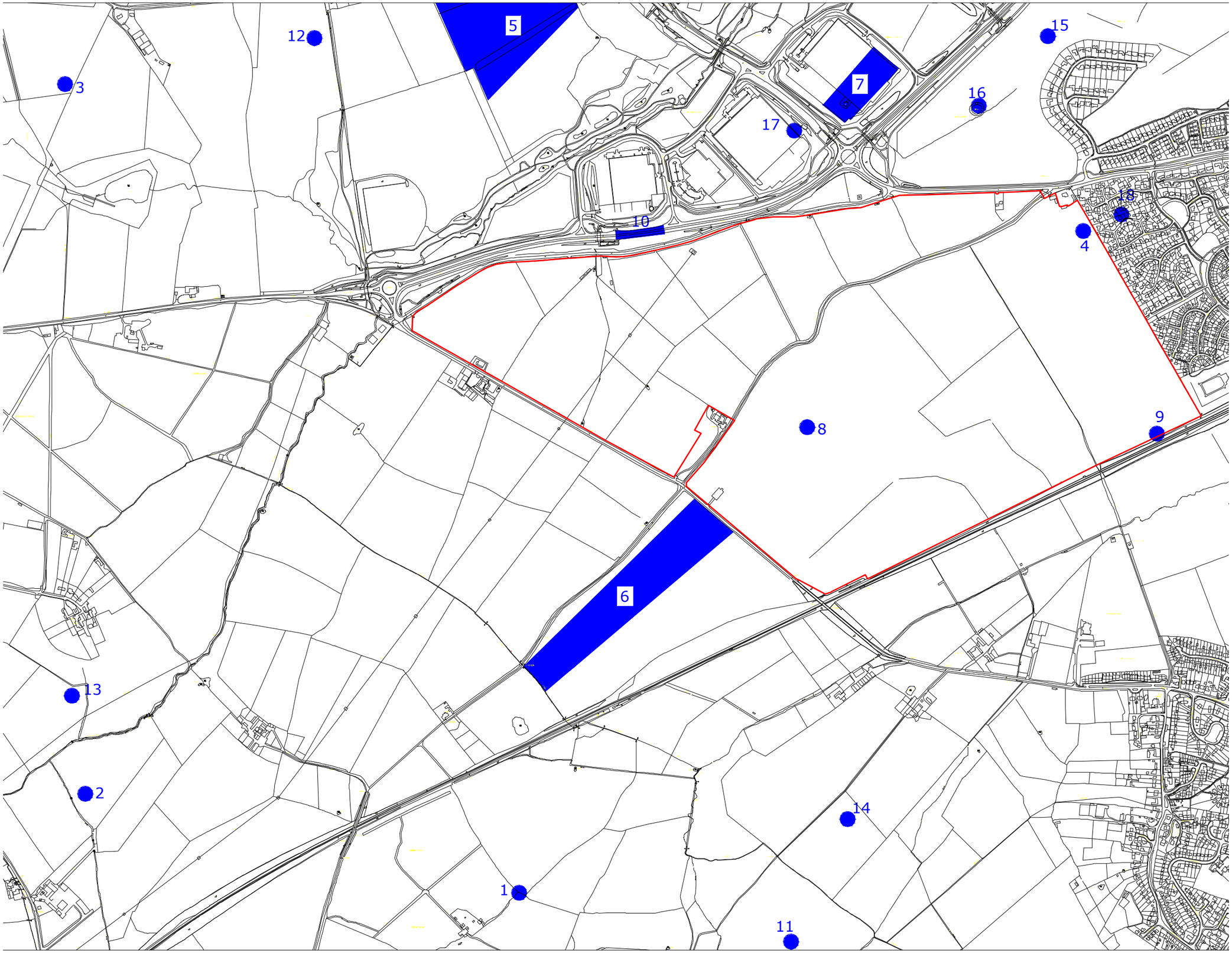

Additional information:

Site boundary

Sites in text

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Figure 3: Location of sites mentioned in the text

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- Survey by GeoQuest Associates

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Figure 4: Geophysical survey plot of Site 6

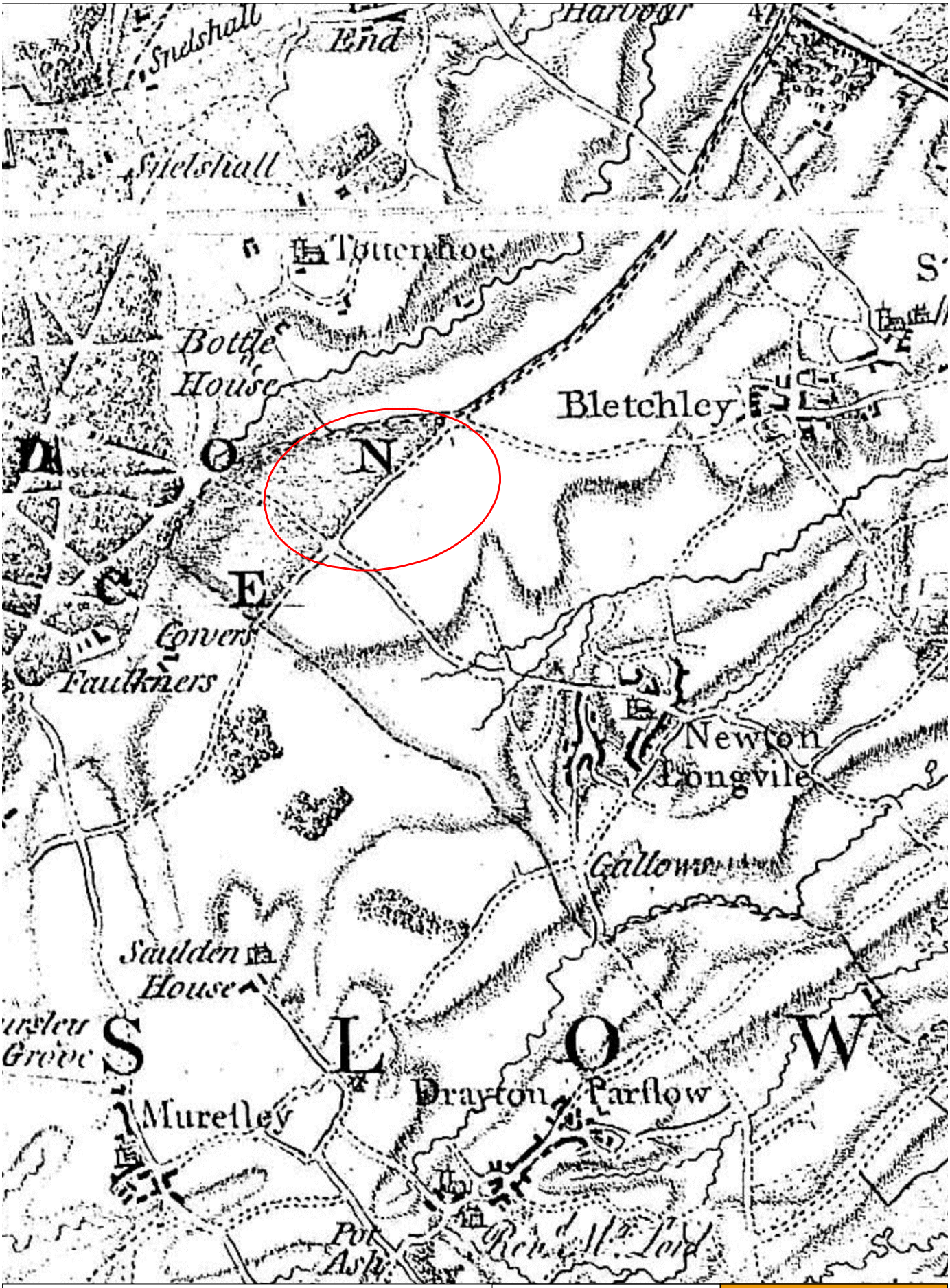

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Figure 5: Jeffery's Map 1770

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0 250 m

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Figure 6: Plan of the Parish of Newton Longville 1779

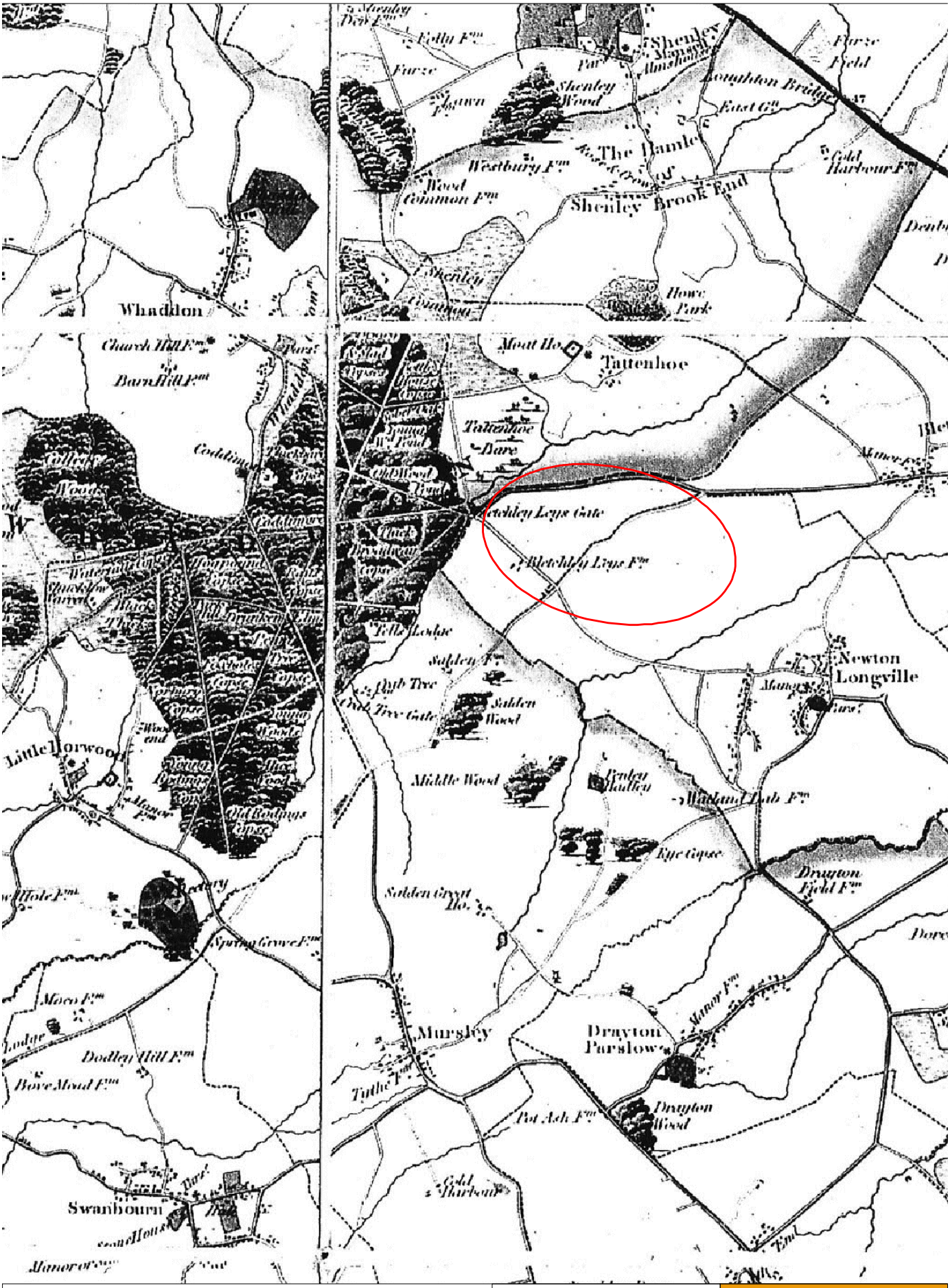

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Figure 7: Bryant's Map 1825

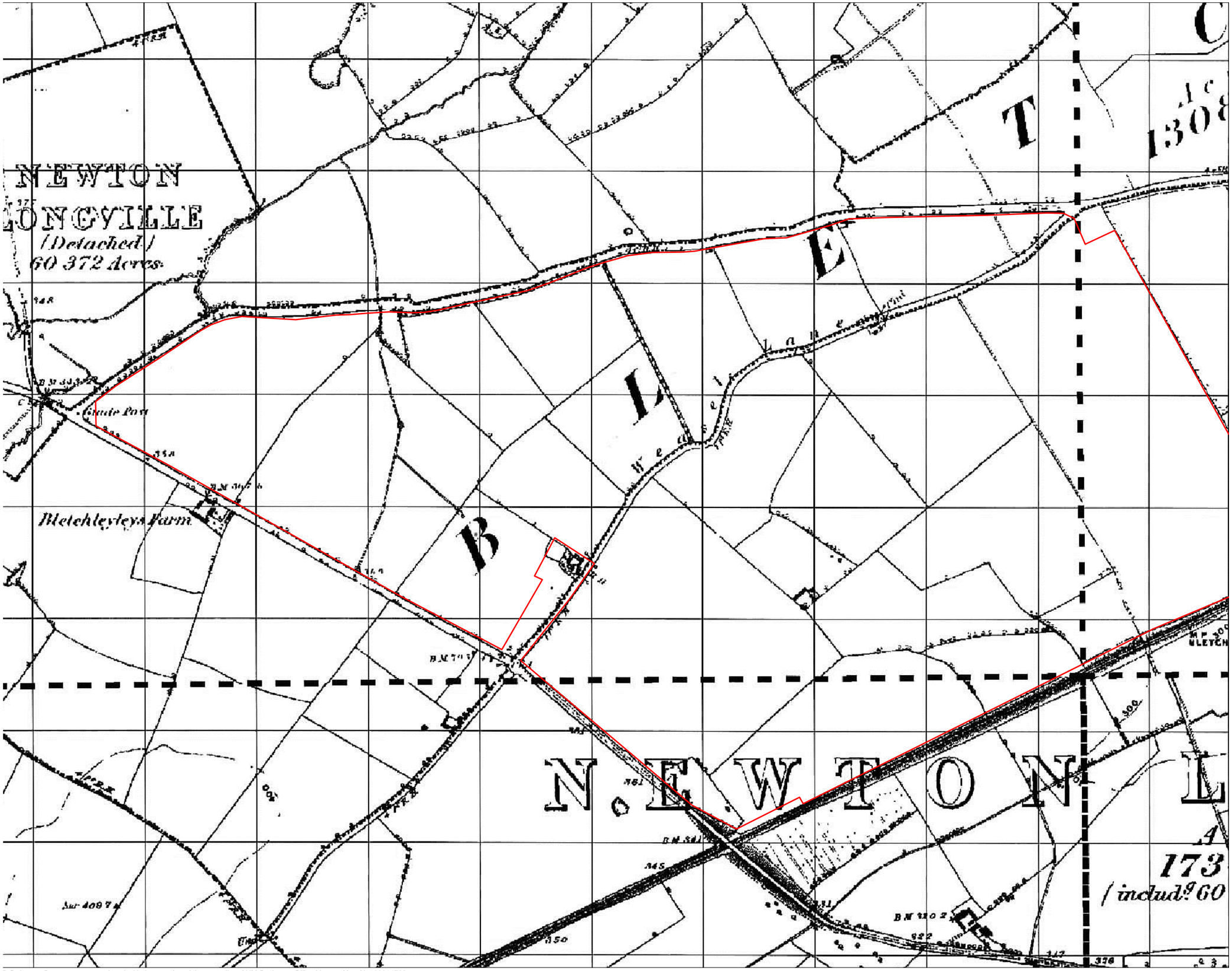

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Figure 8: OS 1:10,560 scale map 1885

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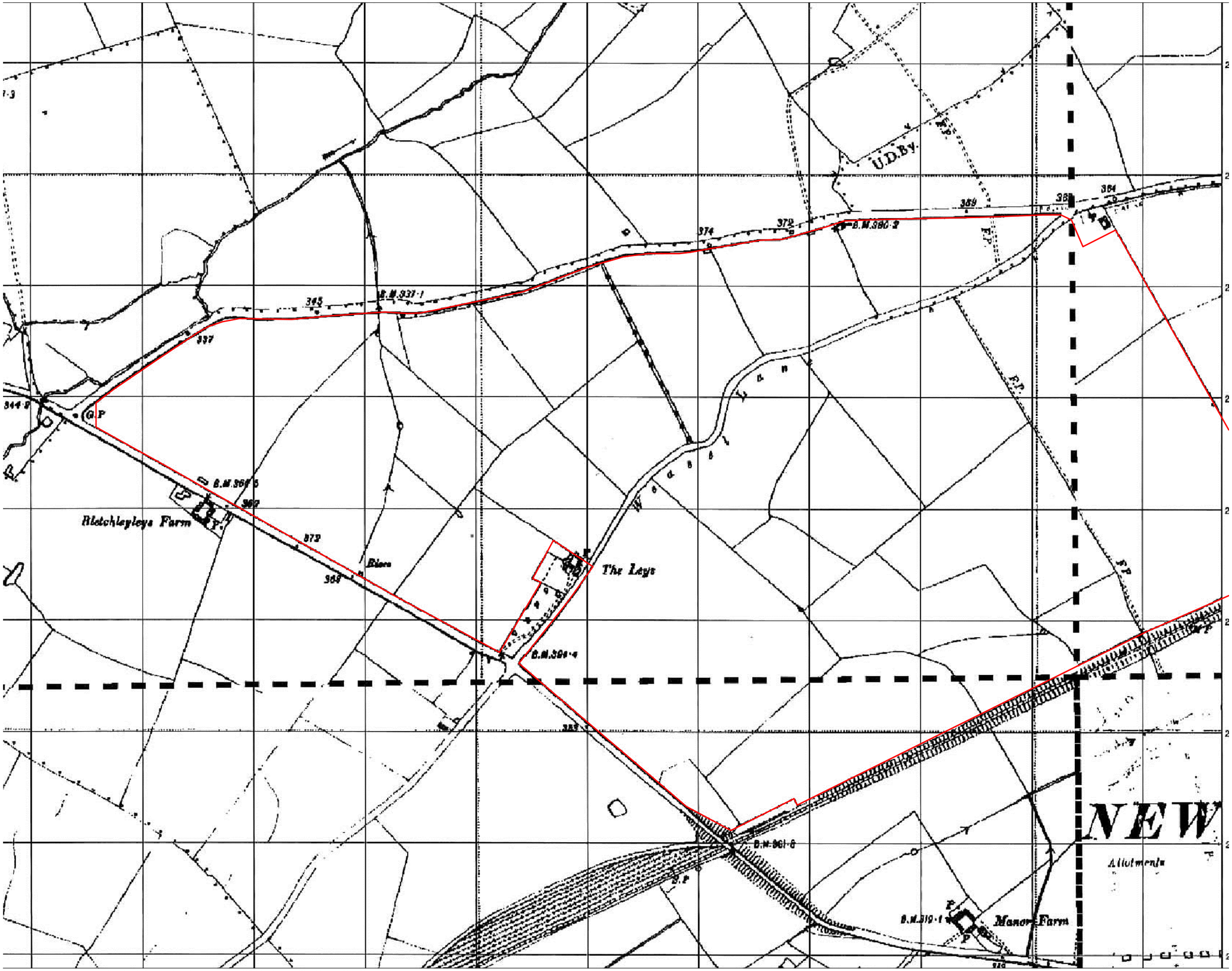

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Figure 9: OS 1:10,560 scale map 1938

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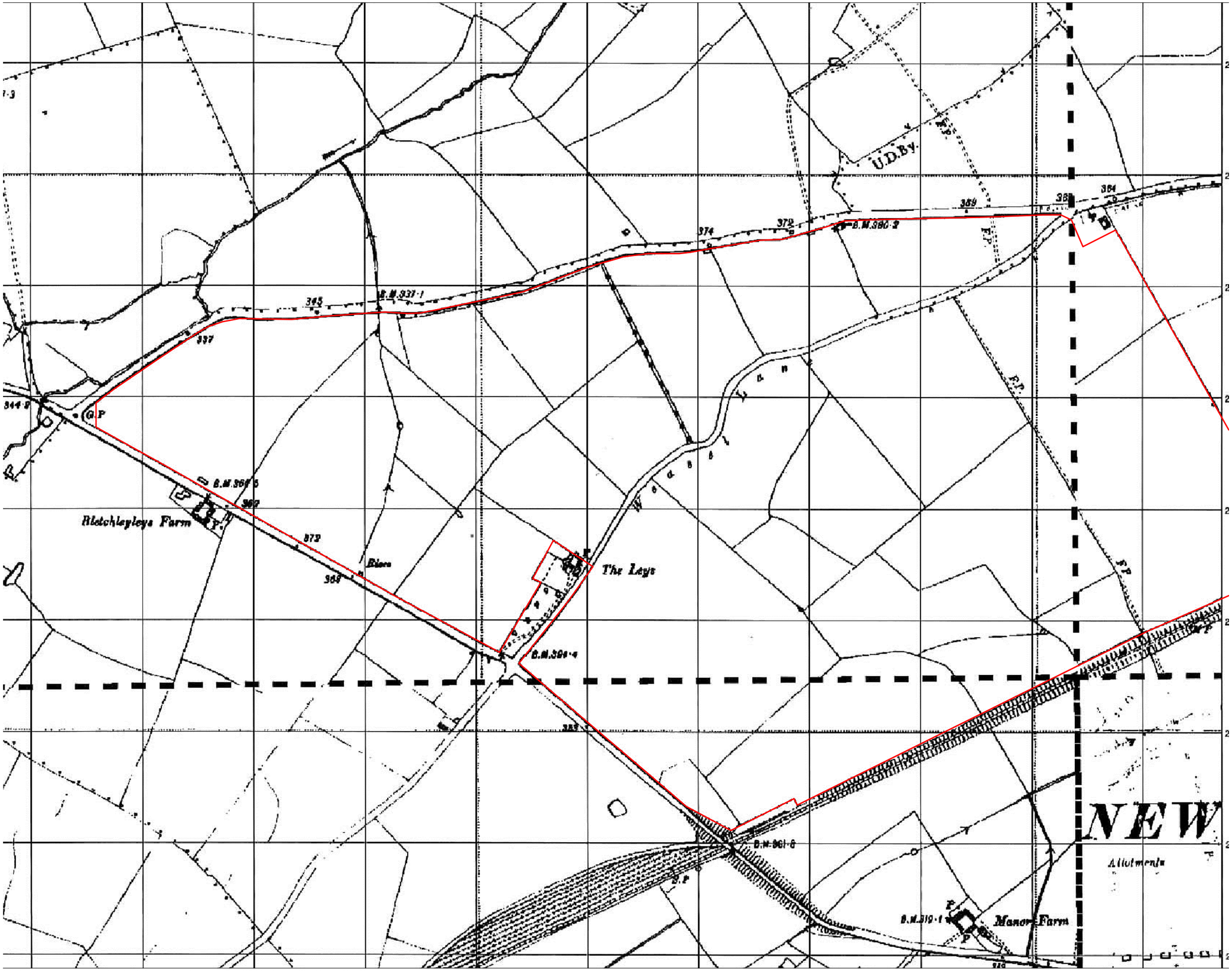

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Figure 9: OS 1:10,560 scale map 1938