TIGERGEO

Development off Llay New Road, Rhosrobin, Wrexham

Written Scheme of Investigation
(Strip, map and sample excavation)

Version 1.0

Project code: DLW241

Produced for:

SG Estates

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TIGERGEO

Development off Llay New Road, Rhosrobin, Wrexham

Audit

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1 Introduction

This Written Scheme of Investigation (WSI) for an archaeological strip, map and sample (SMS) excavation has been prepared by TigerGeo, acting on behalf of SG Estates.

It addresses the requirements of condition 9 of an amended plans application (Ref. P/2021/1057) for the erection of 92 dwellings and the provision of a new roundabout on Llay New Road.

2 Context

2.1 Site location and description

The proposed survey area is located off Llay New Road, in a parcel of land divided by agricultural boundaries. The eastern boundary is formed by a railway embankment, and beyond this is Wat's Dyke.

Details of the site, including a central Ordnance Survey (OS) national grid reference, geology and topography and current land use etc., are set out in the table below and shown on **DWG 01**.

Country	Wales
County	Wrecsam (Wrexham)
Nearest Settlement	Rhosrobin
Central Co-ordinates	333074,352957
Soilscapes Classification	Freely draining slightly acid loamy soils [6]
Superficial 1:50000 BGS	Till, Devensian - Diamicton [TILLD]
Bedrock 1:50000 BGS	Halesowen Formation - Mudstone, Siltstone And Sandstone [HA)]
Topography	Flat
Current Land Use	Freely draining
Land Cover	Agricultural – Pastoral

2.2 Archaeological background

2.2.1 Initial site consultation

Consultation with Mark Walters, the Development Control Archaeologist who advises the local planning authority, stated that:

"Information held on the Historic Environment Record (HER) does not currently indicate any recorded sites within the development boundary. There was a former railway line at the southern end of the site on the early OS mapping which merged with the existing line but this has been demolished. The buildings to the east at Pandy Farm and The Mews are recorded as post medieval farm buildings on the HER, but they lie outside the development boundary. The hedgerow field boundaries are visible on the first edition OS and are likely to be the oldest surviving surface features within the development area and consideration should be given to the retention of these in any final layout design.

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In fields to the south of the modern railway cutting the alignment of the scheduled monument known as Wats Dyke (SM DE 151) crosses the fields as a prominent earthwork. Given the intervening railway and tree foliage on the boundaries it seems unlikely that there would be a setting impact for the scheduled monument, but Cadw must be consulted for their opinion ...

Geophysical survey of the ground to the south around the scheduled monument in advance of a housing development there did reveal sub-surface archaeology of interest including a number of possible prehistoric ring ditch burial sites in the eastern half. These were subsequently preserved by design with this area being removed from the application boundary.

The potential for further prehistoric monuments of similar date and form within your proposed development area is currently unknown and we would advise that a geophysical survey using magnetometry techniques is completed at the pre-determination stage to assess this potential."

2.2.2 Geophysical Survey

The geophysical survey (TigerGeo, 2021) revealed anomalies of potential archaeological interest. The summary of the report states that:

"*A short length of ditch fill, that might be modern, was seen in the larger western field and in one of the eastern ones there is a small circular area of anomalous magnetic gradient that might be the site of a structure or a fill*'.

Following the results of the geophysical survey, further consultation stated that:

"The geophysics results indicate two features of archaeological potential (ditch fill 3 and circular area 4, page 18) which require further investigation by trenching to determine their origin, function and dating so that we can advise on any subsequent mitigation required."

The scope of the work is set out in the following paragraph and states:

"The evaluation will include two trenches of varying length to fully cross geophysics features 3 and 4 and extend up to 3 metres beyond to test for the presence of sub-surface remains. All work will be completed in accordance with the relevant CIFA standards and guidance on evaluation and project archiving and reporting."

2.2.3 Trial trenches

The trial trenching was undertaken in December 2021. The summary of the subsequent report (TigergGeo, 2022) states that:

"A total of four trenches were positioned to test potential anomalies of archaeological interest identified in a previous geophysical survey. Two of the targets were identified and features of potential archaeological interest were revealed in Trenches 1 and 3. Unfortunately the extent of groundwater ingress into the trenches limited any meaningful investigation through excavation, and the character and nature of these

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features could not be established."

Following the results of the trial trenching, further consultation (dated 16th May 2022) on amended plans for the develop stated that:

"An initial area of 10x10 metres around features in trenches 1 and 3 should therefore be investigated by a strip/map/excavate methodology. If these features continue beyond the 10x10 initial area the trench should be expanded accordingly until the entire feature and any associated deposits are fully investigated and recorded. This mitigation is recommended in accordance with Planning Policy Wales (Feb 2021) and TAN24 (May 2017)."

2.3 Planning permission

The above consultation recommended a planning condition to facilitate the a scheme of archaeological work.

The condition states that:

"No development shall take place within the application area until the applicant, or their agents or successors in title, has secured the implementation of a programme of archaeological work in accordance with a written scheme of investigation, which has been submitted by the applicant and approved in writing by the Local Planning Authority.

The archaeological programme of work will be undertaken and completed in accordance with the relevant Standards and Guidance laid down by the Chartered Institute for Archaeologists. A copy of the resulting report should be submitted to the Local Planning Authority and the Development Control Archaeologist, (Clwyd-Powys Archaeological Trust, The Offices, Coed y Dinas, Welshpool, SY21 8RP Email: mark.walters@cpat.org.uk Tel: 01938 553670). After approval by the Local Planning Authority, a copy of the report and resulting archive should also be sent to the Historic Environment Record Officer, Clwyd- Powys Archaeological Trust for inclusion in the regional Historic Environment Record and to the National Monuments Record, RCAHMW."

Reason: To secure preservation by record of all archaeological remains which will be impacted by the development.

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3 Aims and objectives

3.1 Aims

The proposed development has the potential to damage or remove archaeological remains within the development area. Therefore the project aim is to identify and preserve by record, any significant archaeological remains present within the development area as a contribution to the knowledge of the archaeology in the area.

The aims of the project are:

- to establish the character, date, state of preservation and extent of any archaeological remains within the proposed development area;
- understand further the character, form, function and date of any potential archaeology;
- to preserve by record and significant archaeological remains within the development area and to attempt a reconstruction of the history and use of the site; and
- to contribute to an understanding of the archaeologic remains of the area with regard to local, regional and national research frameworks.

3.2 Objective

The objective of the strip, map and sample excavation (SMS) is to establish and make available all information gained about the archaeological resource at the site.

3.3 Research frameworks

The aims and objectives should be updated when the character and nature of the archaeological resource is determined and should be set against relevant local, regional and national research frameworks.

3.4 Standards and guidance

The project will be managed by a corporate grade member of the Chartered Institute for Archaeologists (CIfA) and the following guidelines and standards for archaeological fieldwork will be adhered to during and throughout the investigation:

- Chartered Institute for Archaeologists – Code of Conduct (Revised, 2022);
- Chartered Institute for Archaeologists – Standard for archaeological excavation (2023);
- Chartered Institute for Archaeologists – Universal guidance for archaeological excavation (2023);
- Chartered Institute for Archaeologists – Universal guidance for archaeological monitoring and recording (2023);

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- Historic England – Management of Research Projects in the Historic Environmental (MoRPHE) (2015) and Project Planning Note 3 (to be used with MoRPHE) (2015);
- Welsh Government - Technical Advice Note (TAN) 24: The Historic Environment (2017)

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4 Fieldwork methodology

This section sets out the design of the archaeological project, detailing the strip, map and sample excavation and appropriate recording methods.

4.1 The development site

The development site remains under agricultural/pastoral management

4.2 Archaeological strip, map and sample excavation (SMS)

The SMS will comprise two 10m x 10m areas focused on features identified but not investigated in a previous programme of trial trenches (TigerGeo, 2022). If the features are of archaeological interest and continue beyond the initial strip, the SMS will extend to map the full extent of the features. The areas are named Area 1 and Area 3 (as per the trial trenches).

4.2.1 Archaeological excavation

Deposits considered not to be significant will be removed by an appropriate mechanical excavator fitted with a toothless bucket, under close archaeological supervision. All mechanical works will be monitored by a suitably experienced archaeologist who will control the level excavated to, and stop machining at the top of the first potentially significant archaeological horizon, or the top of the natural substrate, whichever is higher.

Where archaeological excavation is warranted it will be done so by hand and using appropriate tools. Exposed surfaces will be cleaned by trowel and hoe as necessary in order to clarify features and deposits. All features will be investigated and recorded to fully understand, characterise, date and determine their significance. There will be sufficient excavation to give clear evidence for the period, depth, and nature of any archaeological deposit. Investigation slots through all linear features will be a least 10% or 1m in width (whichever is greater). If linear features are substantial an alternative sampling strategy will be discussed with the LPA. Pit features will be half sectioned or excavated in quadrants where they are large or found to be deep. If necessary, an auger will be used to gain information from deep deposits below 1m in depth. Smaller discrete features will generally be 100% sampled.

4.2.2 Archaeological recording

The recording system is digital and will be undertaken using an Android device and the Diggit App. The app features archaeology-specific icons to guide recording of multiple field techniques with a full range of feature, deposit, find and environmental sample options. The digital recording will be backed-up by an on-site diary.

All plan and section locations will be prepared on drawing film and tied to Ordnance Survey grid through Network RTK GNSS. The following plans and sections are required:

- An overall site plan showing the location of the trenches and their position in relation to the National

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Grid, will be prepared at 1:2500 scale;

- Trench plans will be prepared at 1:50 scale
- Detailed plans of individual features and contexts including AOD heights will be prepared at 1:10 or 1:20 scale; and
- Sections containing significant deposits, including half sections, will be prepared at 1:10 or 1:20 scale and include heights AOD.

An adequate photographic record of all archaeological remains will be maintained, in both plan and section, using digital single lens reflex (SLR) camera. All digital photography will be compatible with standards set out in Historic England's Digital Image Capture and File Storage: Guidelines for Best Practice (Historic England, 2015).

4.3 Finds

With the exception of clearly modern 'plastic era' artefacts all will be retained and treated in accordance with UKIC guidelines, 'First Aid for Finds' (1998). All finds will be bagged and labelled according to the individual deposit from which they were recovered, ready for processing.

All artefacts will be cleaned and those selected for further assessment will be marked with a site code (DLW241) and individual context and small find number, where appropriate, and sent to the relevant specialist staff identified in Section 7.2 .

Following assessment all finds will be bagged in accordance with the selection and retention policy/guidance of the local archaeological archives repository.

4.4 Burials and treasure

In the event of discovery of any human remains, they will initially be left *in situ*. TigerGeo will immediately notify the client and the LPA's Archaeological Advisor.

Following discussions with the Coroner and the LPA's Archaeological Advisor, the need for and appropriateness of their excavation/removal will be determined. An exhumation licence application will be made as appropriate. Where deemed appropriate human remains will be fully recorded, excavated and removed from the site.

Should human remains be encountered, all excavation and post-excavation will be in accordance with Chartered Institute for Archaeologists 2017 Updated guidelines to the standards for recording human remains, English Heritage 2004 Human Bones from Archaeological Sites, Guidelines for producing assessment documents and analytical reports, and English Heritage 2005 Guidance for best practice for treatment of human remains excavated from Christian burial grounds in England.

In the event of discovery of artefacts covered or potentially covered by The Treasure Act, their excavation and removal will be undertaken following notification of Susie White, Finds Liaison Officer - Wrexham County

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Borough Museum and Archives (+44 (0)1978 297 466), the Coroner (unless otherwise advised by the FLO) and the LPA's Historic Environment Officer (Archaeology).

4.5 Environmental sampling

The assessment of the environmental potential of the site through examination of suitable deposits will be undertaken as appropriate and in accordance with Environmental Archaeology: A guide to the theory and practice of methods, from sampling and recovery to post-excavation (second Edition, EH, 2011).

Bulk environmental soil samples would normally be taken from appropriately/securely dated sealed archaeological features or deposits with a high priority given to any anoxic deposits where organic material will likely be preserved and include plant macro fossils, insects and small animal bones and small artefacts. The volume of any samples will be context and sediment specific and will be 40 litres or 100% of feature fills (whichever is less) unless otherwise agreed. Where appropriate, column samples for molluscan remains may also be taken.

Any bulk environmental soil samples which are taken will be processed by flotation and scanned to assess the environmental potential of deposits, but will not be fully analysed. The residues and sieved fractions will be recorded and retained with the project archive.

Where appropriate, a specialist environmental archaeologist or geoarchaeologist will make a site visit to comment/advise on and record significant deposit sequences, for the purpose of furthering the understanding of site formation processes.

4.6 Physical archive

The physical site archive will conform to the requirements of MoRPHE (Historic England, 2015), the Chartered Institute for Archaeologists and The National Standard and Guidance to Best Practice for Collecting and Depositing Archaeological Archives in Wales (Welsh Museums Federation, 2017).

4.7 Data Management Plan

This Data Management Plan (DMP) is intended only for use with project. Recommendations made within the "Dig Digital" document prepared by DigVentures for the Archaeological Archives Forum have been incorporated into this DMP where appropriate for the work concerned and in general compliance with relevant Chartered Institute for Archaeologists (CIfA) standards and guidance documents.

4.7.1 Data collection

The project will produce a subset of the following range of common file formats, relating mostly to photographic and drawn survey, and reporting;

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Format	Data type	Typical purpose / content	Typical / Example size (MB)
ESRI .shp	Vector, proprietary, open	Exports from GIS where there is attached data, e.g. plans and elevations	< 50 per file, multiple files
JPEG	Raster image, open	Non-referenced image data	< 5 per file, multiple files
Manifold GIS .map	GIS database, proprietary, closed	Project GIS	50 – 1000+ per file
Libre office.odt	Word processing, proprietary, closed	Report text	< 1 per file
Portable Document Format .pdf	Mixed media, closed	Report elements	5 - 15 per file, multiple files

Most of the above file formats support sharing and long-term access to information, even if not recognised archival formats or require specific options when creating.

To ensure long term access, semi-raw and processed data may actually be preferable to raw data and especially where raw instrument data is stored in proprietary and non-human-readable formats. For our projects data as close to a raw state as possible while still retaining metadata is available for archival use. Human readable proprietary formats may also be available.

Existing data may be used but would only be retained within this project's archive if the original copyright holder permits it, the data is necessary for future re-use of this project and if the data is not already archived elsewhere.

Data is stored for the lifetime of the project and afterwards within a project specific root folder on an internal server providing RAID-based storage and backed up daily to separate internal and external media. Upon completion of the project non-essential files (e.g. temporary notes, images etc.) may be removed, the integrity of file-naming reviewed and if need be corrected, and the archive reduced in scope to just those files necessary to allow subsequent re-use of the data. This always includes the raw data, the primary stages of processing and associated metadata, the project GIS (for internal use only) and all report editions. Data working storage and internal archives are inspected regularly and checked for errors etc.

Version control is intrinsic to our file naming and document titling, using document fields to ensure consistency.

File naming is systematic by data source and process type. Raw data file naming normally includes a time stamp or where collection methods do not permit this then individual files may be renamed or separated within folders by date. Raw data is stored separately from subsequent process stages.

4.7.2 Documentation and metadata

The primary metadata for the overall project is the report itself as this contains the normal survey and processing metadata documenting collection. Individual file formats are documented where not self-

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explanatory.

The combination of the report and the individual file format metadata is sufficient to allow the data to be read and re-interpreted in the future. It is these documents, alongside the data, that form the project archive.

4.7.3 Ethics and legal compliance

No known ethical, copyright or intellectual property rights issues have been identified for project WSK241. All data collected by us remains our copyright and intellectual property rights are retained. Future re-use of the data is by licence and upon application, unless the data is deposited in a public depository; copyright and intellectual property rights normally being retained. This is partly to protect the client in the case of subsequent dispute and to ensure that we are not prevented from reusing and producing new derived material from the data.

Any data for which external consent is required will be removed from the archive, e.g. digital Ordnance Survey data, unless specific permission has been granted.

Working data storage and archives are GDPR 2018 compliant in that personal data is not stored within them. The protection of the identity of individuals is ensured by minimising reference to them, except where necessary to the report, e.g. a statement of who gave a consent for something, or simple acknowledgement of their contribution. No addresses, telephone numbers or other identifying or personal data is included in reporting and only that strictly necessary to the discharge of the project is present within the working data store.

The storage of personal data is, regardless of the above, subject to the provisions within our separate *Personal Data Protection Policy*.

4.7.4 Storage and backup

Data at all stages of a project is stored on an internal server providing RAID-based storage and backed up daily to separate internal and external disk-based storage. The storage is regularly scanned by a commercial antivirus system plus file copying is guarded by the same system.

Use of USB sticks and similar removable storage media is not generally permitted except for transfer of data to and from field instrumentation and laptops. These are also subject to antivirus scanning and periodic reformatting in the case of removable media.

Physical access to the data is limited by hardware security on the server itself, software access by the normal computing log-in based security systems.

4.7.5 Selection and preservation

The data retained in the archive that could become public normally includes just those files necessary to allow subsequent re-use of the data; we maintain a private archive that includes other data relevant to

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project administration. The potentially public archive includes the raw data, the primary stages of processing and associated metadata, the project GIS and all report editions.

Removal of unwanted data occurs at the end of the project upon migration from working to long term storage. By definition, such data is either of no further use to the project, is subject to a licence time-out or can be regenerated so is generally deleted.

Foreseeable uses of the data include re-use within subsequent projects, re-evaluation after excavations/survey, if data from these is made available, and for supporting technical research. Occasionally there may be scope for publication of some aspects of the results and that might include reprocessing and imaging.

Specific archival arrangements for this project are the retention of data within our own archive. Additional archive provision may include the following, subject to discussion with the client and agreement of costs, some of which cannot yet be quantified.

The selection policy will follow the The National Standard and Guidance to Best Practice for Collecting and Depositing Archaeological Archives in Wales (Welsh Museums Federation, 2017).

4.7.6 Data sharing and accessibility

Data is archived securely on internal systems and arrangements will be made to copy the data to an external archive.

Data is shared on the basis of an agreement; we retain copyright and intellectual property rights by default. We are always happy to support *bona fide* research using our data subject to permission being granted by the client. Data obtained from a third party archive is not warranted by ourselves although obviously we will assist with genuine requests for support and information. Commercial re-use of our data by third parties is explicitly prohibited.

4.7.7 Responsibilities

This document would normally be prepared by the Project Manager for this project, who is also responsible for creation and preparation of the working data store and for ensuring the data is maintained in good order throughout the lifetime of the project.

Maintenance of the data storage hardware, data integrity checking and maintenance of the internal archive is the responsibility of the company management.

A separate policy document *QMS – Survey and Reporting* defines the different types and requirements of a responsible person.

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5 Reporting

5.1 Strip, map and sample excavation (SMS) report

A report (to include a welsh summary) detailing the results of the SMS will be prepared within approximately six weeks of the completion of site works. It is expected that the format of the report will be based on CIfA on the Standard and Universal guidance documents prepared by the Chartered Institute for Archaeologists (CIfA, 2023). A copy of the report will be sent to the client for approval and then to the Local Planning Authority (LPA) for comment. Any comments will be addressed and upon approval of the report a digital copy (in PDF format) will be made available. Notes or articles describing the work may be submitted for publication to an appropriate local journal and/or national journals, dependent on the nature of the results. A copy of any such works will be sent to the LPA.

Should post-excavation work and publication be required, it would be carried out in accordance with the guidelines contained in Historic England's Management of Research Projects in the Historic Environment: The MoRPHE Project Managers' Guide (Historic England, 2015). The final report would normally be expected to be submitted within one year of completion of the final stage of on-site work, though variation of this time-scale may be considered if there are external considerations that make it difficult to meet (if the relevant specialists are unavailable, for example).

5.2 Deliverables

A PDF copy of the final report complete with OASIS summary form will be supplied to the LPA, and once approved a copy will be submitted to Heneb: Clwyd–Powys comprising the text and report images exported from the project GIS. In addition, digital report elements are available as vector and raster components exported from the GIS as geo-referenced objects. Images are available in Geo TiFF format and purely vector elements in AutoCAD R12 DXF format. Spatial database data is available in SHP file format.

5.3 Dissemination

A copy of the final report complete with OASIS summary form will be supplied to the Welsh Historic Environment Records via Heneb: Clwyd–Powys. TigerGeo reserves the right to display data rendered anonymous on its website and in other marketing or research publications.

5.4 Archiving

TigerGeo maintains an archive for all its projects, access to which is permitted for research purposes. Copyright and intellectual property rights are retained by TigerGeo on all material it has produced, the client having full licence to use such material as benefits their project. This archive contains all project data, communications, field notes, reports and other related material including copies of third party data (e.g. CAD mapping, etc.) in digital form unless required to delete these, e.g. certain classes of OS digital data upon licence expiry. The project will be registered on the OASIS system provided there are no conflicting

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requirements for confidentiality.

The digital archive will be prepared to meet these specifications:

- Standard and Guidance for the creation, compilation, transfer and deposition of archaeological archives (Chartered Institute for Archaeologists, 2014, Updated 2020); and
- The National Standard and Guidance to Best Practice for Collecting and Depositing Archaeological Archives in Wales (Welsh Museums Federation 2017.

6 Timetable

The LPA's Archaeological Advisor will be given notice of when work is due to commence and will be free to visit the site by prior arrangement. Should any unexpected remains be found, in particular of prehistoric or Roman date, it might be necessary, in liaison with the archaeological advisor, to formulate a strategy designed to fully establish their treatment.

7 Staffing

7.1 Project management

All project management will be undertaken by Daniel Lewis, a suitably qualified archaeologist and Member of the Chartered Institute for Archaeologists. Under the guidance of the project manager, archaeologists with suitable experience in this type of investigation will undertake the fieldwork adhering to the CIfA Code of Conduct.

7.2 Specialist Personnel

Following the initial assessment the following specialists (as required) will undertake various components of the report:

- a report on pottery will be carried out by Derek Hurst, Worcestershire Archaeology Service;
- a report on animal bone would be undertaken by Ian Baxter, Freelance Specialist;
- identification of worked flint will be carried out by Julian Richards, Freelance Specialist;
- a report on metal objects and small finds will be undertaken by Lynne Bevan, Freelance Specialist;
- coins will be identified by Richard Brewer, National Museum of Wales;
- an assessment of palaeoenvironmental samples will be undertaken by Elizabeth Pearson, Worcestershire Archaeology Service;
- a report on human bone would be undertaken by Sharon Cough, Freelance Specialist; and
- scientific dating (C14) will be undertaken by Scottish Universities Environmental Research Centre.

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8 Site specific

8.1 Other designations, services, rights of way, tree preservation orders, etc.

The client will inform TigerGeo of any non-archaeological environmental or other designations that may be affected by the proposed works before the commencement of fieldwork. The client will also inform TigerGeo of live or disused cables, gas pipes, water pipes or other services. Known cables/services should clearly be identified and marked where necessary. The client will likewise inform TigerGeo of any public rights of way or permissive paths on or near the site that may be affected by the work. The client will also inform TigerGeo of any trees subject to Tree Preservation orders within the site or its boundaries.

8.2 Site Security

This WSI is based on the assumption that the site will be sufficiently secure for archaeological work to commence. All security requirements for the wider site are the responsibility of the client. TigerGeo will ensure suitable fencing surrounds each of the open trenches but will not accept any responsibility for the wider site area.

9 Monitoring and Access

The LPA's Archaeological Advisor will be informed in advance of the start of work and arrangements made for the adequate monitoring of the fieldwork. This may involve, in the event of significant archaeology, a site review meeting.

10 Health and Safety

Archaeological staff will operate under TigerGeo's Health and Safety Policy and in accordance with current Health and Safety legislation, to include (but not exclusively rely upon) the Health and Safety at Work, etc. Act 1974, the Management of Health and Safety at Work Regulations 1992 and the Construction (Design and Management) Regulations 2007.

In accordance with the provisions of TigerGeo's Health and Safety Policy the Site Director will be responsible for ensuring that operations under their control are carried out in accordance with the approved procedures as set out in the project risk assessment.

Archaeological staff will not work in unsafe conditions; even where not to do so will result in the possible under-recording of the archaeological resource. Excavation will not normally exceed 1.20m depth, except where either access by site personnel is not required, or where suitable shoring of trench sides is provided.

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11 Quality assurance

TigerGeo is developing an Integrated Management System (IMS) towards ISO certification for ISO9001, ISO14001 and OHSAS18001/ISO45001. For work within the archaeological sector TigerGeo has been awarded CIfA (Chartered Institute for Archaeologists) Registered Organisation status.

A high standard of client-centred professionalism is maintained in accordance with the requirements of relevant professional bodies including the Geological Society of London (GeolSoc) and the Chartered Institute for Archaeologists (CIfA). Senior members of TigerGeo are professional members of the GeolSoc (FGS) and CIfA (MCIfA).

There is a strong culture of internal peer-review within TigerGeo, for example, all reports pass through a process of authorship, technical review and finally proof-reading before release to the client. All work is undertaken in accordance with the high professional standards and technical competence expected by the Geological Society of London and the European Association of Geoscientists and Engineers.

12 Insurance

TigerGeo Ltd is covered by Public Liability Insurance and Professional Indemnity Insurance by Towergate Insurance. Copies of the certificates are held at our office and can be supplied upon request of TigerGeo.

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13 Bibliography

Coflein (https://coflein.gov.uk/en/)

British Geological Survey 1: 50,000 mapping (https://mapapps.bgs.ac.uk/geologyofbritain/home.html)

Google Maps (https://www.google.com/maps/)

National Library of Scotland (NLS) historic mapping (https://maps.nls.uk/geo/explore/side-by-side/)

The National Library of Wales, Welsh Tithe Maps and Apportionments (https://places.library.wales/browse/)

National Panel for Archaeological Archives in Wales, 2017, "*The National Standard and Guidance to Best Practice for Collecting and Depositing Archaeological Archives in Wales*", Welsh Museums Federation

National Soil Resources Institute (NSRI) Soilscapes mapping (https://mapapps2.bgs.ac.uk/ukso/home.html)

TigerGeo, 2021, "Proposed Development off Llay New Road, Rhosrobin, Wrexham: Geophysical Survey" Ref. TG_DLW211_REPORT_V1.0

TigerGeo, 2022, "Proposed Development off Llay New Road, Rhosrobin, Wrexham: Field Evaluation (Trial Trenching)" Ref. TG_DLW212_REPORT_V1.0

14 For reference

Chartered Institute for Archaeologists, 2014, Revised 2021, "Code of Conduct" Reading

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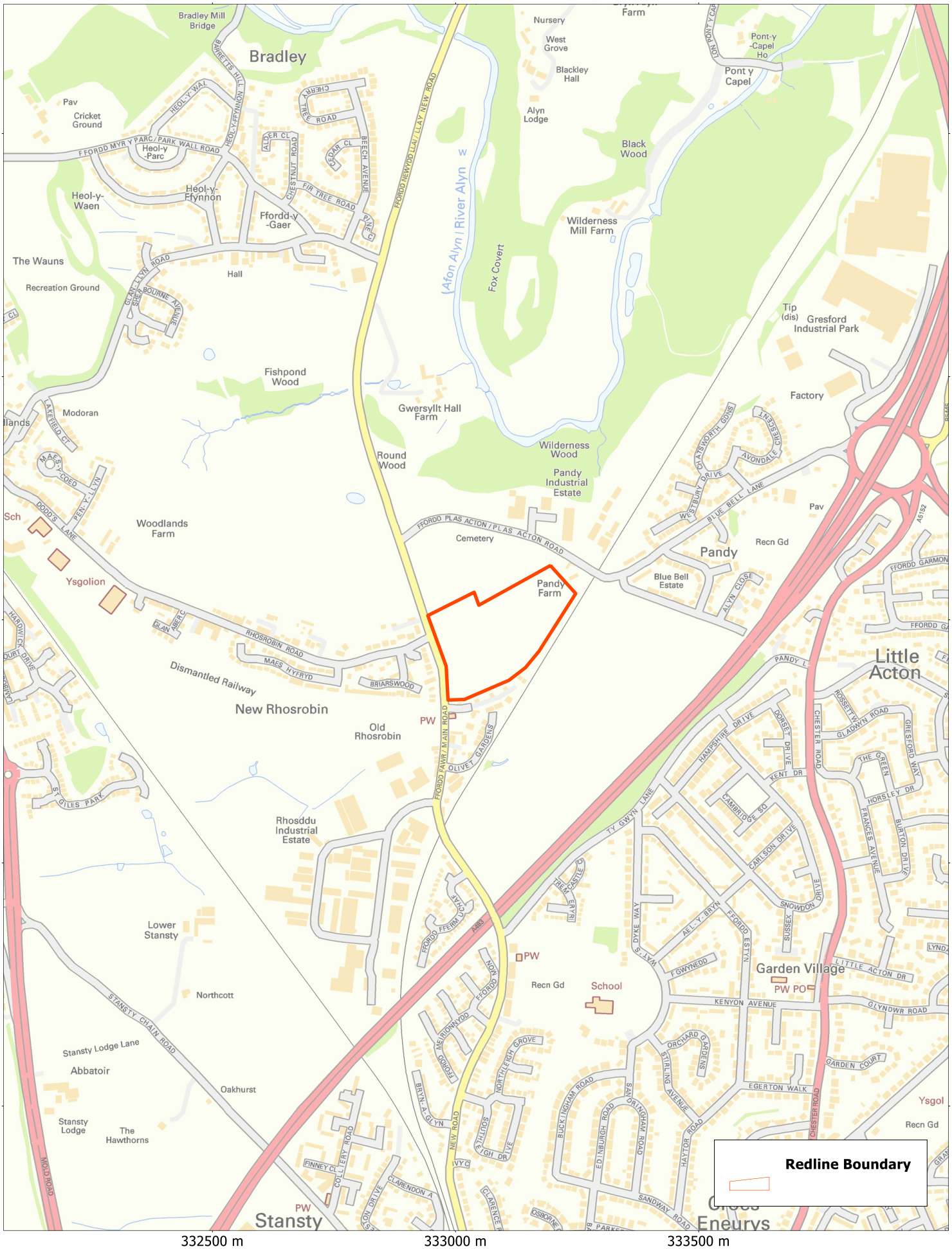
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15 Illustrations

Drawing	Title
DWG 01	Location Plan
DWG 02a	SMS Area 1
DWG 02b	SMS Area 3

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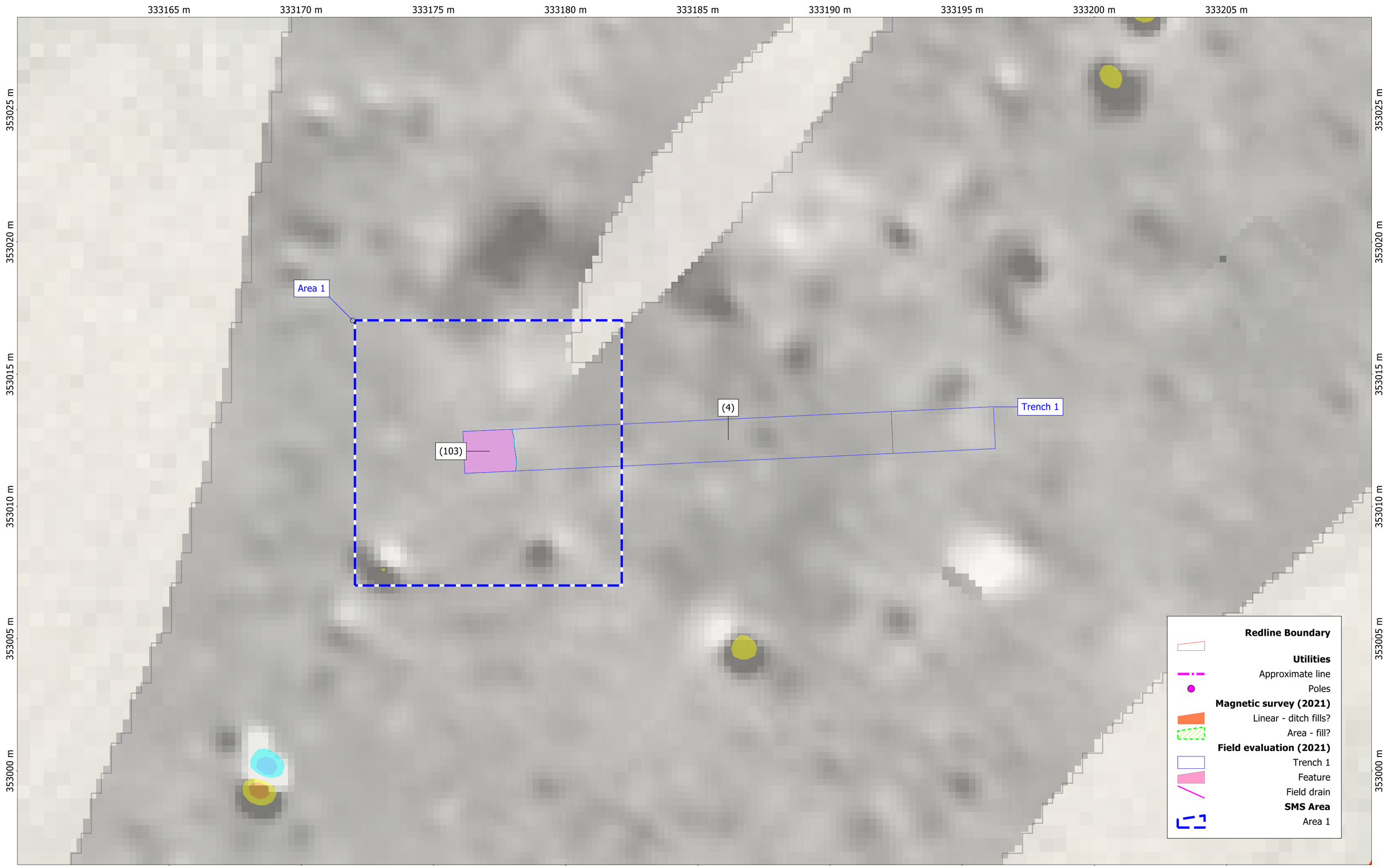
DLW241 Development off Llay New Road, Rhosrobin, Wrexham

DWG 01 Location Plan

Orthographic Scale: 1:10000 @ A4 Spatial Units: Meter. Do not scale off this drawing

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DLW241 Development off Llay New Road, Rhosrobin, Wrexham
DWG 02a SMS Area 1

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333010 m 333020 m 333030 m 333040 m 333050 m

352950 m

352940 m

352930 m

Area 3

(103)

(5)

Trench 3

Redline Boundary

Utilities
Approximate line
Poles

Magnetic survey (2021)
Linear - ditch fills?
Area - fill?

Field evaluation (2021)
Trench 1
Feature
Field drain

SMS Area
Area 1

333010 m 333020 m 333030 m 333040 m 333050 m

DLW241 Development off Llay New Road, Rhosrobin, Wrexham
DWG 02b SMS Area 3

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