

DEVELOPMENT ARCHAEOLOGY SERVICES Ltd.

WRITTEN SCHEME OF INVESTIGATION [WSI] FOR AN ARCHAEOLOGICAL EVALUATION [PHASE 1] ON LAND AT THE WOODGATE NURSERY [WOODGATE QW3]

APPLICATION: AL//89/24/OUT [CONDITION 25]

Site centred at approximately National Grid Reference: SU 9353 0421

- **Planning Authority:** Arun District Council [ADC]
- **Planning:** J. Kenny CDC [as archaeological advisor to ADC].
- **Client:** HANBURY PROPERTIES

Figure 1 General site location at an original scale of 1:10,000. The area of the proposed development site is shown in red. Site Centred at National Grid Reference SU9353 0421

Figure 2: Site location at an original scale of 1:1,250 at A3, (extract from Architects plan)

Figure 3: Plan showing the proposed layout of the development site at an original scale of 1:500 at A3, (extract from Architects plan)

Figure 4: Proposed [indicative] survey trench locations [25No. X 30m X 2m = 1500m2]

In response to Condition 25 of the permission, the applicant has requested that Development Archaeology Services Ltd [DAS] produce and submit the required Written Scheme of Investigation [WSI] detailing an appropriate strategy for mitigating the impacts of the proposed development on significant surviving archaeological remains that may present within the application site.

1.0

This document constitutes the required 'Written Scheme of Investigation' and will be submitted to Arun District Council [ADC], initially in draft form, for comment leading to ratification / approval by ADC's archaeological advisor.

2.00 Background and general procedures

Background: The assessment site is situated on land to the west of the Lidsey Road at Woodgate. The modern settlement of Woodgate is located within the modern civil parish of Aldingbourne, administrative district of Arun, county of West Sussex.

The set is presently occupied by several now derelict 'commercial' glass house units within the north east of the site area with the remainder of the site seen as rough pasture / fallow agricultural land with variable scrub and grass cover

- 2.1 The assessment site is situated on deep, stoneless silty soils of the Park Gate Series, which have developed on aeolian silty drift deposits of brickearth. These in turn overlie Oldhaven, Blackheath, Woolwich, Reading and Thanet gravel beds of the Palaeocene [Soil Survey, 1983; BGS, 1996].

The site is centred at approximately Central National Grid Reference: SU 9353 0421.

After review of a previously submitted Desk Based Assessment for the site [DAS 2024] submitted to inform the application James Kenny [CDC Archaeology Officer] advised that:

- 2.2 ***REF: Application AL/89/24/OUT: No development shall take place until the applicant has secured the implementation of a programme of archaeological work in accordance with a written scheme of investigation [WSI] which has been submitted by the applicant and approved by the local planning authority***

Following this advice the applicant has requested that DAS [Development Archaeology Services Ltd] produce the required WSI [initially in draft form] for submission / approval.

- 2.3 This document constitutes the required WSI. Works as detailed will be undertaken in response to the imposed Condition [Condition 25].

- 2.4 The archaeological contractor [DAS Ltd or other contractor, as appointed] shall take full responsibility in ensuring that the archaeological work will be of a comparable standard, and will use a similar methodology, to previous archaeological work in the area. Sufficient contingences in terms of time and resources will also be made available to adequately elucidate initial findings. Allied to this, there will be further contingencies made available for all post excavation costs [including the artefactual and environmental material].

- 2.5 The archaeological evaluation will be managed by Mr. Christopher Pine MA BSc in conjunction with Mr. Neville Hall. The on-site fieldwork will be undertaken by Christopher Pine and Neville Hall and up to 3 additional field archaeologists. At all times a member of staff, responsible on

DAS' behalf for the conduct of the on-site work, shall be present. The following specialists, as required, will also be involved in this project:

- M. Seager Thomas Pre-historic through to Anglo-Saxon ceramics
- John Carrott Archaeobotanical / environmental
- Luke Barber Roman Medieval and Post-medieval ceramics
- Chris Pine & Dr. M. R. Bates Environmental / Geoarchaeological
- Dr. Malin Holst Osteoarchaeology
- Dr. Matt Pope Lithics / pre-historic artefacts.

2.6 Prior to the commencement of archaeological works on the site, DAS shall have:

2.6.1 Obtained a provisional accession number from the designated recipient museum.

2.4.2 Obtained information derived from the Statutory Undertakers on services [gas, electricity, water, sewerage and telecommunications] on the site, and ascertained the alignments of public rights of way.

2.6.3 Shall have issued a copy of the approved 'WSI' to the Field Officer responsible for carrying out the work on site [to be kept on site at all times].

2.7 'The archaeological advisors to ADC will be given a minimum 10 working days' notice as to start of field work. Regular email updates, to include a selection of digital photographs will be provided with written update / progress reports to ADC's archaeological consultee during field work phase.

2.8 Prior to the excavation of the archaeological trial trench, a scan will be undertaken using a CAT or other cable-tracer to locate any live services. If services are revealed and are suspected to be live, the area of the services shall be left unexcavated.

2.9 A program of excavation of the investigation trenching [as outlined in Section 4 below] will be undertaken using a mechanical excavator using a toothless ditching bucket, followed by the manual investigation and recording of any archaeological features.

2.10 Where appropriate, a program of sampling of key archaeological contexts will be carried out for subsequent processing and assessment / analysis.

2.11 A full written report on the results of the archaeological investigation shall be completed within approximately 20 [4 weeks] working days of the completion of the on-site works. This report will also include specialists' reports as required. Copies of this report will be submitted to Arun District Council's appointed external advisor, and the client.

2.12 This report is an essential piece of documentation for use by the Local Planning Authority, and therefore a reasonable basic minimum level of report will be provided by DAS. Guidelines as detailed in Sussex Archaeological Standards [West & East Sussex: updated 2019] will be followed. A fuller presentation of reporting elements is presented at Section 5 below.

2.13 All elements of the evaluation, regarding both field work and report production, will follow and be guided by the Chartered Institute of Archaeologists *Standard and Guidance for Field Evaluation* [2014].

2.14 DAS will liaise, as appropriate, with other archaeological field units who have carried out archaeological investigations in the vicinity of the proposed development site to ensure that the work undertaken is in accordance with previous studies in the area.

3.0 Objectives of the Field Evaluation

3.1 To establish whether any archaeological remains exist in the area, with particular regard to any which are of sufficient importance to require additional second phase investigation. The results of the preliminary phase of investigation will inform any subsequent archaeological mitigation.

3.2 The investigation should aim to determine, as far as reasonably possible, the location, form, extent, date character, condition, significance and quality of any surviving archaeological remains, irrespective of period, liable to be threatened by the proposed development. A

representative sample of all areas where archaeological remains are potentially threatened should be studied, and attention given to sites and remains of all periods.

3.3 The archaeological investigation should also seek to clarify the nature and extent of existing disturbance and intrusions and hence assess the degree of archaeological survival of buried deposits and any surviving structures of archaeological significance.

3.4 Within these parameters, the investigation of this site presents an opportunity to address the following objectives:

3.4.1 To establish the presence or otherwise of remains of all periods with possible emphasis on any pre-historic activity within the area of the proposed development site and to define the date and nature of that activity/occupation.

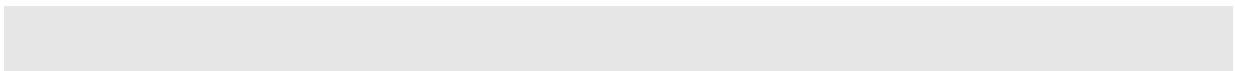
3.4.2 To establish the palaeoenvironmental context of any activity/occupation;

3.4.3 Evaluate the likely impact of past land use;

3.4.4 Establish the presence or otherwise of masking colluvial/alluvial deposits and of waterlogged organic deposits; and

3.4.5 To provide sufficient information to construct a second phase archaeological mitigation strategy, if necessary.

3.5 Where physical preservation *in situ* is likely to be considered as a mitigation option, the primary factors affecting the present state of preservation and the direct and indirect effect of the proposed development should also be considered.



4.0 Investigation Methodology.

- The survey will involve the excavation and recording of up to 1,500² metres of trenching that will be 2m wide. It is anticipated that 25 trenches will be minimally 30m in length. Trenches will be spaced within the build impact area to sample all areas where the proposed build and associated ground works, including access routes, may impact on potential archaeological levels. An indicative trench location is shown at **Figure 4**. A contingency of an additional 300 m² of trenching will be available to elucidate survey findings. Note: The trench locations shown should, at this stage, be considered as indicative and dependant on going results may be modified / adapted. Any modification / adaption of survey trench locations will be undertaken with the approval of ADC's appointed archaeological consultee. **NOTE: Some areas within the footprints of existing 'derelict' glass-house structures are not available for survey due to health and safety constraints. Should adjacent / proximal survey trenches indicate these excluded areas have high archaeological potential they may, subject to review of the results of this survey be subject to additional / subsequent phase of excavation / investigation. The scope of this additional phase of investigation to be agreed with the LPA's archaeological advisor after review of survey results as detailed in this WSI.**
- 4.1
- 4.2 The trenches [location and heights relative to OD] will be surveyed in using a Total Station [with consequent c. 100% accuracy] and excavated under the supervision of suitably qualified and experienced archaeologists.
- 4.3 The initial excavation of the trial trenches shall be by a c. 14 ton 360° tracked mechanical excavator of sufficient size and power, fitted with a c. 2.00-meter-wide toothless ditching bucket. The machine will excavate in less than 5cm spits. The spoil generated will be banked at a safe distance from the trenches' edge [spoil heaps will not exceed 1.2m in height].
- 4.4 The mechanical excavation will remove the modern over-burden [plough soil or other] exposing the underlying archaeological/geological [natural] deposits. The archaeology revealed will be recorded in plan and manually excavated.
- 4.5 All archaeological features, structures and deposits exposed in the trench will be cleaned, planned and recorded [in a manner compatible with that most widely used elsewhere in the

County and in accordance with guidelines as detailed in Sussex Archaeological Standards [West & East Sussex: as updated / amended 2019]

4.6 All archaeological contexts revealed through excavation will be planned in relation to the trench within which they lie and this trench will be planned onto a copy of an Ordnance Survey base map of not smaller than 1:1250 scale. All significant deposits will be formally planned at a scale of 1:20 with sections recorded at a scale of 1:10 [this will include all features half-sectioned]. All archaeological contexts will be surveyed using a temporary benchmark derived from an Ordnance Survey benchmark.

4.7 Individual descriptions of all archaeological strata and features excavated or exposed will be entered onto prepared pro-forma recording [context] sheets. Sample recording sheets, finds recording sheets, sample registers and a photographic register will also be used.

4.8 A photographic record will be made using digital camera [min 8mp resolution] to illustrate in both detail and general context the principle features and finds discovered also be used. Working shots to illustrate the nature of the archaeological investigation will also be included. All archive material will be guided, as an exemplar, by: 'Guide to the Deposition of Archaeological Archives with Winchester Museums' [2011] regarding photographic [both digital and film] deposition.

4.9 Archaeological excavation may require work by mattock, pick or shovel; these will only be used for the removal of homogenous deposits. These techniques will not be used to remove complex or sensitive archaeology.

4.10 A proportion of archaeological features, structures or deposits, will be excavated. The amount of archaeological context excavated will vary with type: all intersections and termini; at least 50% of each large discrete feature [e.g. a pit] will be excavated, and 50% of each small discrete feature [e.g. a posthole], with a minimum of 20% for each linear feature / deposit exposed in the trenches. The proportion of each archaeological feature excavated will be sufficient to obtain a representative picture of the feature's date and function.

4.11 Particular care will be taken not to damage any areas containing significant remains that may merit further detailed investigation under full excavation conditions [second phase] and in

addition areas of potential national importance which may merit preservation *in situ*, even if obscuring underlying archaeological features. Such areas will be protected from the weather and other forms of deterioration. A sufficient sample of these areas will be investigated to assess their character and quality, without compromising the policy of preservation *in situ*.

- 4.12 Arun District Council's appointed external consultee /advisor, will be notified at the earliest opportunity of any archaeological contexts considered worthy of preservation *in situ*.

- 4.13 The strategy and methodology for the sampling, recording, processing, assessment, analysis and reporting of deposits with environmental archaeology potential will be in accordance with English Heritage Centre for Archaeology Guidelines "Environmental Archaeology – A guide to the theory and practice of methods, from sampling and recovery to post-excavation" [English Heritage, 2011]. Any variation to this guidance will be agreed in advance with both ADC's archaeological consultee and/or the Historic England's Science Advisor [South East].

- 4.14 High priority deposits for palaeo-environmental sampling a: primary fills of pits, wells, ditches and cesspits, layers of middens, occupation surfaces and other discrete activity areas, contents of hearths, kilns and ovens, storage areas or containers. Discrete burnt or charcoal areas are of the greatest interest and should always be sampled, but sampling should not be limited to areas of visibly burnt remains, for even charred plant remains are not necessarily visible within deposits, and many other types of material, including small finds, can be retrieved from the bulk samples. For some contexts and features [e.g. ditches, middens, occupation layers] multiple samples might be needed, from different locations; and for floors sampling should target areas where preservation is likely to be best [e.g. corners]. It is to be anticipated that on dry sites, pit and ditch fills where concentrations of bones and pottery are visible will yield the richest bulk samples.

- 4.15 Judgmental sampling strategies will be undertaken in the field by C. A. Pine [DAS Environmental officer] using sampling techniques such as column / monolith / kubiena samples / core [hand driven] through obviously complex environmentally rich sediment sequences.

- 4.16 Consideration will be given to the collection of samples that may be used for scientific dating techniques such as:

- radiometric [14C] dating
- dendrochronology
- archaeomagnetic dating

Provision for the application of scientific dating techniques [by uptake of contingency] will be made at assessment stage.

4.17 It is possible, though in this case unlikely, that human remains will be revealed during the archaeological investigations. At evaluation stage human remains will be retained *in situ* wherever possible. ADC's external archaeological advisor will be informed immediately as to the presence of any human remains found on site. Any such remains revealed during the archaeological investigations will be covered and protected *in situ*, and reported to the relevant Coroner's Office, the local Environmental Health Department, and the police will be informed. Where their removal is agreed by the appropriate authorities, the appropriate license will be obtained prior to the removal of the remains. A separate, case specific, method statement will be submitted and approved by the relevant planning authority's appointed archaeological advisor if excavation lifting / removal is required.

4.18 Any finds recovered will be bagged and labelled for potential further assessment / analysis. All relevant finds will be ordered into an archive. Most modern material will not be retained, although notes will be made of the appropriate context. An appropriate sample of materials such as ceramic building materials will be made. Sampling of and retention of same as part of the site archive should only be undertaken following discussion and agreement with archaeology curator of the designated recipient museum.

4.19 Any finds believed to fall potentially within the statutory definition of Treasure, as defined by the Treasure Act [1996] and further defined by the Treasure [Designation] Order 2002, shall be reported to the relevant Coroner's Office, the developer/site owner and the relevant planning authority's appointed archaeological advisor. In addition, the Portable Antiquities Scheme Finds Office [c.o. Sussex Archaeological Society] will be notified. Reporting on the find/s shall outline the date and circumstances of discovery, the identity of the finder and the precise location of the find.

4.20 The trenches, when unattended, shall be secured fenced and clearly marked, in a manner commensurate with Health and Safety regulations. 'Deep Excavation' notices will be used if appropriate. [see also 4.27].

4.21 A Risk Assessment will be carried out prior to the archaeological investigation, and all relevant Health and Safety regulations will be complied with during its implementation. In particular, the mechanical excavator will be kept away from unsupported trench edges, safety helmets, footwear and 'high visibility' jackets will be used by all personnel where necessary.

4.22 DAS will comply with the Construction [Design and Management] Regulations current at time of the investigation. [CDM 2015]

4.23 A metal detector will be used both on the spoil heap and within the trenches to facilitate investigation. Use of metal detector during the survey will be guided by Sussex Archaeological Standards.

4.24 Upon the completion of the excavation, re-instatement, if required by the site owner, will be the responsibility of the site owner beyond the back-filling and bucket compressing of deposits. All trenches will be filled and levelled and be checked for safe surface conditions by the site supervisor.

4.25 Access to the site will be at locations/routes confirmed by the site owner with particular consideration being given to the relevant Health and Safety requirements. Overnight, the site will be secured, as well as is reasonably possible, to discourage public / unauthorised access and lower the risk of damage to the archaeology.

4.26 DAS will reserve the right to limit access, at their sole discretion, to employees of DAS, designated representatives of the site owner, the landowner's agents and assigns and representatives of Arun District Council and their appointed archaeological advisor/s. All requests to access the site during investigation work must be through the senior site officer of DAS. All site visits will be logged.

4.27 The appointed contractor will ensure that adequate protection [fencing barriers] are in position and site-specific RAMS will be produced to ensure safe operating procedures are followed to ensure public safety.



5.00 Fieldwork reporting

- 5.1 A full report on the fieldwork shall be completed by DAS Ltd within four weeks of completion of all fieldwork on the site, unless agreed in writing with the Local Planning Authority and their archaeological officer or advisor.

- 5.2 The report will be considered as an essential piece of documentation within the evaluation exercise. The main aim / purpose of the report will be to communicate to the Local Planning Authority via their appointed archaeological advisor, the archaeological significance of the site. In this case the report / information generated will facilitate, using the expertise of the Local Authority's archaeological adviser, possible further archaeological mitigation, all in line with current Heritage / Archaeological policies of Arun District Council.

- 5.3 A digital copy of this report [PDF/A] shall be submitted to the Local Planning Authority, the local planning authority's archaeological adviser, and the relevant Historical Environment record. A hard copy of the final report must be included with the project archive. In this case [East Sussex] a hard copy of the report must also be sent to the HER and the East Sussex Record Office.

- 5.4 The Developer and Archaeological contractor should assume that reports lodged with the respective Historic Environment records will become available for public inspection; and that information from the report may be authorised to be used by the Local Authority, with due acknowledgement to the Developer and Archaeological Contractor

- The report must include, except where otherwise stated in the Brief.
- 5.5
- Planning history, in brief, including nature of proposed development, relevant Local Planning Authority, applicant, and planning application reference number [where applicable]
 - Function of the report
 - Location of site by OS map reference [5 figures easting, 5 figures northing]
 - A location plan of the site, with boundary clearly marked, on an OS base map of not less than 2:2500 scale [smaller scale for large sites only], showing Grid North, and tied in to the OS Grid.
 - Plans of trenches / excavated areas showing archaeological contexts recorded therein, at a scale suitable for distinguishing clearly the outlines of recorded contexts
 - Those parts of archaeological contexts which have been excavated

- For deeper / stratified sites, drawn sections of each trench elevation, with OD levels
- Levels above / below OD at top and bottom of trenches / excavated areas, at each end / corner of the trench / excavated area
- Site geology
- Archaeological and historical background
- Reproduced extracts of relevant historical maps, with site boundary superimposed and clearly shown [where photocopies cannot be taken, good quality traced extracts should be made]
- Dates of fieldwork – beginning and end
- Fieldwork methodology, archaeological and Palaeoenvironmental sampling strategies
- Site Code
- Staff Structure – Project Manager, Site Supervisor[s]
- Name of developer, person or body commissioning the archaeological contractor
- An abstract of the background and findings of the report of about 100-200 words
- Principal author and [at the head of each specialist report] names of contributors to the report
- Stratigraphic report, by excavated area and context
- Finds reports by recognised specialist
- Identification of finds requiring active conservation
- Present location of finds, intended repository of the finds, museum accession number
- Palaeo-environmental report – results of palaeo-environmental processing and assessment by recognised specialist
- A list of contexts excavated, arranged numerically, with brief description, nature of artefactual / ecofactual contents, and provisional / final dating
- A list of palaeo-environmental samples taken
- Discussion and Conclusions
- References
- Historic Environment Record summary form

5.6

The copies of the report submitted to the Local Planning Authority must be in PDF A format and on a CD accompanied by a selection of illustrative images which shall be submitted to the HER within six weeks of completion of trial investigation works on site. These images are intended both for record purposes and for dissemination of information to the Local Planning Authorities and to the public [e.g. through presentations and talks].

- 5.7 The relevant OASIS [Online Access to Index of Archaeological Investigations] on line reporting form will be completed and submitted by DAS.

6.0 Monitoring.

- 6.1 Arun District Council's appointed archaeological advisor [J. Kenny] will be invited to visit the site whilst all elements of work are in progress A minimum of five working days' notice will be given prior to the start of the archaeological investigation detailed within this document. It is understood that the archaeological advisor to ADC will be allowed access at all reasonable times to the site and will be afforded a site tour and overview of the site by the senior archaeologist present. The tour to include access to view all open areas [and access to these areas] examination of any finds made still on site and records not in immediate use.

- 6.2 Regular email updates, to include a selection of digital photographs will be provided to the archaeological advisors to ADC with written update / progress reports during the field work phase.

7.0 Site Archive.

- 7.1 An archive of all records and finds is to be prepared consistent with the principles and guidelines as presented in: Management of Research Projects in the Historic Environment [MoRPHE] [English Heritage 2006] The archive is to be sufficiently detailed to allow comprehension and further interpretation of the site should the project not proceed to detailed analysis and final report production. It must be adequate to perform the function of a final archive for lodgement in the designated recipient museum.

- 7.2 The minimum acceptable standard for the archival report is defined in the 'Management of Archaeological Projects' 5.4 and Appendix 3. It will include all materials recovered [or the comprehensive record of such materials] and all written, drawn and photographic records relating directly to the investigations undertaken. It will be quantified, ordered, indexed and

internally consistent. It will also contain a site matrix, a site summary and brief written observations on the artefactual and environmental data.

- 7.3 Work on the site archive will be completed within six months of the fieldwork and this will be available for the inspection prior to deposition with at the designated recipient museum.

- 7.4 A basic level of conservation [for example: airtight bagging/ soft packing] will be provided for finds liable to deterioration, and on deposition of these finds w a full record of their treatment will be provided. Items for which available resources do not permit stabilisation will be separately packed and listed. Metal artefacts may be X-rayed as part of the basic level of conservation.

- 7.5 Finds will be appropriately conserved and stored [in accordance with UK Inst. Conservators Guidelines / RESCUE publication *First Aid for Finds* [1987]]; with all 'small finds' boxed together, separate from bulk samples.

- 7.6 All artefacts / ecofacts will be deposited with the designated recipient museum with the landowner's permission. The recipient museum will be consulted regarding the nature of the archive to be presented. Prior to this they will be securely stored.

- 7.7 Prior to deposition of the site archive, Copyright [for the written, drawn and photographic record], will be retained by DAS, though full license shall be granted to the WSCC's Historic Environment Record for the use of the report for planning and bona fide research purposes. At deposition of the archive, written permission will also be given for the reproduction of specific material for educational or academic purposes, with due acknowledgement to the Copyright holder [DAS].

8.0 Timetable of work

- 8.1 It is anticipated that the archaeological works will commence within a 4-week period following approval / ratification of this specification by Arun District Council's archaeological advisor [J. Kenny CDC].

- 8.2 The post-excavation work will be undertaken immediately after the fieldwork component. A short summary report [outlining main results and recommendations] will be submitted to LDC's appointed archaeological advisor/consultee within five working days of completion of the fieldwork. A final report will follow and this will be submitted within four weeks of the end of the fieldwork.

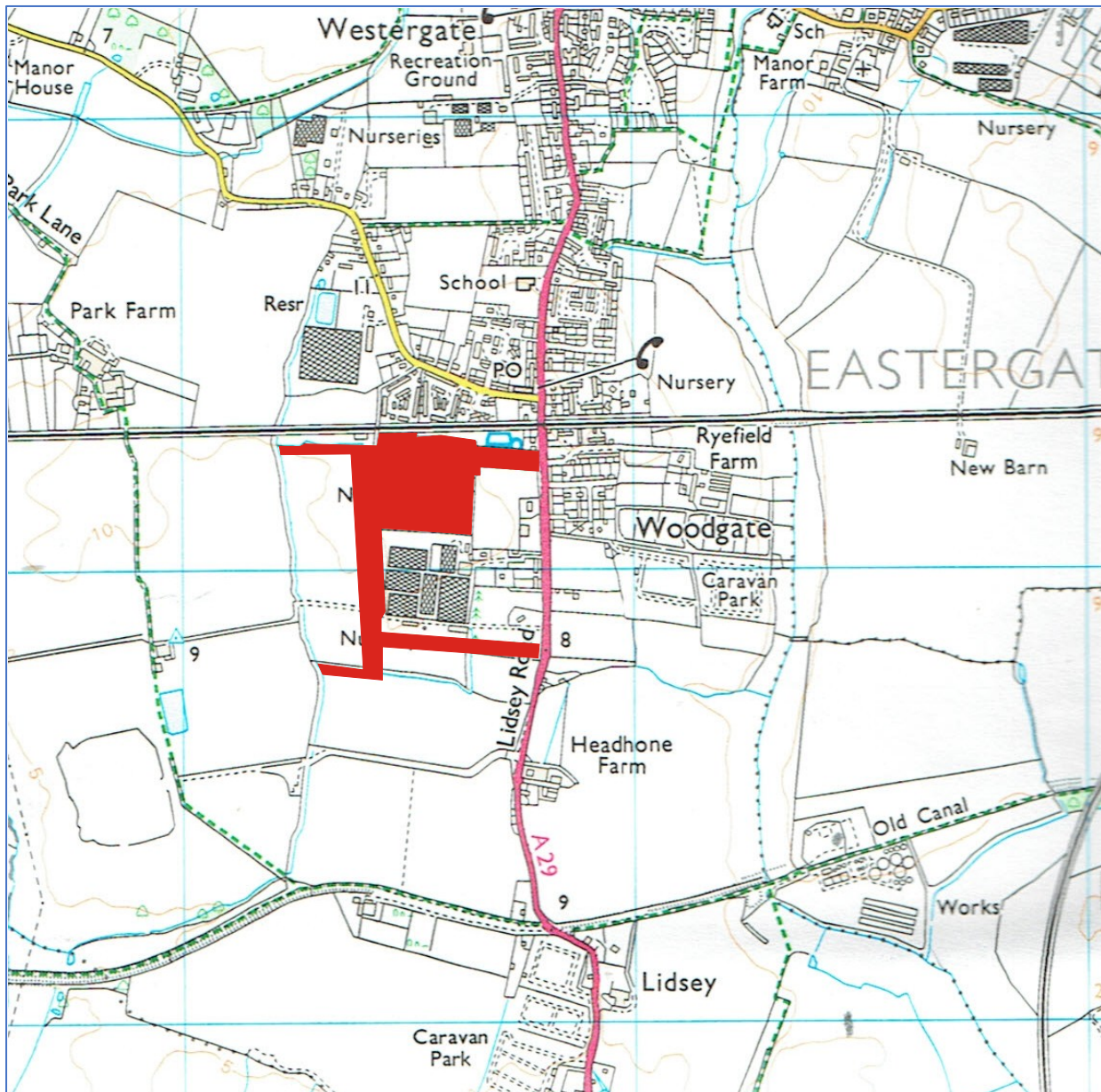


Figure 1: General site location at a scale of 1:25,000. The area of the proposed development site is shown in red. (O.S. copyright licence number 100048723)

Site centred at approximately Central National Grid Reference: SU 9353 0421

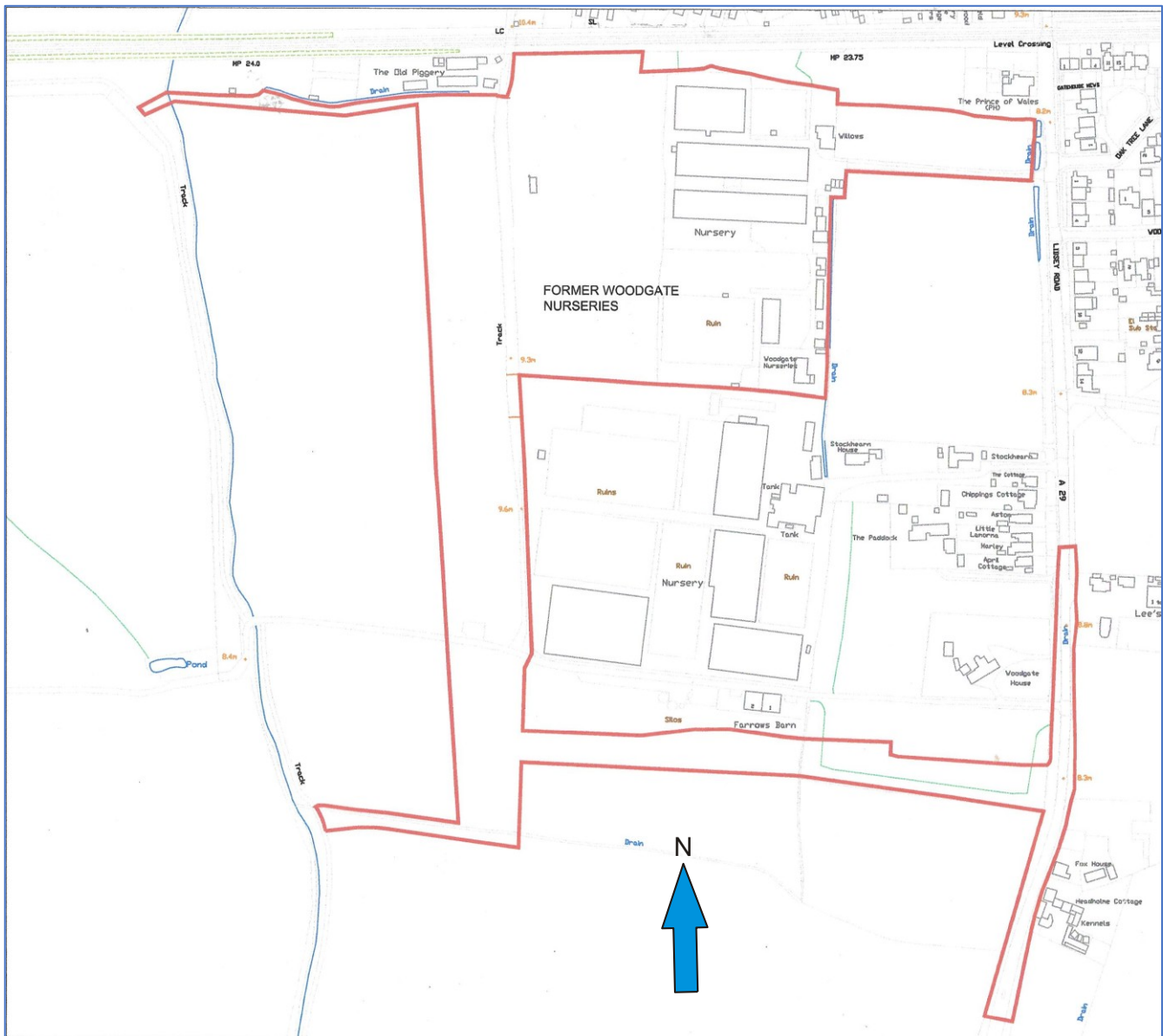


Figure 2: Site location at an original scale of 1:5,000 at A3, (extract from Architects plan). The assessment site is shown outlined in red.



Figure 3: Plan showing the proposed, indicative, layout of the development site at an original scale of 1:3,000 at A3, (extract from Architects plan).

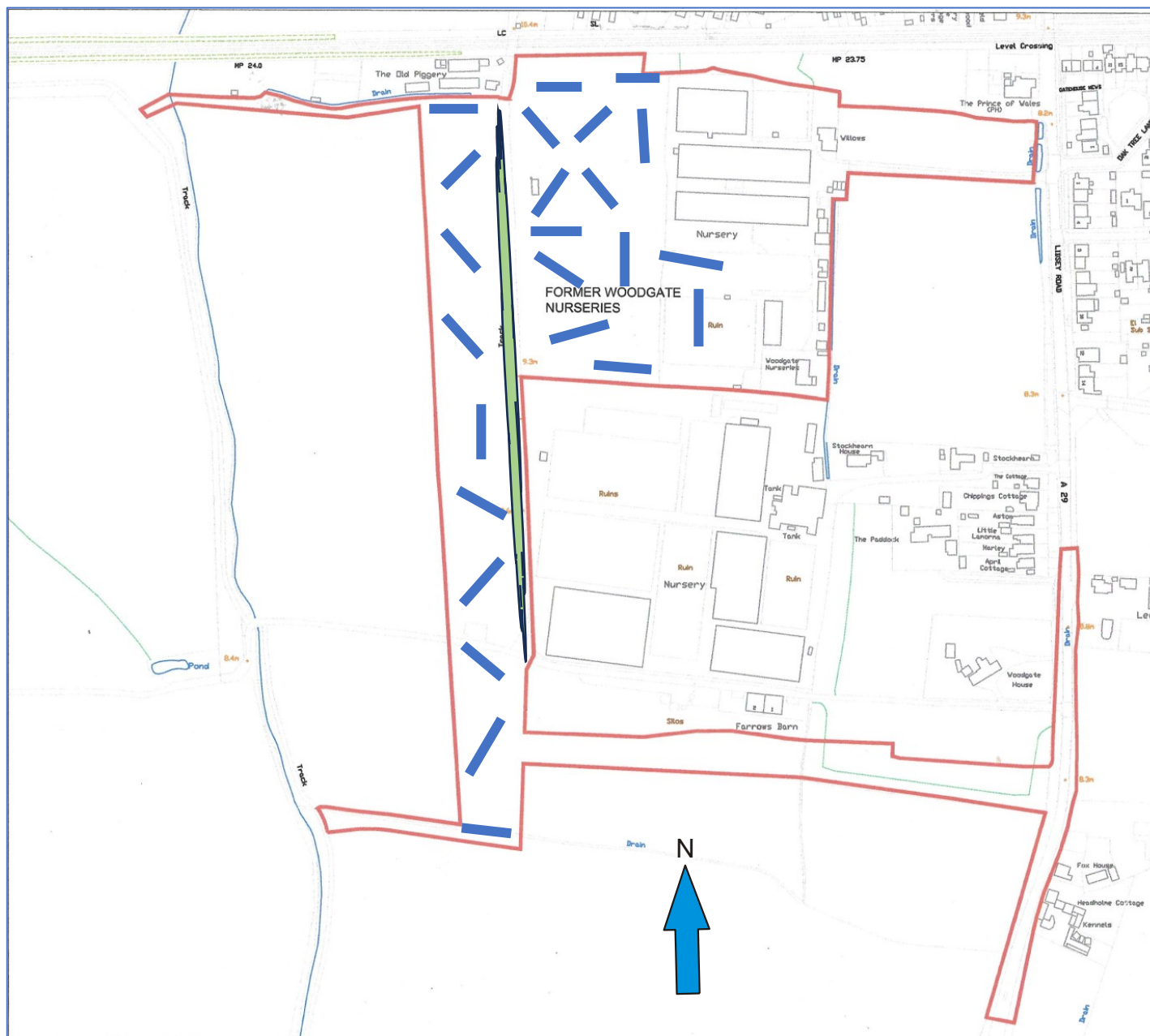


Figure 4: Indicative survey trench layout



The survey will involve the excavation and recording of up to 1,500² metres of trenching that will be 2m wide. It is anticipated that 25 trenches will be minimally 30m in length

Existing tree hedge line [to be maintained] 