

M42 Junction 6 Improvement Scheme Number TR010027 Volume 6 6.3 Environmental Statement Appendix 7.1 WSI for Archaeological Evaluation Trenching

Regulation 5(2)(a)

Planning Act 2008

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

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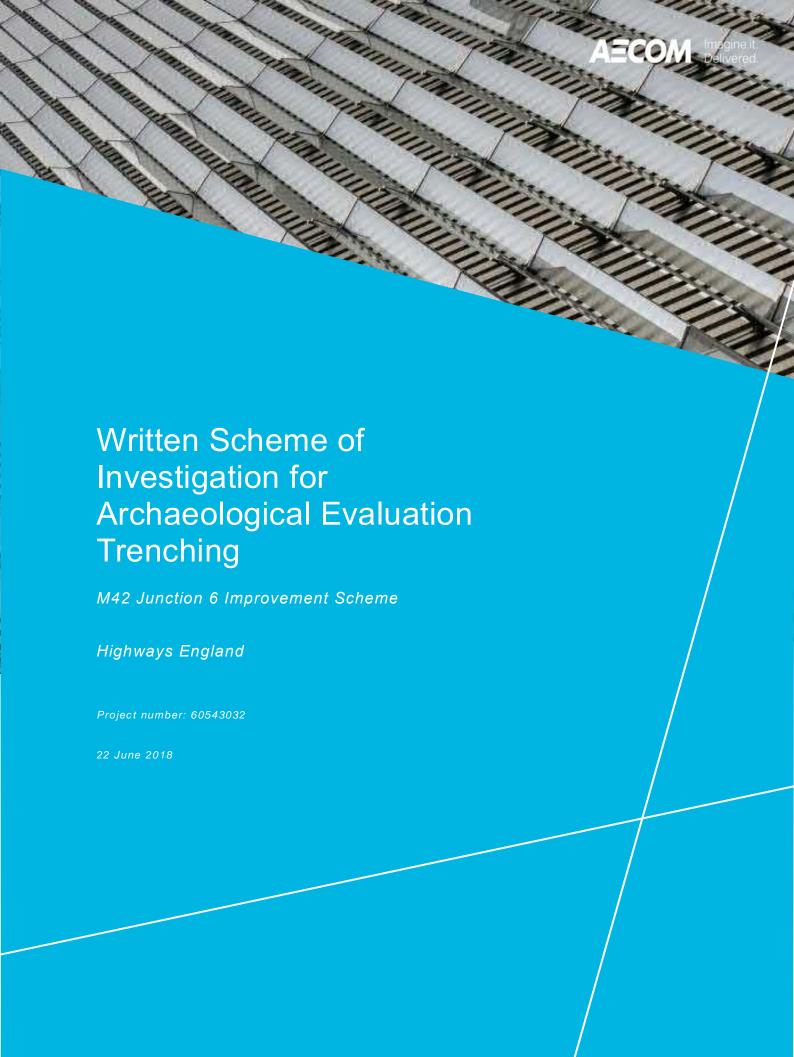
M42 Junction 6 Improvement

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6.3 Environmental Statement Appendix 7.1 WSI for Archaeological Evaluation Trenching

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Written Scheme of Investigation for Archaeological Evaluation Trenching

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1. Introduction

1.1 Project Background

AECOM has been commissioned by Highways England (the Client) to undertake an Environmental Impact Assessment of proposed improvement works as part of the M42 Junction 6 Improvement Scheme (the proposed scheme).

This Written Scheme of Investigation (WSI) and accompanying figures set out the methodology for undertaking a programme of archaeological evaluation trenching, the purpose being to contribute to the understanding of the extent and nature of the archaeological resource that could be affected by the proposed scheme. The results of the evaluation trenching will also inform the design of a suitable archaeological mitigation strategy.

This WSI has been prepared by AECOM (the Consultant) on behalf of the Client in accordance with guidance provided by the Design Manual for Roads and Bridges (DMRB) Volume 10, Section 6, Part 1 (Highways Agency, 2001) and the Chartered Institute for Archaeologists (ClfA) Standard and Guidance for archaeological field evaluation (2014).

The WSI will be approved by the County Archaeologist for Warwickshire. The works specified in this WSI will then be let by competitive tender by the Consultant to an archaeological contractor (the Contractor).

1.2 Site Location, Development Description and Geology

M42 Junction 6 provides connections between the national motorway network and the A45 Coventry Road which provides strategic access to Birmingham to the west and Coventry to the east. The junction lies on the eastern edge of Birmingham, approximately 11km from the city centre, with its nearest town being Solihull.

The proposed scheme is located to the west of the existing M42 Junction in the area of green belt. The scheme limits, cover the A45 in an east-west direction from Clock Interchange (junction with the B4438) in the west to the A452 junction at Stonebridge Island to the east. In the north-south direction, the scheme limits are generally located at the midpoint between junctions 5-6 in the south and mid-point between Junctions 6-7 in the north.

The location of the proposed scheme is shown on Figure 1.

The objective of the proposed works is to:

- a. promote the safe and reliable operation of the road network;
- b. increase the capacity of the junction;
- c. improve access to key businesses; and
- d. support economic growth.

A detailed description of the proposed scheme is provided in Chapter 3 of the Environmental Statement (AECOM 2018). In summary, the proposed scheme comprises the construction of a new junction on the M42 and 2.4km of dual carriageway linking it to the existing Clock Interchange on the A45. The proposed works will also require some modifications to the existing road network and supporting structures such as site compounds, balancing ponds etc.

Geology

The bedrock geology of the site consists of Branscombe and Sidmouth formations of mudstone as well as Arden Sandstone Formation. The superficial geology consists of Glaciofluvial deposits (sand and gravel) and alluvium (clay, silt, sand and gravel), although these are patchy (http://mapapps.bgs.ac.uk/geologyofbritain/home.html).

2. Archaeology & Historical Background

A Scoping Report was produced by the Consultant in September 2017, the purpose being to identify the form and nature of the assessments to be undertaken as part of the EIA of the proposed scheme. The report accompanied a formal request for a Scoping Opinion made to the Planning Inspectorate, and contained details of the proposed scope of the Cultural Heritage assessment.

As part of the scoping exercise a study area of 500m from the proposed scheme boundary was identified, within which information on heritage assets was gathered to establish their type, distribution and importance.

2.1 Existing and Baseline Knowledge

There are three scheduled monuments within the 500m study area, including a moated site, at Moat House (1017243) and the Moated Site at Eastcote Hall (1017529), both of which are medieval in date. Moat House includes the buried earthwork and standing remains of the moated and walled manorial complex. The site at Eastcote Hall also consists of buried and earthwork remains and is smaller in size. A scheduled cross (1017815) is located within the churchyard of St Mary and St Bartholomew's Church and is principally medieval in date. This is also a Grade II listed building (1076764).

Two Conservation Areas are located within the 500m study area, these being Hampden-in-Arden and Bickenhill.

The 500m study area contains archaeological remains dating from the Mesolithic (10,000-3500 BC) through to the modern (1901-present) period. Cropmarks of potential field boundaries, trackways and enclosures, as well as individual small finds such as a flint blades and a copper palstave axe, indicate activity in the area in the prehistoric periods. Evidence of Roman (AD 43-AD 450) activity within the study area is limited to individual finds of mainly pottery. However, some of the cropmarks recorded in the area may potentially represent Romano-British activity. The early medieval (450-1066AD) period is associated with the woodland clearances and expansion of land cultivation activity. The medieval (1066-1500AD) period was one of great expansion for the area. A number of settlements were established, including Bickenhill and Hampton-in-Arden, and there is evidence for a further three Deserted Medieval Villages within the study area. Alongside these are three moated sites, including the two scheduled examples mentioned above. Throughout the medieval period and into the post-medieval (1500-1900) the area remained largely rural in nature, despite the rapid industrial growth of Birmingham during the 19th century. The most significant change to the area came in the modern period when Birmingham airport was opened in the early 20th century.

2.2 Archaeological Geophysical Survey

An archaeological geophysical survey was carried out along the line of the proposed scheme by Phase Site Investigations in April and May 2018.

Preliminary interpretation of the results of this survey suggests that there has been a great deal of modern disturbance from tipped material and made ground. There is also evidence for general rubble and ferrous debris mixed within the topsoil which makes identification of possible weaker anomalies more difficult.

The geophysical survey revealed evidence for linears and curvilinears in some areas. These have been interpreted as evidence of infilled features though none form any major patterns or relationships. These features may relate to modern activity such as services, drains or former field boundaries.

Agricultural responses suggest that the local soils have a relatively low magnetic susceptibility with the result that infilled features only produce weak or not measureable anomalies. The survey produced a lack of responses suggestive of archaeological activity though this could be due to the nature of the local conditions with more archaeological features than have been identified.

2.3 Ground Investigation Monitoring

Between 26th January and 8th May 2018, 31 ground investigation (GI) test pits were excavated under archaeological supervision. The test pits were between 3.0m and 5.0m long and 0.40m and 4.5m deep. Subsoil was present in 26 of the test pits and one was found to be in an area of thick made ground that was not breached during the excavation.

Of the 31 test pits, seven contained one or more modern land drains, six of which were less than 1.00m below the surface. A further three were found to contain made ground which was between 0.77m and 2.2m thick and was considered to relate to the construction of the M42.

No features of archaeological significance were identified.

3. Project Objectives

3.1 General Objectives

The evaluation trenching objectives are:

- to confirm the presence or absence of surviving archaeological remains within land required to construct, operate and maintain the proposed scheme;
- to determine the location, nature, date, condition, state of preservation, significance and complexity of any archaeological remains;
- to determine the likely range, quality and quantity of artefactual and environmental evidence present; and
- to inform the design of any detailed archaeological mitigation required.

4. Scope of Work

The evaluation trenching will cover the area as shown on Figure 2 and will comprise 101 trenches. These trenches will all measure 2m wide by 50m long. Details of the proposed trial trenching regime are outlined in Table 1 below.

Table 1. Archaeological Evaluation Trenching

Table 1 – Trench Locations

		Trench Extents		
Evaluation Trench Number	Easting	Northing	Easting	Northing
1	419226.164	282939.791	419178.745	282923.936
2	419141.417	282937.816	419157.272	282890.396
3	419123.749	282905.548	419076.329	282889.693
4	419106.065	282866.948	419121.920	282819.529
5	419143.393	282853.068	419190.812	282868.924
6	419175.984	282831.279	419191.839	282783.859
7	419154.511	282797.739	419107.092	282781.884
8	419140.632	282760.411	419156.486	282712.992
9	419119.159	282726.872	419071.739	282711.016
10	419074.379	282741.792	419075.879	282791.770
11	419056.298	282863.637	419009.011	282879.884
12	419027.029	282834.257	419042.883	282786.838
13	419035.002	282765.704	419050.857	282718.284
14	418958.276	282870.470	418974.130	282823.050
15	419005.556	282800.717	418958.136	282784.861
16	418970.510	282762.397	418986.364	282714.977
17	418936.803	282836.930	418889.383	282821.074
18	418920.809	282798.740	418936.664	282751.320
19	418928.965	282711.133	418888.045	282682.400
20	418852.056	282834.953	418867.911	282787.534
21	418899.336	282765.200	418851.917	282749.345
22	418880.707	282716.542	418830.746	282718.524
23	418942.034	282652.000	418892.174	282648.267
24	418830.583	282801.414	418783.164	282785.558
25	418768.171	282750.282	418718.211	282752.263
26	418688.928	282751.169	418686.947	282701.208
27	418734.165	282728.871	418732.184	282678.911
28	418710.699	282669.241	418660.738	282671.223
29	418689.971	282794.693	418646.307	282819.054
30	418607.254	282808.252	418626.999	282762.316

Table 1 – Trench Locations

		Trench Extents		
Evaluation Trench Number	Easting	Northing	Easting	Northing
31	418590.705	282760.326	418589.786	282710.334
32	418701.423	282638.410	418699.442	282588.449
33	418666.211	282596.555	418643.485	282641.092
34	418656.300	282559.311	418706.261	282557.329
35	418626.315	282585.519	418624.334	282535.558
36	418598.126	282505.573	418648.086	282503.592
37	418594.104	282420.219	418598.152	282370.383
38	418545.836	282459.447	418547.361	282409.471
39	418529.908	282397.881	418531.433	282347.904
40	418558.099	282304.256	418508.122	282302.73
41	418474.754	282319.938	418449.380	282276.855
42	418534.056	282272.508	418535.581	282222.53
43	418503.833	282246.574	418453.856	282245.049
44	418561.516	282192.308	418511.539	282190.783
45	418479.790	282214.826	418481.315	282164.849
46	418449.567	282188.892	418399.591	282187.367
47	418512.687	282147.422	418557.280	282124.808
48	418520.963	282108.467	418498.348	282063.873
49	418471.212	282106.964	418426.619	282129.578
50	418517.618	282050.599	418525.733	282001.262
51	418471.709	282038.760	418448.045	282082.806
52	418411.014	282091.746	418400.807	282042.799
53	418393.153	282007.015	418437.747	281984.40
54	418423.343	281967.915	418390.349	281930.346
55	418401.353	281902.636	418436.564	281867.136
56	418405.379	281867.323	418370.193	281831.798
57	418460.270	281861.451	418427.485	281823.700
58	418435.820	281728.239	418451.627	281680.804
59	418415.502	281645.170	418461.050	281624.544
60	418533.625	281651.274	418573.955	281621.719
61	418515.891	281535.883	418510.653	281486.158
62	418549.334	281559.166	418544.096	281509.442
63	418485.026	281461.392	418535.008	281462.712
64	418489.041	281414.696	418484.491	281364.904
65	418472.928	281335.633	418522.768	281331.640
66	418477.318	281301.153	418473.142	281251.328
67	418472.451	281215.614	418471.236	281165.628
68	418475.560	281149.278	418519.440	281125.308
69	418454.969	281130.335	418481.823	281088.159

Table 1 – Trench Locations

		Trench Extents		
Evaluation Trench Number	Easting	Northing	Easting	Northing
70	418442.247	281092.597	418400.070	281065.743
71	418561.312	281098.310	418606.294	281076.479
72	418564.222	281071.323	418609.204	281049.491
73	418581.572	281470.879	418537.946	281446.452
74	418567.284	281445.163	418591.711	281401.536
75	418628.670	281386.702	418585.043	281362.274
76	418622.002	281347.439	418646.429	281303.813
77	418677.034	281284.554	418672.198	281234.788
78	418750.947	281225.490	418707.321	281201.062
79	418729.291	281176.767	418777.868	281164.927
80	418719.007	281156.047	418697.175	281111.065
81	418663.530	281094.488	418708.512	281072.657
82	418774.002	281086.304	418813.316	281117.197
83	418836.382	281073.083	418834.210	281023.130
84	418883.528	281027.305	418844.214	280996.412
85	418901.149	280965.402	418932.043	280926.088
86	418926.287	280989.491	418967.602	280961.330
87	419000.415	280908.877	418970.731	280868.642
88	419027.041	280927.843	419073.222	280908.678
89	419015.062	280886.322	419064.565	280879.291
90	419002.875	280847.054	419033.768	280807.740
91	418996.525	280773.235	419027.418	280733.921
92	419028.106	280767.522	419067.420	280798.415
93	419085.690	280818.479	419116.583	280779.165
94	419090.450	280723.798	419043.593	280706.350
95	419155.404	280681.058	419203.543	280667.543
96	419187.853	280704.146	419201.368	280752.285
97	419185.677	280788.889	419233.816	280775.374
98	419270.420	280791.064	419256.905	280742.925
99	419284.293	280877.050	419270.778	280828.911
100	419213.363	280821.502	419226.878	280869.641
101	419247.612	280882.443	419281.342	280919.351

5. Works Specification

5.1 General Works

All archaeological works will be carried out in accordance with this WSI, and any further instructions provided by the Consultant. This WSI takes account of assessment guidance in Standard and Guidance for Archaeological

Field Evaluation prepared by the Chartered Institute for Archaeologists (ClfA 2014); the ClfA Code of Conduct (ClfA 2014b) and other current and relevant best practice and standards and guidance (refer to Appendix 1).

The Contractor shall prepare and submit a Risk Assessment and Archaeological Method Statement for the works prior to the commencement of the fieldwork. The draft Archaeological Method Statement will be submitted to the Client and the Consultant for their review and approval.

The Consultant will provide the Contractor with AutoCAD Ordnance Survey mapping for the works area, and the proposed scheme layout.

To ensure the successful completion of the archaeological trial trench evaluation, the Contractor shall:

- provide an Archaeological Method Statement inclusive of risk assessment and safe method of working;
- provide suitably qualified and competent staff who have valid Construction Skills Certification Scheme (CSCS) cards;
- provide a mechanical excavator suitable to cleanly excavate the trial trenches. The machine will need to be fitted with a toothless ditching bucket to reduce each trench under the archaeological supervision of the contractor;
- provide appropriate safety fencing and edge protection for each trench;
- provide and monitor/maintain safe access into the trial trenches. No staff are to enter the trenches if it is declared unsafe by any competent person or the archaeological site supervisor;
- provide a suitably qualified archaeologist, experienced in archaeological investigation, recording and the nature of archaeological deposits which are expected on this site;
- work with the Client and the Consultant to safely complete the archaeological site works;
- provide all hand tools and recording materials required to complete the archaeological evaluation; and
- ensure that during the archaeological trial trench evaluation the extent of any surviving archaeological
 deposits are mapped, and that any surviving archaeological remains are hand cleaned, defined and sample
 excavated, sufficient to determine type, plan form and relationships and that these are recorded.

5.2 Specific Works

Evaluation trenches will be excavated at the locations indicated by the Consultant and shown on Figure 2.

The trenches will be positioned using metric-survey equipment to an accuracy of ±100mm of the specified trench location. Each trench will be opened under direct archaeological supervision using an appropriate mechanical excavator fitted with a toothless ditching bucket. The arisings from the archaeological works will be stored adjacent to each trench (within a safe working distance) and will be separated according to material (i.e. topsoil from subsoil).

Due to the proximity of the airport to the north, all arisings will be covered by appropriate sheeting (eg tarpaulin) during storage. This is to discourage birds from being attracted to the area.

All trenches are to be the stated dimensions at their base as indicated in Table 1.

If important concentrations of artefacts suggestive of significant activity are uncovered during machining, these should be left in situ in the first instance and investigated using hand tools only. Where required, the machined surface will be cleaned by hand to allow acceptable definition of the archaeological remains. Following cleaning, all archaeological remains will be planned, to enable the selection of features and deposits for sample excavation by the Contractor.

The Contractor shall ensure that the archaeological investigations are undertaken in an organised, efficient and professional manner.

The Contractor shall have full regard for the safety of all personnel on site, including measures to ensure the safety of all, including any effects the archaeological works may have on the daily operations of the Client.

The Contractor will undertake any necessary health and safety training and/or inductions.

The on-site archaeological recording and recovery techniques will be in line with current industry best practice and should be fully understood by all.

5.3 Hand Excavation

Any archaeological deposits/features identified will be cleaned and hand excavated in an archaeologically controlled and stratigraphic manner, sufficient to meet the aims and objectives of the investigation.

Archaeological remains will be investigated and recorded. Hand excavation will initially be targeted to provide information on the form, function and date of the feature. Stratigraphic relationships between features will be investigated and recorded. Sampling strategies for specific feature types are as follows.

- Linear features: A minimum sample in length not less than 1m long, where the depositional sequence is consistent along the length. Linear features with complex variations of fill type will be sampled sufficiently in order to understand the sequence of deposition a minimum of 20% along the length.
- Where possible one section will be located and recorded adjacent to a trench edge. If appropriate all
 intersections will be investigated to determine the relationships between features. All termini will be
 investigated.
- Discrete features: Pits, post-holes and other isolated features will normally be half-sectioned. A minimum
 requirement to meet the project objectives will be agreed in consultation with the Consultant. If large pits or
 deposits (over 1.5m diameter) are encountered then the sample excavated should be sufficient to define the
 extent and maximum depth of the feature and to achieve the objectives of the evaluation, but should not be
 less than 25%.
- Structures: Each structure will be sampled sufficiently to define the extent, form, stratigraphic complexity and depth of the component features and its associated deposits to achieve the objectives of the evaluation. All intersections will be investigated to determine the relationship(s) between the component features. The remains of all upstanding walls will be hand cleaned sufficient to understand their dimensions, extent, composition, sequence and relationships.

The extent of the evaluation trenches will be recorded on a suitable base map, even if they reveal no archaeological remains. The depth of excavation will also be recorded, where appropriate. The stratigraphy of any evaluation trench is to be recorded, even where no archaeological deposits have been identified. All trenches will be planned at 1:50. One representative long section of each trench will be produced, at an appropriate scale.

A full written, drawn and photographic record will be made of all archaeological remains. Hand drawn plans and sections of features will be produced at an appropriate scale (normally 1:20 for plans and 1:10 for sections). Drawings will include spot heights relative to Ordnance Datum in metres, correct to two decimal places.

5.4 Recording

Following machine excavation, the excavation area will be accurately recorded using metric survey-grade equipment or its equivalent, (Historic England, 2015a) and fixed in relation to any existing survey markers. The data will be overlaid at an appropriate and recognisable scale onto the Ordnance Survey National Grid (using digital map data).

All archaeological remains will be recorded in plan using electronic survey equipment. The resultant digital dataset will be utilised to compare the position of the identified archaeological remains with any relevant previous geophysical data.

A full written, drawn and photographic record will be made of each trench and any identified archaeological remains in accordance with standard archaeological methodologies (see Appendix 1).

Detailed hand-drawn plans and sections of features will be produced at an appropriate scale (normally 1:50 or 1:20 for plans, and 1:10 for sections). All plans, sections and drawn elevations will include spot heights relative to Ordnance Datum in metres, correct to two decimal places. Photography (digital, colour transparency and monochrome negative photographs) will be taken using a minimum format of 35mm or 10 megapixels resolution. The primary, archive record will be formed of the monochrome negative images. In addition to records of archaeological features, a number of general site photographs will also be taken to give an overview of the site. Particular attention should be paid to obtaining shots suitable for displays, exhibitions and other publicity.

5.5 Artefact Recovery

All artefacts will be collected, stored and processed in accordance with standard methodologies and national guidelines (refer to Appendix 1). Except for modern artefacts all finds will be collected and retained; the Contractor will clarify in their Archaeological Method Statement the Collection Policy. The Archaeological Method Statement will provide an indicative artefact collection policy. Each 'significant find' will be recorded three dimensionally. Similarly, if artefact scatters are encountered, these should be also recorded three dimensionally. Bulk finds will be collected and recorded by context.

All recovered artefacts will be stabilised, conserved and stored by a qualified conservator in accordance with current national conservation guidelines and standards (see Appendix 1). If necessary, a conservator will visit the site to undertake 'first aid' conservation treatment.

Artefacts will be stored in appropriate materials and conditions, and monitored to minimise further deterioration.

5.6 Environmental Sampling

The Archaeological Method Statement will outline an appropriate environmental sampling strategy that conforms to this specification. If important archaeological remains are encountered then the Historic England Regional Science Advisor (RSA) will be notified and will be consulted regarding the sampling strategy proposed by the Contractor. In addition, the Contractor's Environmental Specialist will visit the site to ensure that the agreed sampling strategy is appropriately implemented and to offer specialist advice whenever required. Appropriate provision will also be made for the recovery of material suitable for scientific dating.

Any samples taken must come from appropriately cleaned surfaces, and will be collected with clean tools and will be placed in clean containers. They will be adequately recorded and labelled and a register of all samples will be kept. Once the samples have been obtained, they will be stored appropriately in a secure location prior to being sent to the appropriate specialist.

5.7 Human Remains

Should human remains be discovered during the course of the excavations, the remains will be covered and protected and left in situ in the first instance, in accordance with current best practice (See Appendix 1). The removal of human remains will only take place in accordance with a licence from the Ministry of Justice and under the appropriate Environmental Health regulations and the Burial Act 1857. In the event of the discovery of human remains, the Contractor will notify the Consultant immediately, who will contact the County Archaeologist for Warwickshire to establish whether it is necessary to contact the office of H.M. Coroner.

5.8 Treasure Trove

Any recovered artefacts that fall within the scope of the Treasure Act 1996 and the Treasure (Designation) Order 2002 will be reported to the Consultant, Historic England and to H.M. Coroner immediately. The Contractor will ensure that the Treasure Act is enforced and that all the relevant parties are kept informed. In addition, the Contractor shall maintain a list of finds that have been collected that fall under the Treasure Act 1996 and related legislation, and this list shall be included in the Fieldwork Report.

Artefacts that are classified as 'treasure' will be removed to a safe place. Where removal cannot be undertaken on the same working day as the discovery, suitable security measures must be taken to protect the finds from damage or unauthorised removal.

5.9 Finds Processing

The finds assemblage will be treated, labelled and stored in accordance with the with the appropriate Historic England guidance documents and the Institute of Conservation guidelines (see Appendix 1). At all times the Contractor shall ensure that the processing of the assemblage is in accordance with the requirements of the recipient repository.

If appropriate, each category of find or each material type will be examined by a suitably qualified archaeologist or specialist and the results incorporated into the report.

Any pottery reports produced will refer to the appropriate type series, including the Warwickshire type series for Roman, medieval and post-medieval pottery.

6. Monitoring, Progress Reports & Meetings

The fieldwork will be subject to monitoring visits by the Consultant, who will have unrestricted access to the sites, site records or any other information. The work will be inspected to ensure that it is being carried out to the required standards and that it will achieve the stated aims and objectives.

Weekly written progress reports will be provided to the Consultant by the Contractor during each phase of fieldwork, to be issued via e-mail each Monday to be received no later than 09.30 hrs. In addition, the Contractor will inform the Consultant on the progress of the fieldwork verbally upon request.

Progress meetings between the Consultant and the Contractor will be held on site during the course of the fieldwork. The County Archaeologist for Warwickshire and, if appropriate, the Historic England Regional Science Advisor shall be invited to attend. These meetings will be arranged by the Consultant; monitoring meetings will also be held during the post-excavation phase of the project if appropriate.

The Contractor will only accept instruction from the Consultant.

7. Completion of Fieldwork

Evaluation trenches shall not be reinstated without the prior approval of the Consultant in consultation with the Client. In exceptional circumstances, such as for health and safety purposes or ground stability reasons, some backfilling would be permitted. The trenches shall only be backfilled by machine under appropriate conditions and with direct archaeological supervision. Arisings will be returned strictly in the correct sequence and will not be compacted.

The Contractor shall prepare and submit a Completion Statement to the Consultant within one working day of completing the fieldwork.

The site will be left in a tidy and workman-like condition and the Contractor will ensure that all materials brought onto site are removed.

As a minimum, an Online AccesS to the Index of archaeological investigationS (OASIS) entry shall be completed at the end of the fieldwork, irrespective of whether a formal report is required (http://ads.ahds.ac.uk/project/oasis/). If appropriate, the entry should include caveats regarding any conclusions drawn in advance of analysis. The OASIS entry may be updated and re-submitted not later than three months after the completion of a report. The Contractor is advised to ensure that adequate time and costings are built into their tenders to complete the form to a satisfactory standard.

8. Reporting

An interim statement will be prepared and submitted to the Consultant within **two weeks** of the completion of the works. This is for the Consultant's information only. The interim statement will include:

- a summary of the results;
- a draft or sketch plan of each archaeological area or site; and
- a quantification of the primary archive including finds and samples.

The finds and samples will be processed (cleaned and marked) as appropriate. Each category of find or environmental/ industrial material will be examined by a suitably qualified archaeologist or specialist and the results incorporated into the Fieldwork Report. The archive will be quantified, ordered, indexed and internally consistent. Provisional site matrices and a short summary of the findings (including the artefactual and environmental data) will be prepared. Reporting will be undertaken within **four weeks** following the completion of the fieldwork.

The preparation of the site archive will be undertaken in accordance with this WSI and will follow relevant archaeological standards and national policy and guidance.

The precise format of the fieldwork report is dependent upon the findings of the investigations, but it will include:

- a Quality Assurance sheet detailing as a minimum the report title, author, version, date, 'checked by' and 'approved by';
- a non-technical summary;
- site location details;
- a brief archaeological, historical and project background;
- a description of the methodology followed;
- aims and objectives;
- results of the evaluation trenching (to include full descriptions, assessment of condition, quality and significance of the remains);
- an appendix containing specialist reports;
- a list of all finds that fall within the scope of the Treasure Act 1996 and associated legislation;
- an appendix containing plates illustrating specific finds, working shots and portraits of specific features or structures or important remains;
- a stratigraphic matrix (if appropriate);
- an assessment section and, if appropriate a statement of potential with recommendations for further work and analysis;
- statements regarding the immediate and long-term storage and curation;
- statements of the significance of the results in their local, regional and national context;
- publication proposals (if warranted);
- general and detailed plans showing the location of the investigation areas accurately positioned in relation to the Ordnance Survey basemap with grid co-ordinates and a plan of the identified archaeological remains (to a known scale);
- detailed plans and sections illustrating archaeological features and / relationships between features (at an appropriate and recognised scale); and
- a cross-referenced index of the project archive.

The Fieldwork Report will specifically comment on the level of preservation and will comment on the character of the overlying deposits and on the potential for extrapolating the results into adjacent areas. Two bound hard copies and a digital PDF copy (complete with illustrations and plates) of the completed report will be submitted to the Consultant as a draft for comment.

The Consultant will submit a copy of the draft Fieldwork Report to the County Archaeologist for Warwickshire for comment and if appropriate Historic England. In finalising the Fieldwork Report, the comments of the Consultant and County Archaeologist for Warwickshire will be taken into account. Three bound copies (together with one unbound master-copy and digital versions in both Word and PDF format) of the final Fieldwork Report will be submitted to the Consultant within two weeks of the receipt of comments on the draft.

Three bound copies of all reports will be submitted to County Archaeologist for Warwickshire for information and for inclusion on the County Historic Environment Records. A project archive shall be submitted containing image files in JPEG or TIFF format, digital text files shall be submitted in Microsoft Word format, and illustrations in AutoCAD format or ArcView shapefile format. A fully collated PDF version of the Fieldwork Report shall be included.

A summary account of the work will be submitted to the editor of West Midland Archaeology and any relevant period journals (e.g. Medieval Archaeology, Proceedings of the Prehistoric Society) no later than March 31st of the year following completion of fieldwork.

9. Resources and Timetable

The Contractor must ensure that they have adequate and appropriate management procedures in place to ensure that risks to programme timetable (more extensive remains, better preserved deposits, exceptional finds and interruptions from periods of prolonged inclement weather or restrictions caused by animal disease) can be

identified at an early stage. These risks will be kept under constant review by the Contractor to ensure that the aims and objectives are met within the agreed time-scales and budget. The Consultant will be notified at the earliest opportunity of any changes to the methodology or programme of work that arise from these reviews. Changes / variations to the programme will only be accepted after they have been agreed in writing with the Consultant. The Contractor will give immediate warning to the Consultant should any agreed programme date not be achievable.

An experienced archaeologist familiar with monitoring heavy plant during archaeological work shall be deployed with each mechanical excavator. During archaeological excavation and recording, additional manpower resources may be deployed to deal archaeological remains, but only with the agreement of AECOM and after the archaeological strategy has been agreed with the Consultant and approved by the County Archaeologist for Warwickshire.

All archaeological personnel involved in the project should be suitably qualified and experienced professionals and hold valid CSCS cards. The Contractor will provide the Consultant with staff CVs of the Project Manager, Site Supervisors and specialists that might be involved in the post-excavation work. Site assistants' CVs will not be required, but all site assistants should have an appropriate understanding of archaeological excavation procedures.

All staff will be fully briefed and aware of the work required under this specification and will understand the aims and objectives of the archaeological investigations and the methodologies to be employed.

The fieldwork is programmed to be implemented as soon as possible (subject to land access agreements and the Consultants approval of the health and safety plan) and will be completed within a timescale that will be agreed in writing between the Contractor and the Consultant. The Consultant will inform the Contractor of the start date for the works and the Contractor will provide the Consultant with a programme for the works (fieldwork and reporting) within one week of the start date.

The Consultant will notify Warwickshire Council Archaeology of the commencement of the fieldwork at least one week prior to the start of the investigations.

10. Archive Preparation and Curation

The Contractor will, prior to the start of fieldwork, liaise with an appropriate storage facility to obtain agreement-inprinciple to accept the documentary, digital and photographic archive for long-term storage. The Contractor will be responsible for identifying at the initial project set-up stage any specific requirements or policies of the recipient repository in respect of the archive (for example, the discard policy for finds), and for adhering to those requirements. The Contractor shall immediately inform the Consultant of the policies adopted, who shall in turn inform County Archaeologist for Warwickshire.

Any charges levied by the repository for the long-term storage of the archive will be met by the Contractor.

The site records and assemblages (list of fieldwork interventions, notebooks/ diaries, context records, feature records, structure records, site geometry (drawings), photographs and films, finds records and associated data files) will constitute the primary Site Archive. This is the key archive of the fieldwork project and the raw data upon which all subsequent assessment and analysis and future interpretation will be based. The archive will therefore not be altered or compromised. It will remain the original record of the fieldwork. The site archive will be kept secure at all times and should be quantified, ordered, indexed and made internally consistent in line with current good practice (Brown 2011, Historic England 2015b). All finds and coarse sieved and flotation samples will have been processed and stored under appropriate conditions. The archive will also contain a site matrix, a summary of key findings, and descriptions of artefactual and environmental assemblages. Arrangements should be made for the proper cataloguing and storage of the archive during the project life-cycle (it may be appropriate to liaise with an archive specialist).

The archive of finds and records generated during the fieldwork will be removed from site at the end of each day and kept secure at all stages of the project until it is deposited in the agreed repository. The archive will be produced to current national standards (refer to Appendix 1).

The deposition of the archive forms the final stage for each phase of development at the application site. The Contractor shall provide the Consultant with copies of communication with the accredited repository and written confirmation of the deposition of the archive. The Consultant will deal with the transfer of ownership and copyright

issues and will inform the County Archaeologist for Warwickshire once the archive has been transferred to the recipient repository.

11. Confidentiality and Publicity

The archaeological works may attract the interest of the public and the press. All communication regarding this project is to be directed through the Consultant. The Contractor will refer all inquiries to the Consultant without making any unauthorised statements or comments.

The Contractor will not disseminate information or images associated with the project for publicity or information purposes without the prior written consent of the Consultant. Provision shall be made for publicising the results of the investigations locally.

12. Copyright

The Contractor shall assign copyright in all reports, documentation and images produced as part of this project to the Consultant. The Contractor shall retain the right to be identified as the author or originator of the material. This applies to all aspects of the project. It is the responsibility of the Contractor to obtain such rights from subcontracted specialists.

The Contractor may apply in writing to use or disseminate any of the project archive or documentation (including images). Such permission will not be unreasonably withheld.

The results of the archaeological works shall be submitted to the Client and the County Archaeologist for Warwickshire by the Consultant, and will ultimately be made available for public access.

13. Access Arrangements and Site Information

Site access to undertake the archaeological investigations will be arranged/organised by the access co-ordinator for the proposed scheme. Designated routes into and out of the area(s) will be identified and will be adhered to at all times. The schedule for the archaeological will be agreed in advance with the Consultant.

The archaeological works shall not extend beyond the specified extent shown on Figure 2 without the agreement of the Consultant and the approval of the County Archaeologist for Warwickshire, prior to its implementation.

The Contractor will notify the Consultant immediately of any areas that cannot be opened and will provide a clear explanation for the situation.

The Contractor will record photographically (digital photographs) ground conditions within the targeted area before the start of ground works and also at completion.

14. Insurances and Health and Safety

The Contractor will provide the Consultant with details of their Public and Professional Indemnity insurance cover.

The Contractor will have their own Health and Safety policies compiled using national guidelines, which conform to all relevant Health and Safety legislation and best practice.

A copy of the Contractor's Health and Safety policy will be submitted to the Consultant with their tender.

The Contractor shall prepare a Risk Assessment and if appropriate a project specific Health and Safety Plan and submit these to the Consultant for approval prior to the commencement of the fieldwork. If amendments are required to the Risk Assessment during the works the Consultant and any other interested party must be provided with the revised document at the earliest opportunity.

All staff involved in the fieldwork should be CSCS qualified.

The Client and the Consultant will provide the Contractor with any available details for known overhead or buried services. However, it will remain the responsibility of the Contractor to identify and avoid any buried underground or overhead services and to carry out scanning at each trench location prior to the start of the works and during the excavation of the trenches. All site personnel will familiarise themselves with the following:

- site emergency and evacuation procedures;
- the site's health & safety coordinator;
- the first aider; and
- the location of the nearest hospital and doctor's surgery.

The supervisor will maintain a record of site attendance for each day that there is a team in the field.

All site personnel will wear full Personal Protective Equipment (PPE) in accordance with the requirements at the site. As a minimum, PPE shall consist of a hardhat, steel toe-capped boots with mid-sole protection, high visibility jacket and high visibility trousers, safety glasses and gloves shall be worn at all times. Additional PPE will be issued by the Contractor as required, i.e. ear defenders, masks etc. In addition, site personnel will ensure that any visitors to the excavation are equipped with suitable PPE prior to entry to the site.

As photographs taken as part of this project may be used for publicity or for publication purposes, it is essential that all personnel photographed within any working shot are wearing the specified PPE

All equipment must be 'fit-for-purpose' and be maintained in a sound working condition that complies with all relevant Health & Safety Regulations and recommendations.

15. General Provisions

No variation from, or changes to, the WSI will occur except by prior agreement with the Consultant's archaeological representative (where appropriate in consultation with the Contractor, and the County Archaeologist for Warwickshire).

All communications on archaeological matters will be directed through the consultant.

The Contractor shall leave all sites in a tidy and workmanlike condition and remove all materials bought onto the site.

Access for plant and temporary parking and site welfare facilities shall be agreed with the Contractor prior to entering the site.

Provision should be made by the Contractor for fencing (Heras fencing or similar) to prevent access to deep excavations if required.

The Contractor shall provide the following site accommodation facilities for the use of their staff. The number of staff required will be confirmed in the Contractor's Archaeological Method Statement. The following services will be provided:

- male and female toilets, with drying and washing facilities; and
- First Aid facilities.

16. Valid Period of Written Scheme of Investigation

This WSI is valid for a period of 6 months from the date of issue, after which it will be reviewed by the Consultant and may need to be revised, updated or amended in order to take account of new discoveries and to accommodate changes to policy, legislation, standards and guidance, good practice, the introduction of new working practices or techniques, or changes in design associated with the proposed scheme.

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Figure 1 – Location Plan

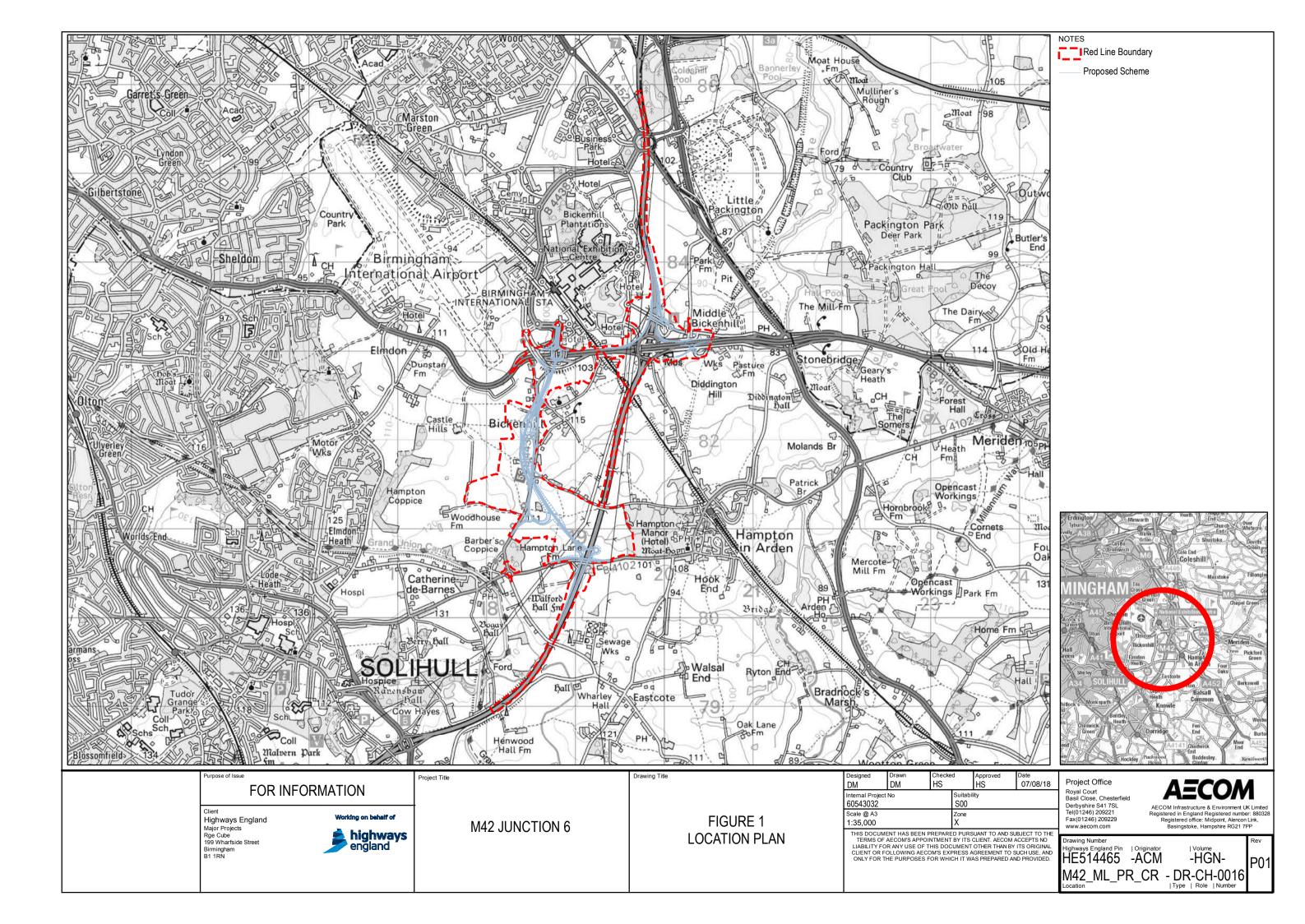
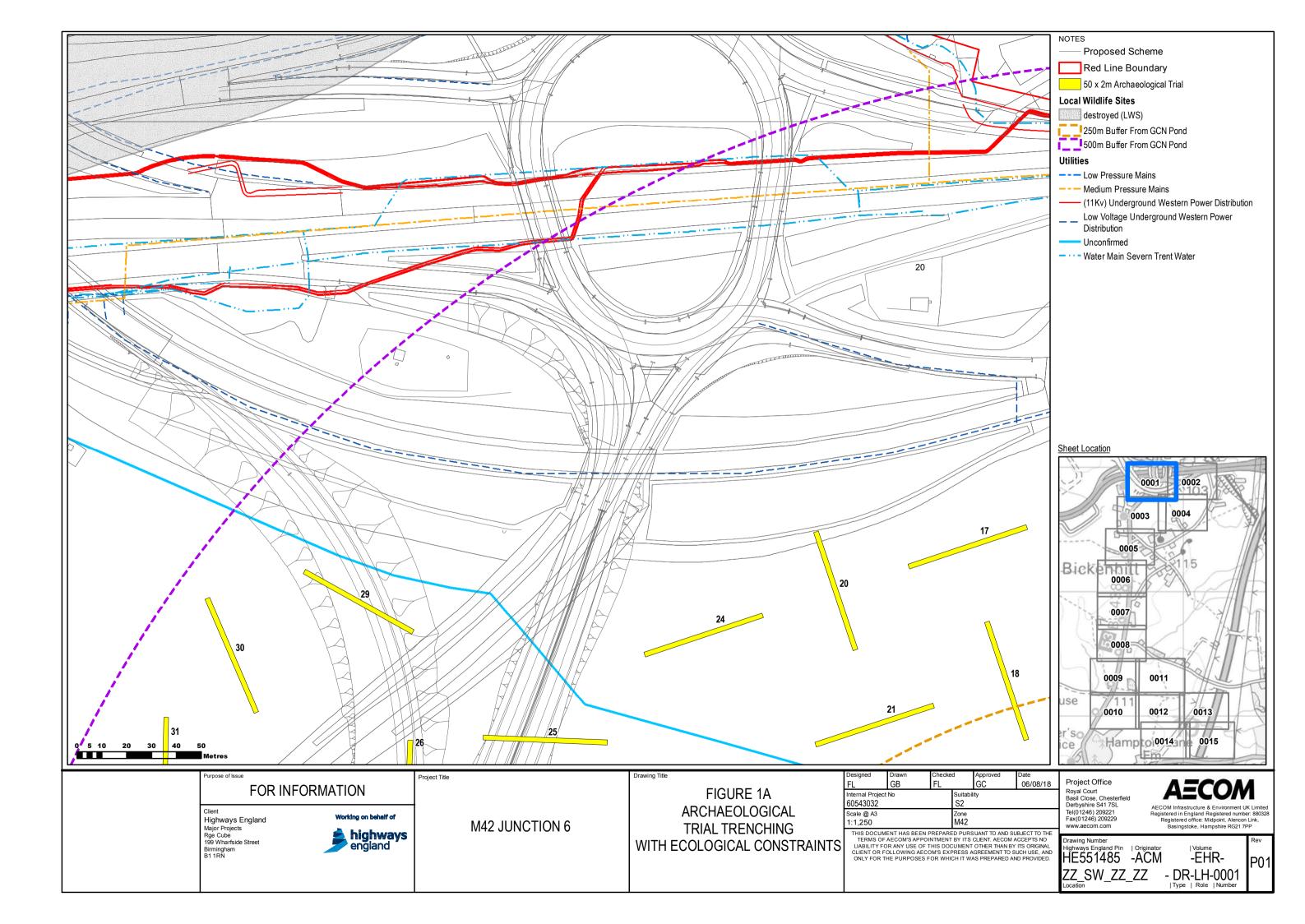
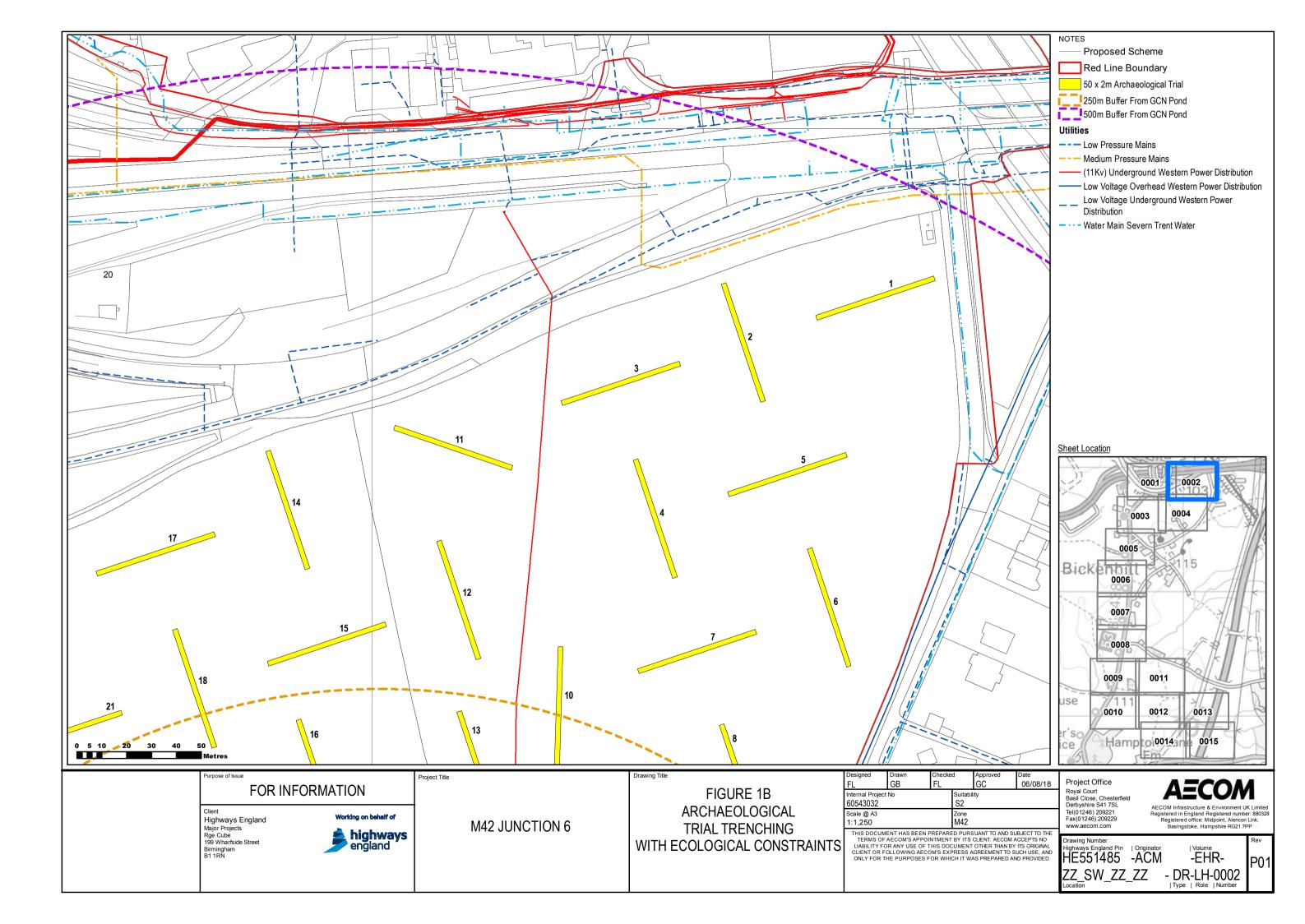
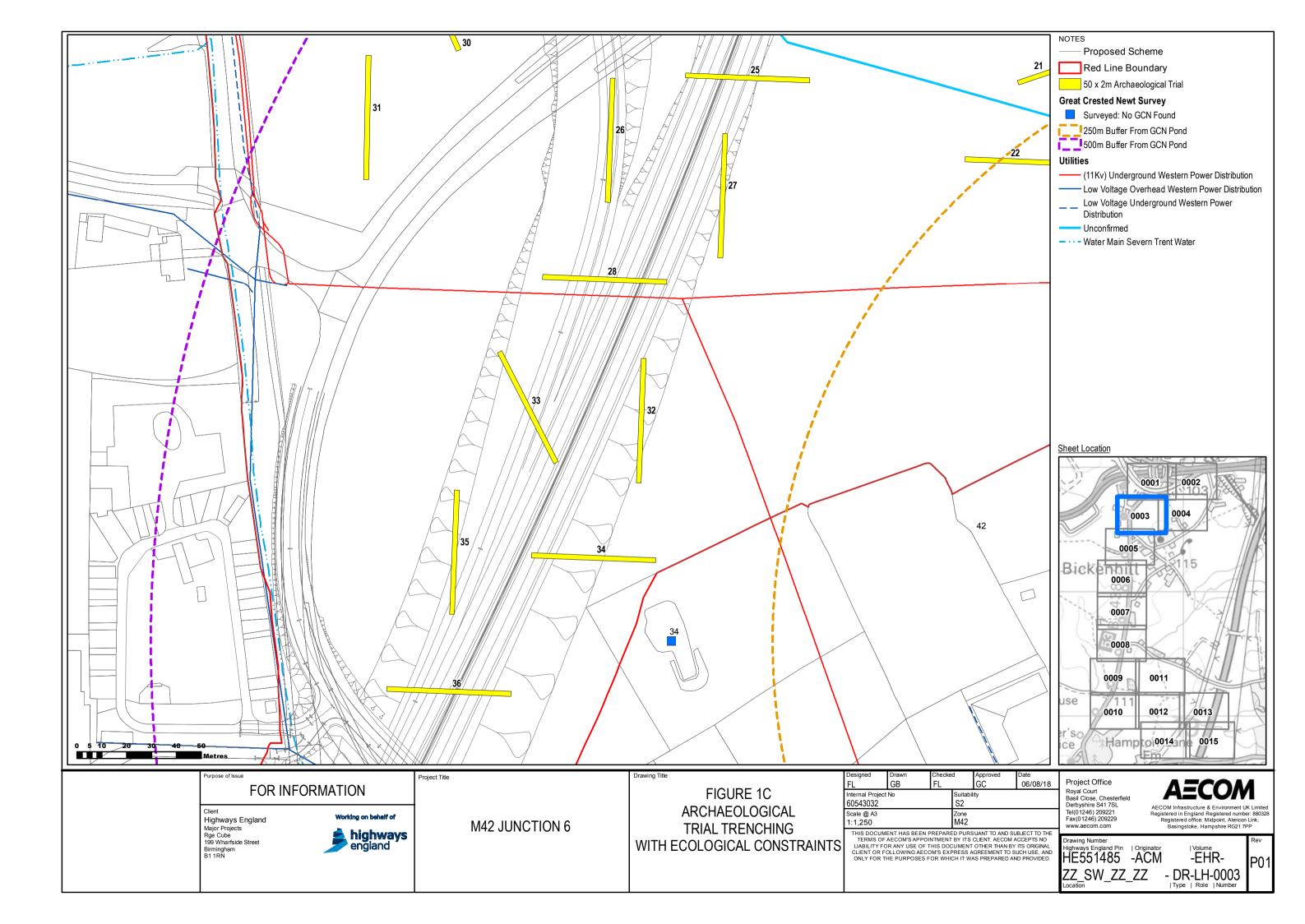
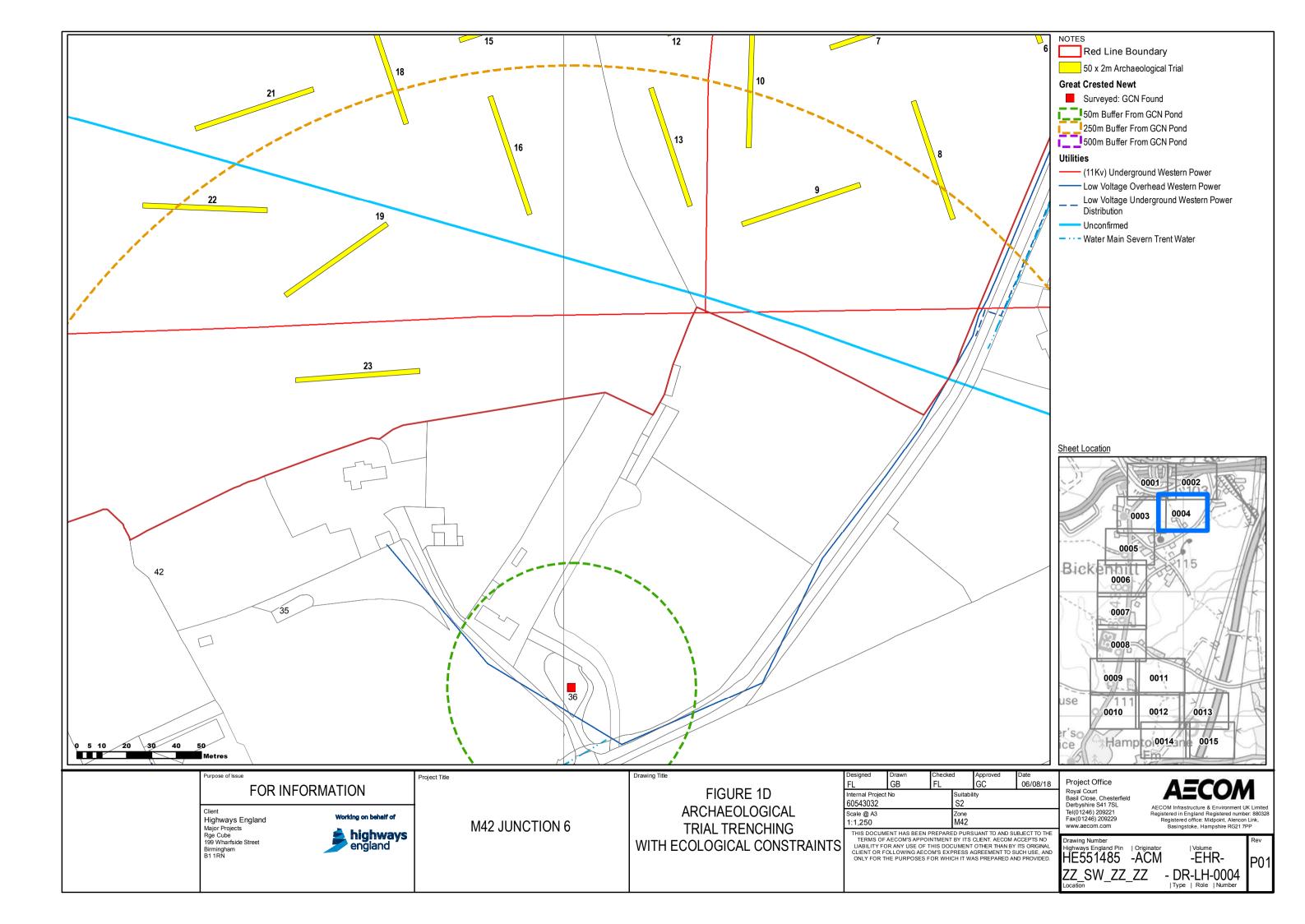


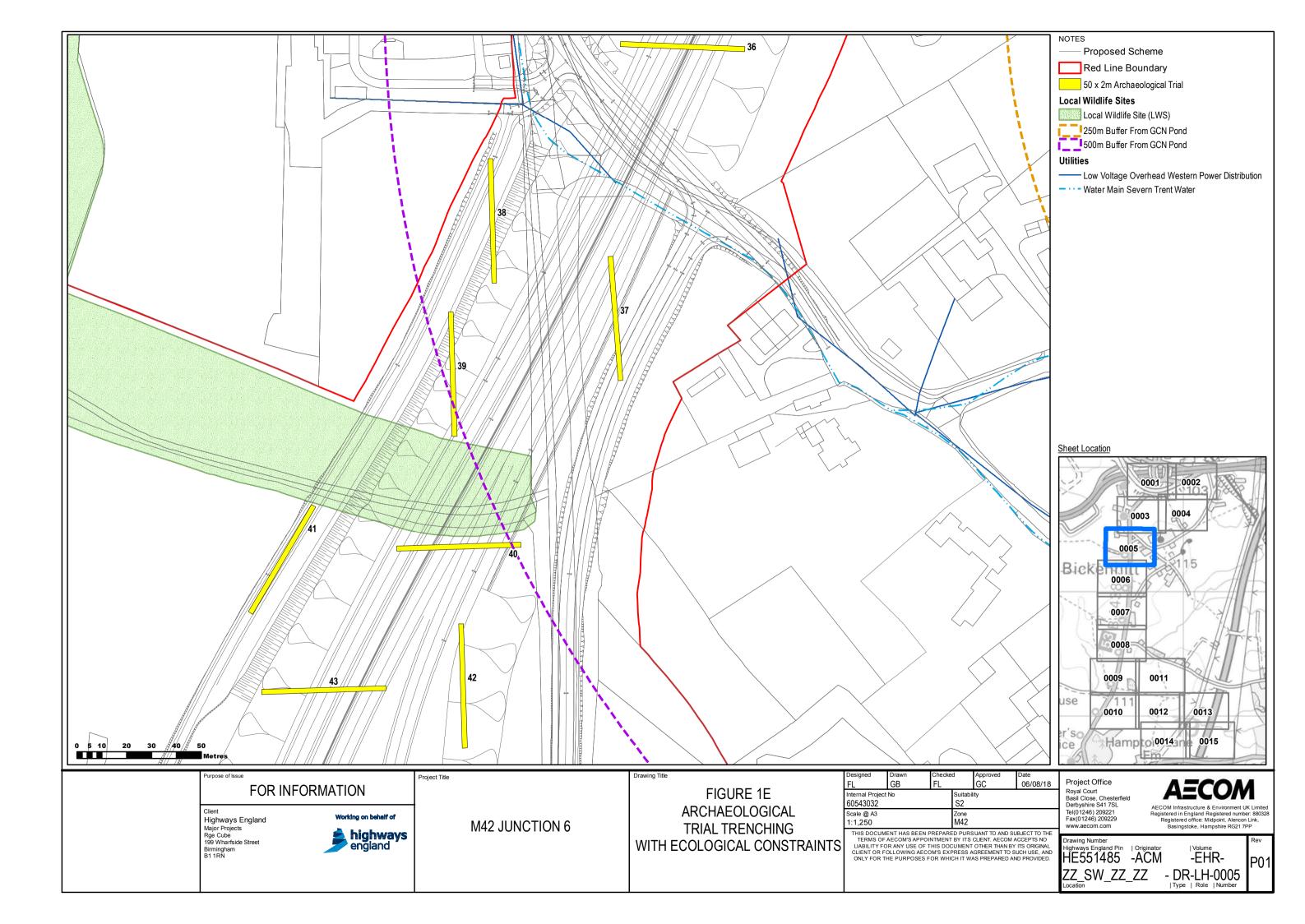
Figure 2 – Trench Location Plan

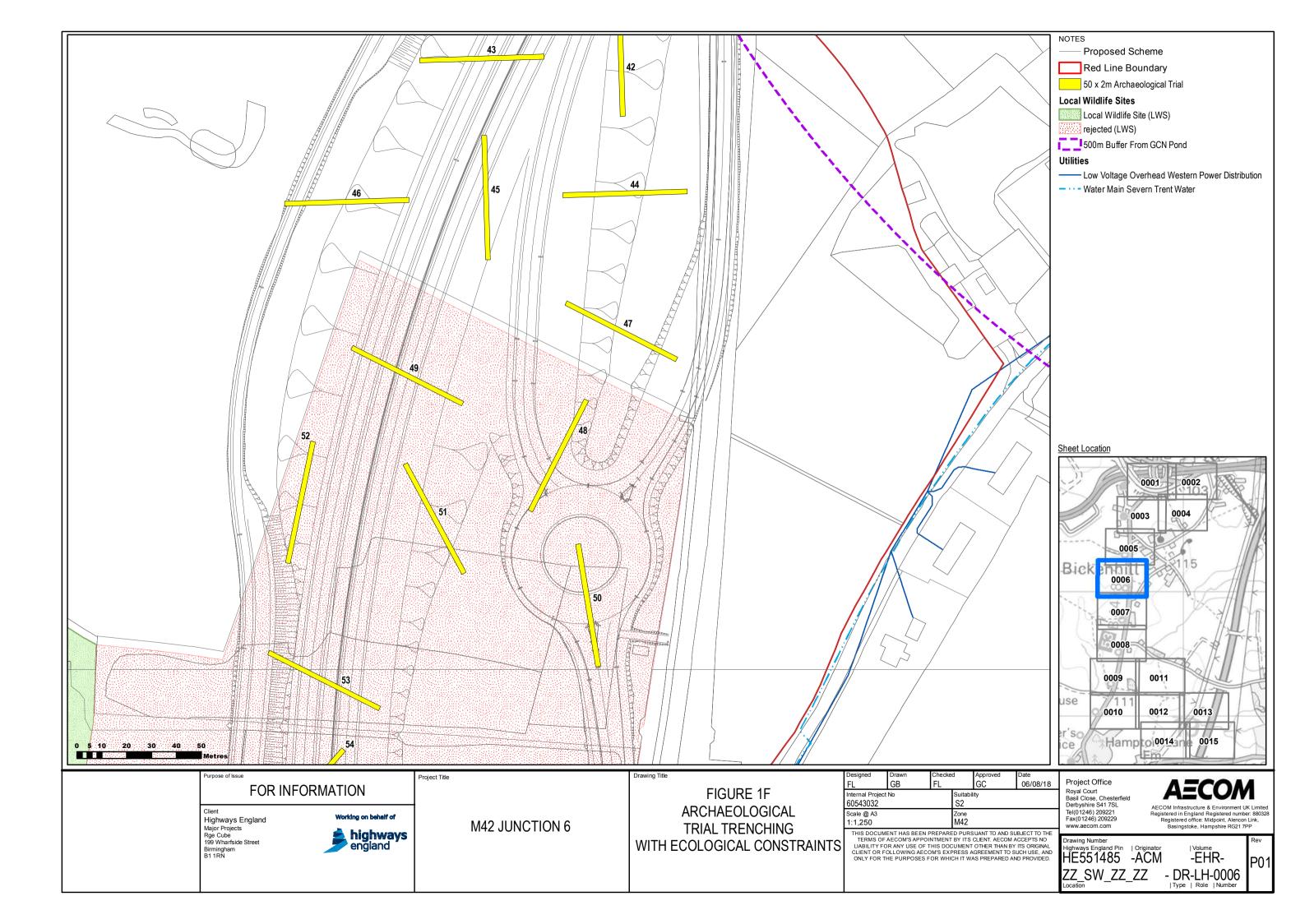


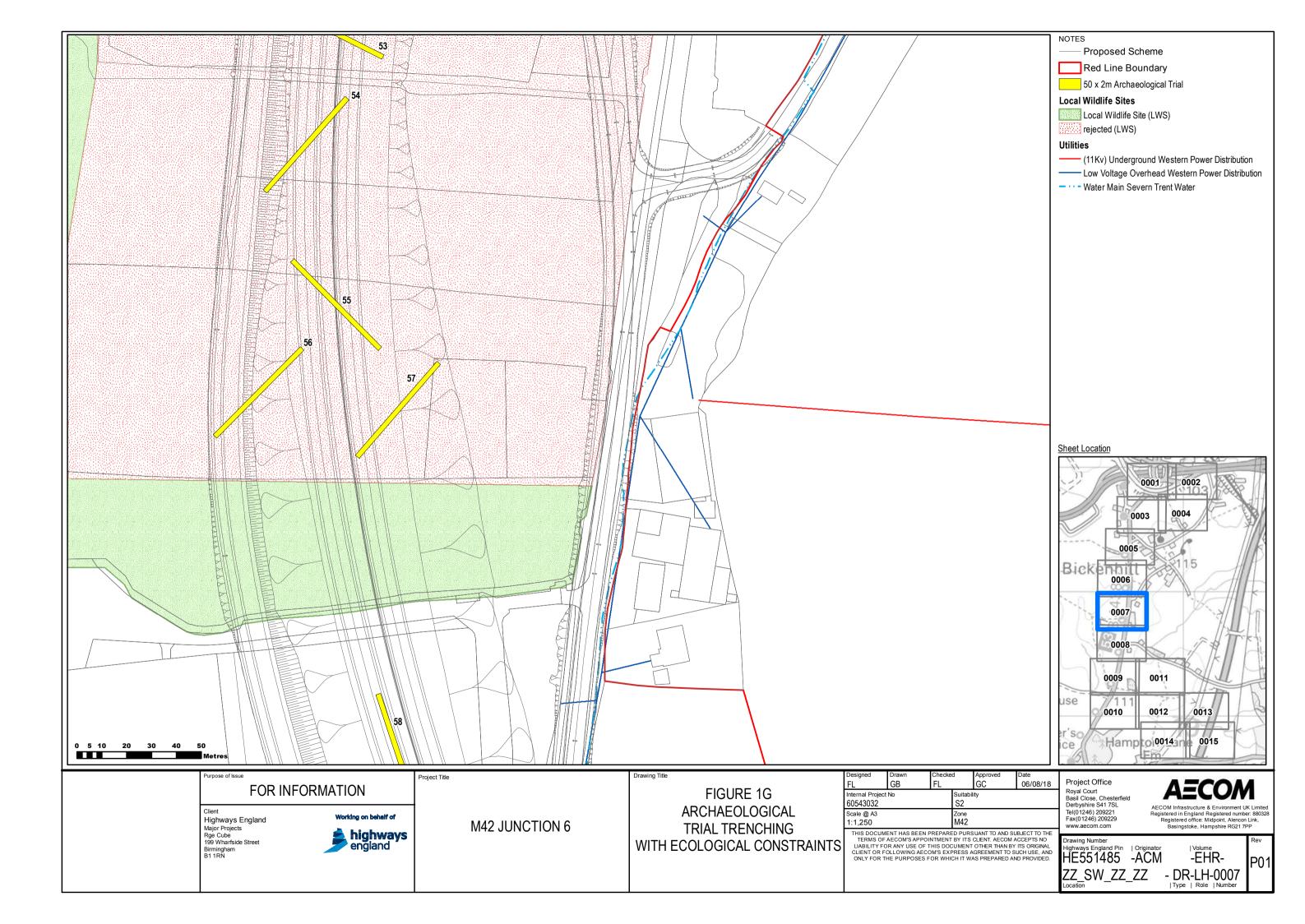


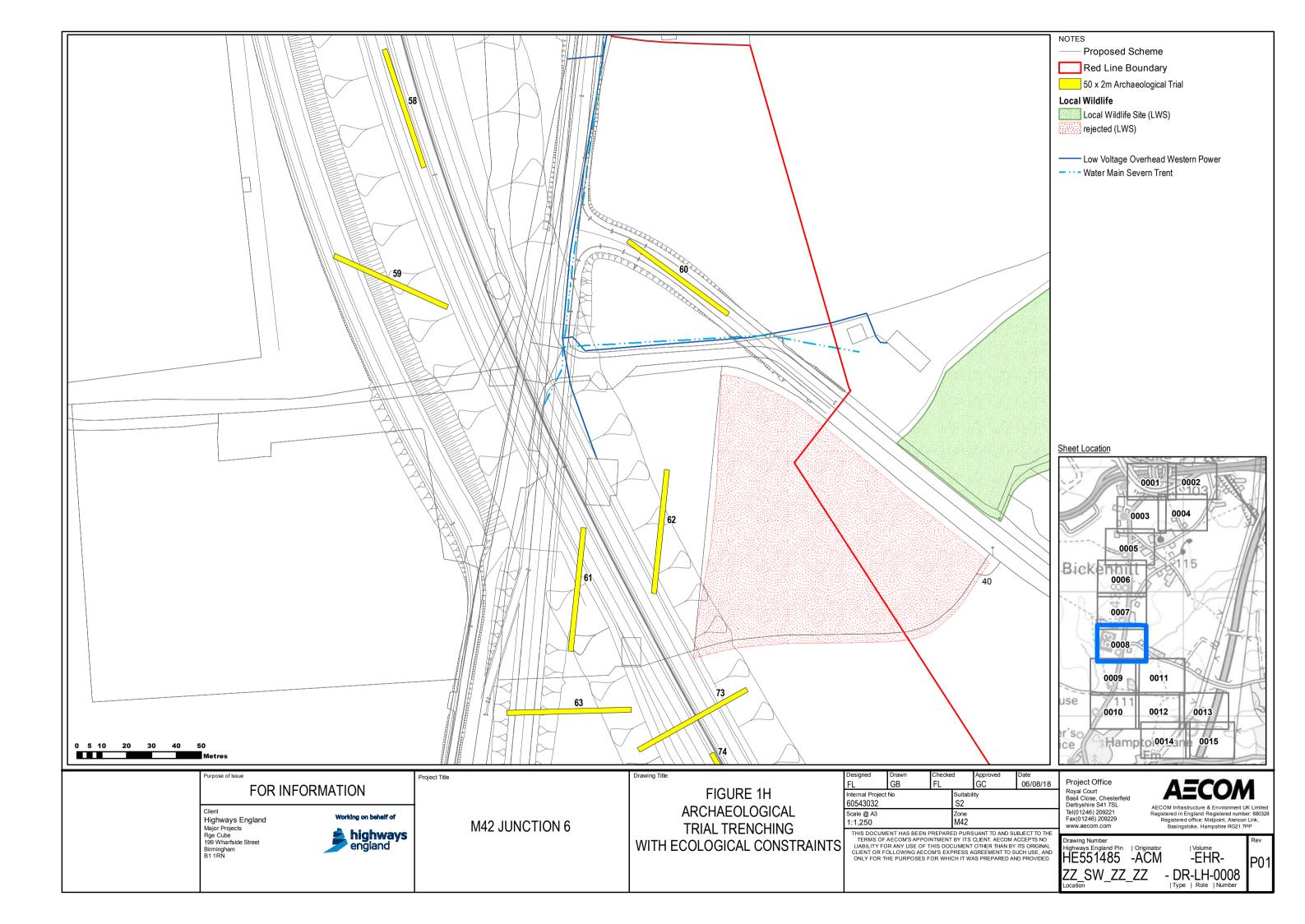


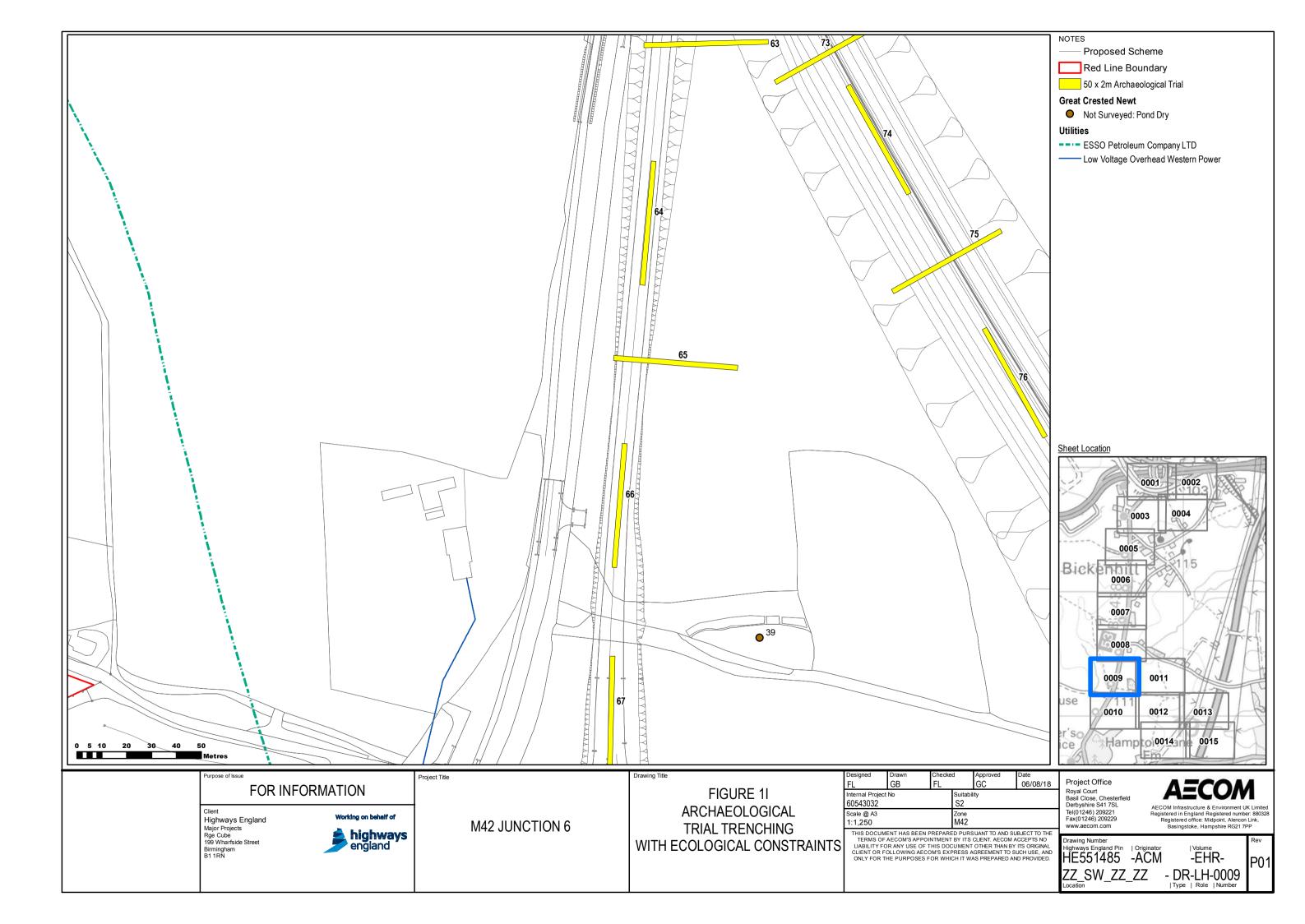


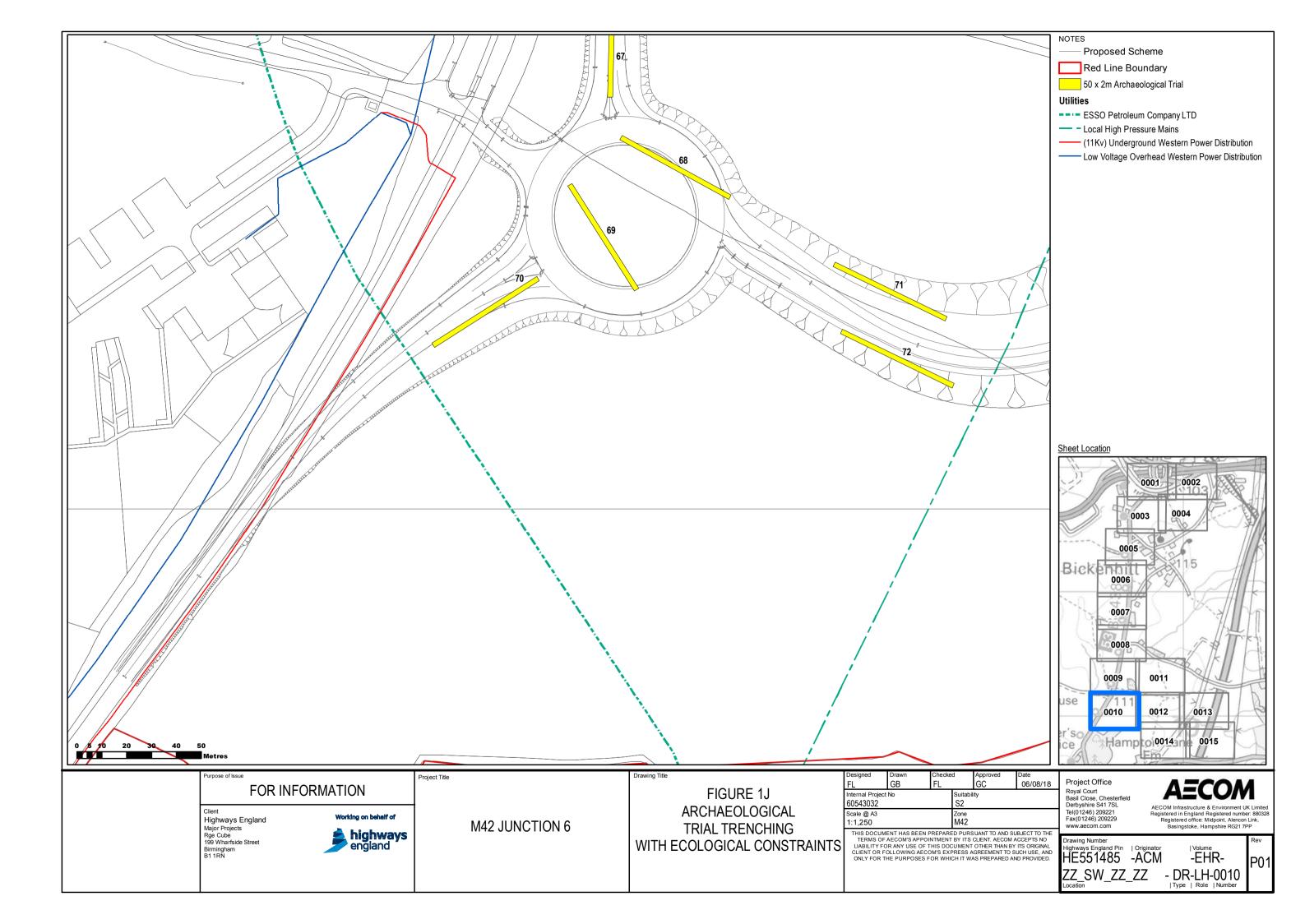


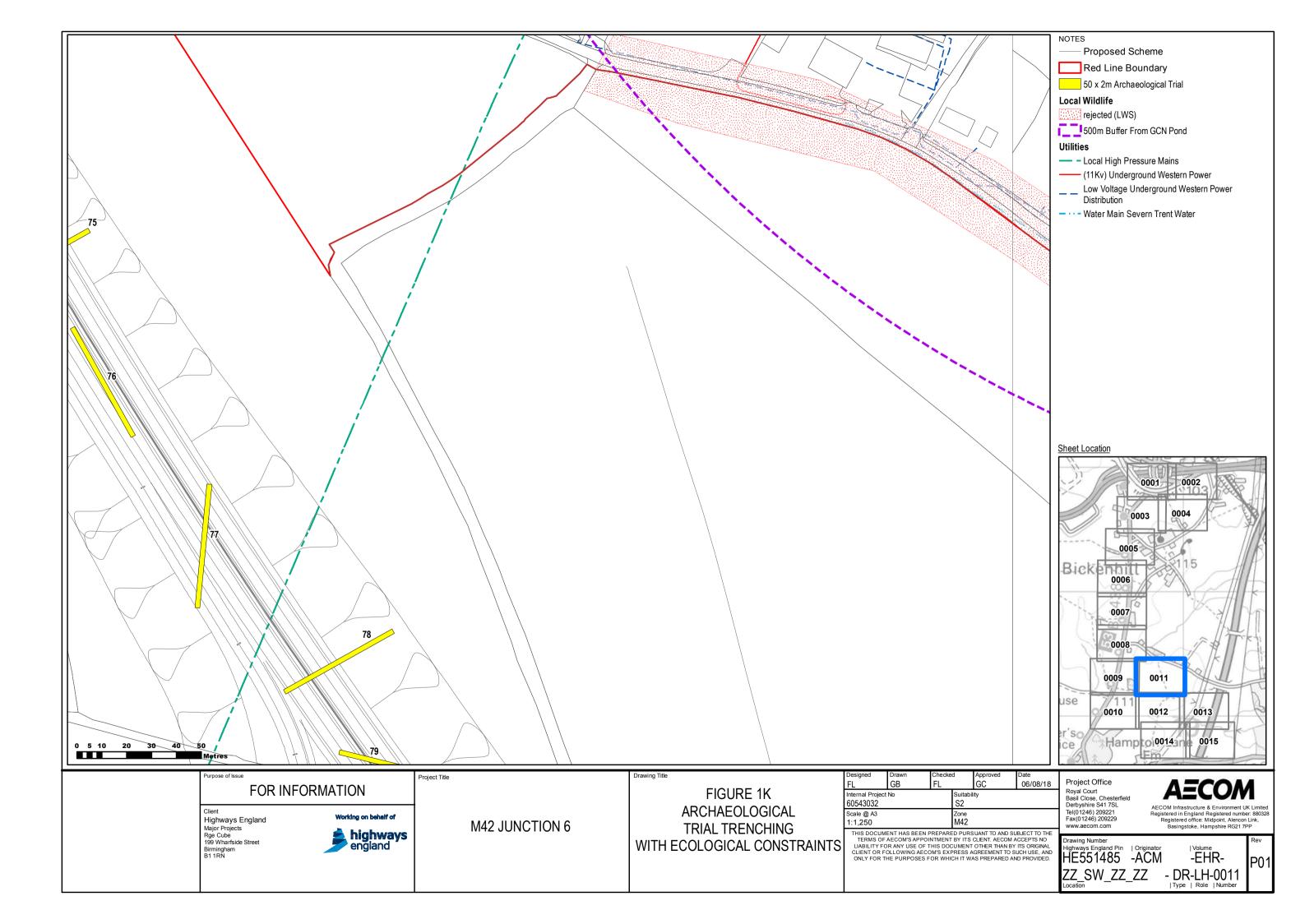


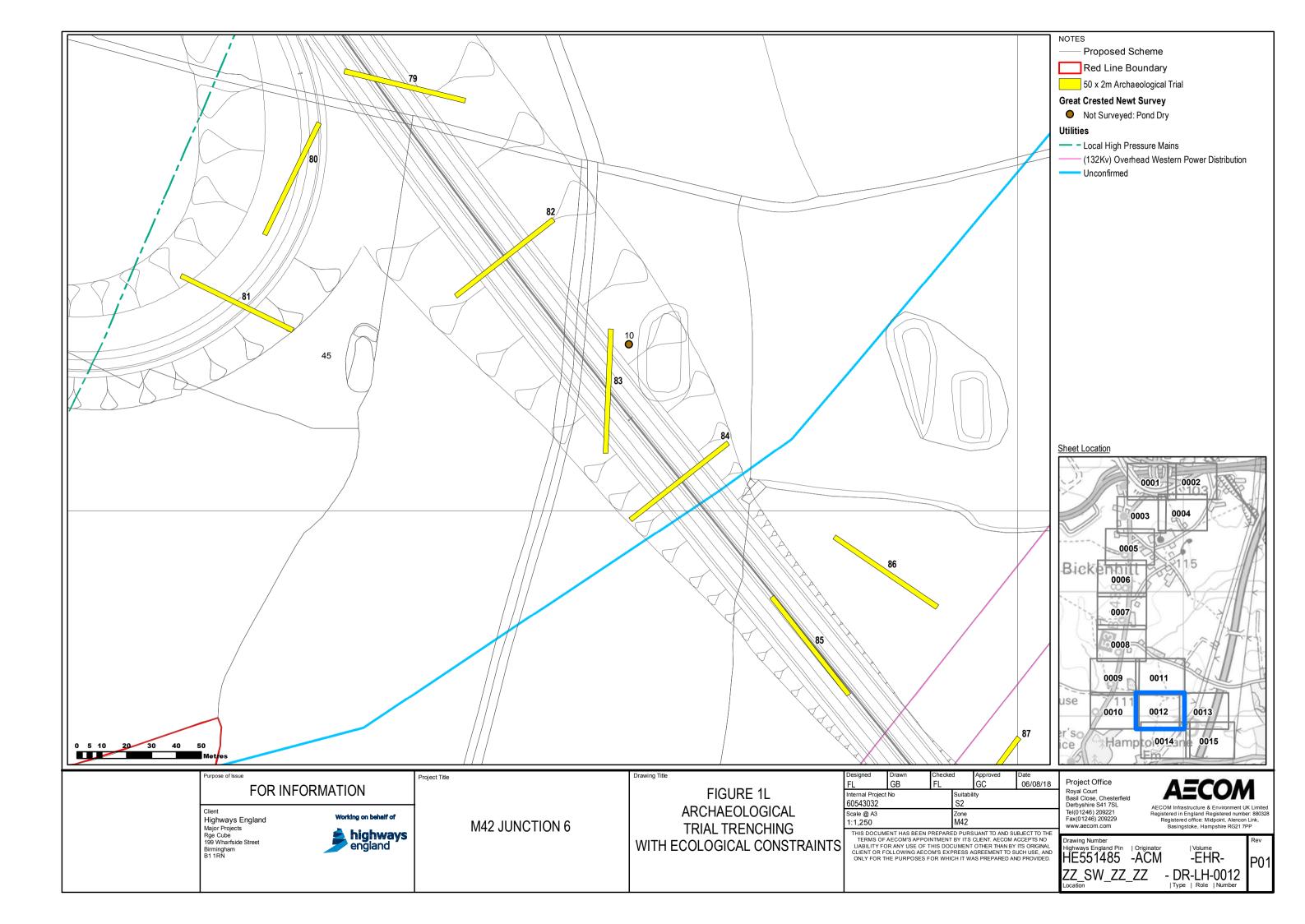


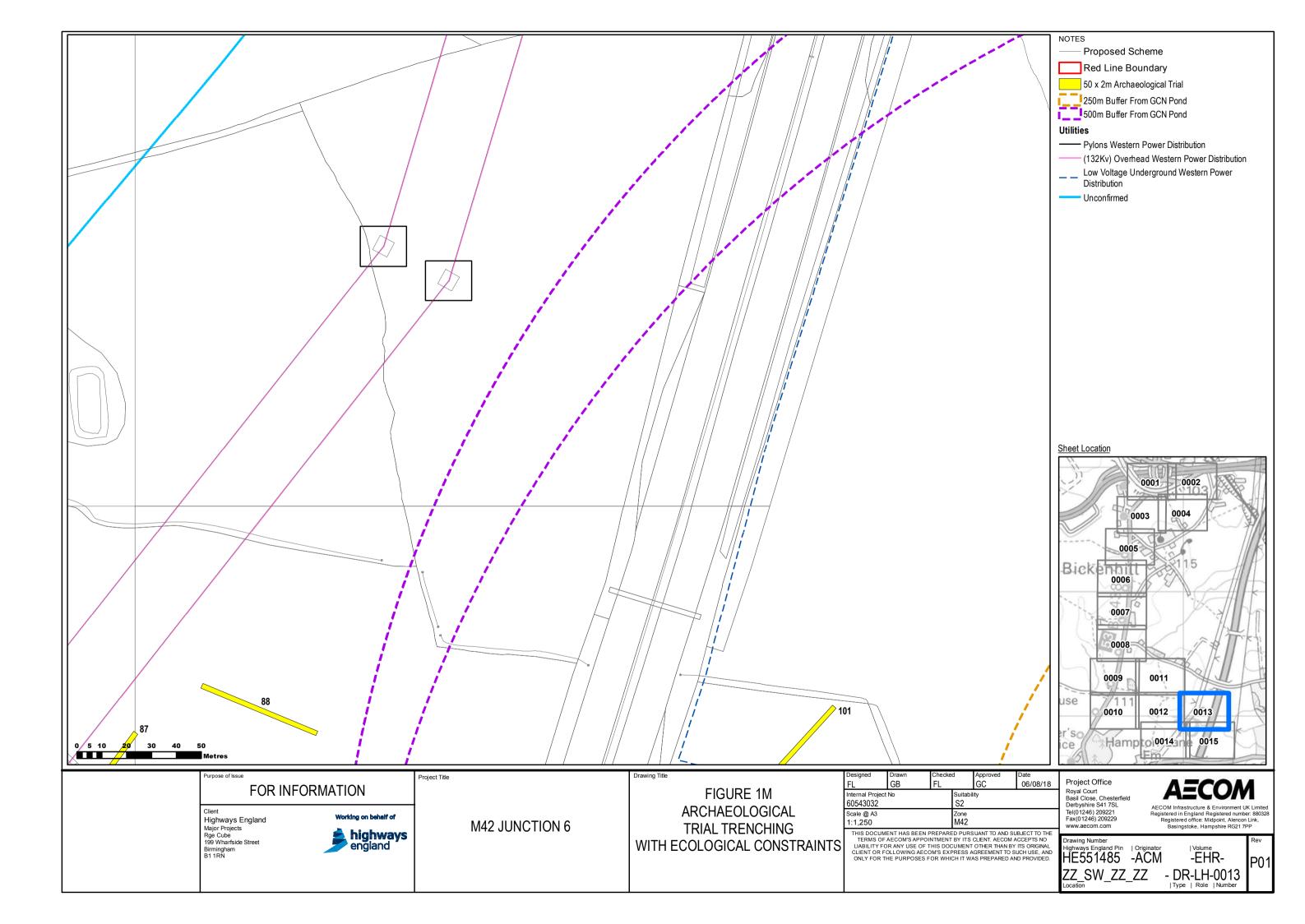


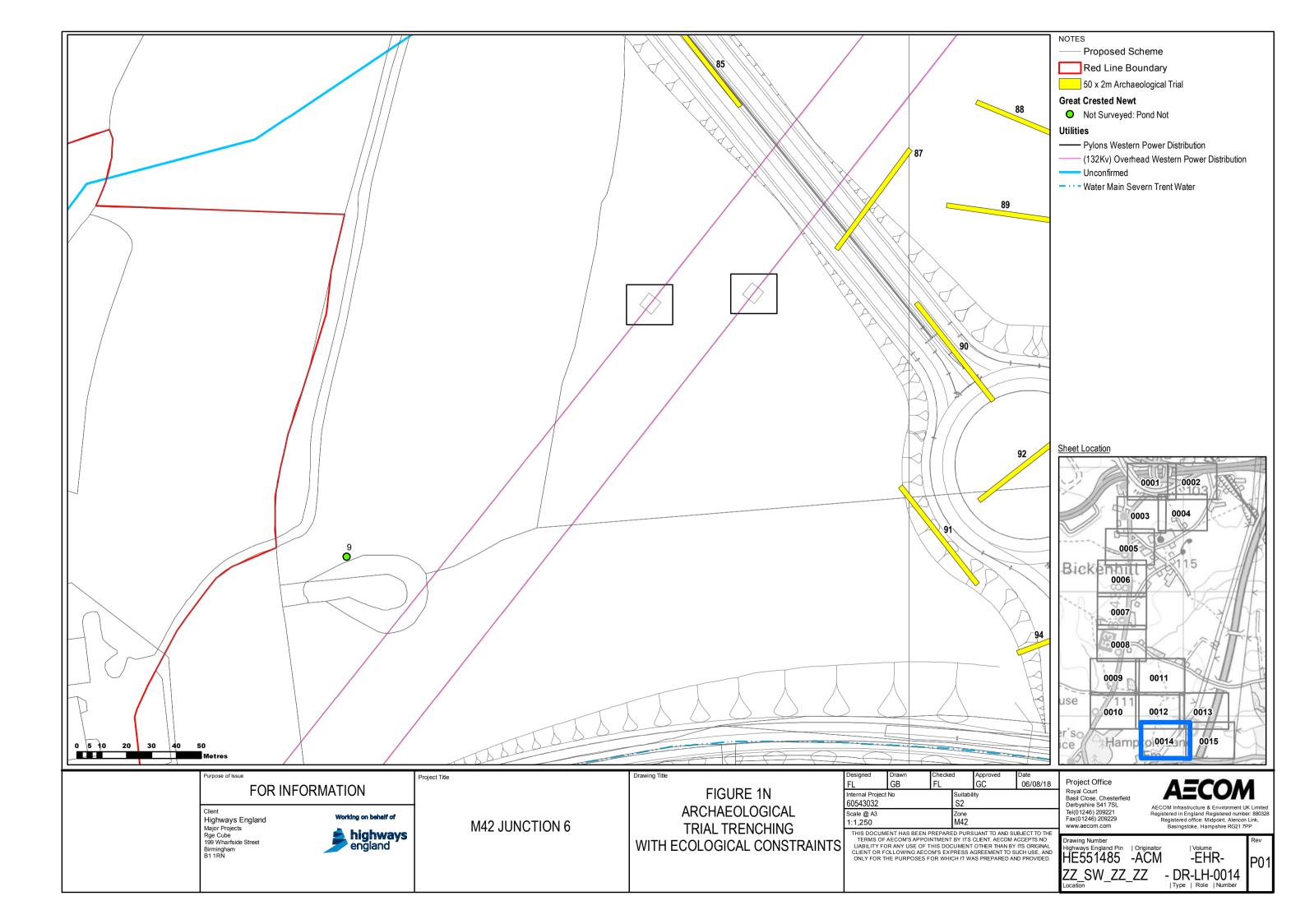


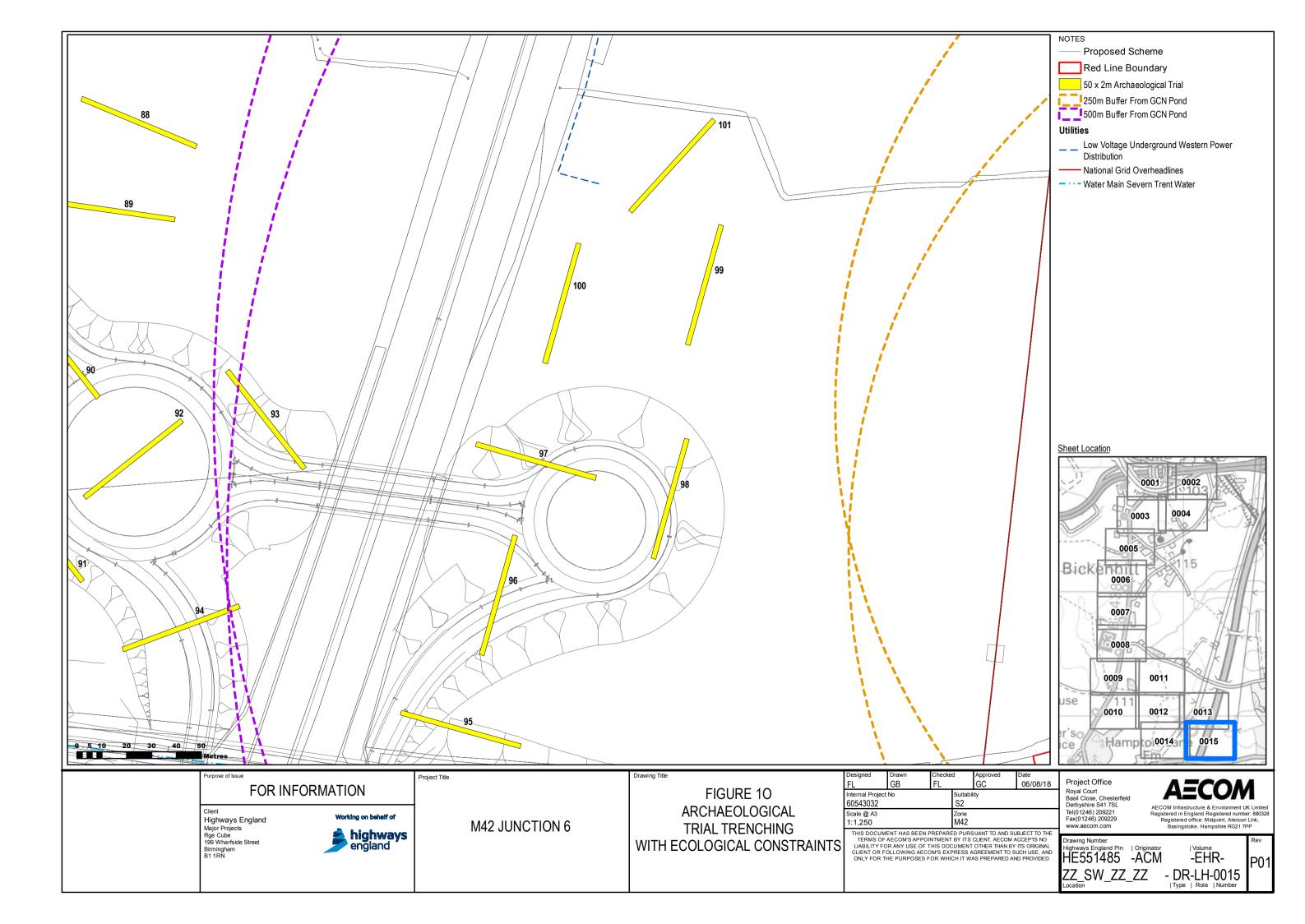












Appendix A Standards and Guidance

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