Asland Walks Energy Park

Assessment report on an Archaeological Evaluation

York Archaeology

Report Number YA/2025/213

Asland Walks Energy Park

Archaeological Evaluation Report

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ABBREVIATIONS

AOD Above Ordnance Datum

ASDU Archaeological Services Durham University

BGL Below Ground Level

NGR National Grid Reference

HER Historic Environment Record

WSI Written Scheme of Investigation

YA York Archaeology

NON-TECHNICAL SUMMARY

York Archaeology (YA) was commissioned by Lanpro Services Ltd. on behalf of The Bretherton Energy Co-Operative and GA Pet Food to conduct an archaeological trial trenching evaluation for the Asland Walks Energy Park, near Bretherton, Lancashire, PR4 6HS (NGR SD 46091 19288), in advance of the construction and operation of single wind turbine, solar farm and battery energy storage with associated infrastructure – Asland Walks Energy Park.

The evaluation consisted of the monitored mechanical excavation of 12 trial trenches, measuring 50m x 2m. Although geophysical survey (ASDU 2025) did not conclusively identify any potential, archaeological features the trenches were positioned to verify this and to determine the extent of potential alluvial deposits across site.

The results of the archaeological evaluation supported the geophysical survey, with no archaeological features identified other than modern boundary ditches and field drains. Alluvial deposits were identified in a number of the trenches, indicating potential flooding events across the site.

The impact of the proposed works is considered to be low as they impact to shallow depths onto natural geological deposits and potentially one hedgerow feature.

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1 INTRODUCTION

1.1 The Project

1.1.1 York Archaeology (YA) was commissioned by Lanpro Services Ltd. on behalf of The Bretherton Energy Co-Operative and GA Pet Food to conduct an archaeological trial trenching evaluation for Asland Walks Energy Park in advance of the construction and operation of single wind turbine, solar farm and battery energy storage with associated infrastructure – Asland Walks Energy Park. This report is for Planning Issue September 2025.

1.1.2 The evaluation took place from the 26th to the 29th of August 2025 on the site at Asland Walks, Eyes Lane, Bretherton, PR4 6FS (Figure 1).

1.1.3 The layout of the trenches aimed to verify the lack of archaeological features as seen from the geophysical survey (ASDU 2025) and to test for the extent of alluvium across site. The results of this trial trenching will inform decisions on the need for any further archaeological mitigation investigation.

1.1.4 The layout comprised of 12 trenches, each measuring 2m by 50m in size, positioned to ground truth the geophysical survey results, as well as identify the extent of potential alluvium across the site, based on methodology set out in the WSI (James 2025).

1.1.5 The site lies on 39.7ha of open arable land south of Bank Bridge, to the southeast of Tarleton and is bounded by the straight channel of the River Douglas to the east and the Leeds and Liverpool Canal (Rufford Branch) to the west.

1.1.6 The geology of the site consists of the Sherwood Sandstone Group, a sedimentary bedrock formed 272.3 and 237 million years ago during the Permian and Triassic periods, with superficial Tidal Flat Deposits (BGS 2024). Tidal flat deposits accumulate in horizontal areas in the intertidal zone with the land being covered and uncovered by the rise and fall of the water in low energy environments with unconsolidated layers of silt, clay, gravel and peat, with common smaller laminations or lenses within the deposit.

1.1.7 The existing ground level on site is 4.50m AOD.

1.2 Archaeological Potential

1.2.1 This has summarised the information presented in the desk-based assessment (DBA) by Archaeological Services Durham University (ASDU 2020; 2023) and a subsequent geophysical survey report (ASDU 2025).

Prehistoric and Roman (to 5th century AD)

1.2.2 No evidence for prehistoric or Roman activity has been recorded within the site. Paleoenvironmental coring undertaken approximately 650m to the north (ELA 1702) revealed a Bronze Age landscape, though no signs of human occupation were recovered. Two undated cropmark enclosures have been identified nearby: a circular enclosure at Strine Plat (HER 3443), c.975m to the north-west, and a sub-rectangular enclosure at Manor Farm (HER 3444), c.375m south within Sollom, both of which may relate to late prehistoric activity.

1.2.3 There is no evidence for Roman occupation within the site or its 1km surrounding area. Overall, occupation during the prehistoric and Roman periods appears limited. The site likely

formed part of the low-lying floodplain associated with the meanders of the River Douglas, making it unsuitable for settlement. This interpretation is supported by geophysical survey results, which identified palaeochannels corresponding to the former course of the river.

Early-Medieval and Medieval Periods (c.410 – c.1540)

1.2.4 There is no recorded evidence for early medieval activity within the site.

1.2.5 The proposed development area is located between the medieval villages of Tarleton and Bretherton, with the hamlet of Sollom situated to the south-west. The surrounding landscape would have been primarily agricultural. Surviving strip field boundaries (HER 23896) are recorded approximately 150m to the north-west, while aerial photography has identified a possible deserted medieval village around 650m to the north (HER 3425), though this remains unconfirmed by further investigation.

1.2.6 The site itself likely formed part of the agricultural hinterland of these nearby settlements. However, its position adjacent to the River Douglas suggests it may have been prone to flooding and therefore unsuitable for cultivation, functioning instead as floodplain.

Post-Medieval and Modern Periods (c.1540 – Present)

1.2.7 There are no heritage assets of post-medieval date recorded within the site.

1.2.8 Tarleton and Bretherton are depicted on Speed's 1610 map, with the proposed development area shown as undeveloped land near the river, approximately 650m south-west of Bank Hall. Bank Hall (HER 1348), a moated manor house constructed in 1608, is thought to occupy the site of an earlier medieval building.

1.2.9 During the 17th century, population growth across the Lancashire plain prompted extensive agricultural development, including the drainage of land through ditches, culverts, and river embankments to reduce flooding. Several nearby farms date from this period, such as Cross Farm, Green Lane Farm, White Dial Farm, and Bank Hall Farm. It is likely that the site was drained and brought into agricultural use at this time.

1.2.10 Yates' 1786 map depicts the site as open land. Major alterations to the landscape occurred in the later 18th century with improvements to the River Douglas (from 1753) and the construction of the Rufford Branch of the Leeds and Liverpool Canal. Sollom Lock (HER 7484), located about 30m west of the site, was built in 1780 but had fallen out of use by 1803. Systematic drainage of the mossland continued into the 19th century, and by Greenwood's 1818 map the site lay between the River Douglas and the Rufford Branch Canal, and was likely fully drained for cultivation.

1.2.11 The 1847 Ordnance Survey map records the site as a patchwork of 26 small, irregular fields with drainage ditches, alongside key infrastructure such as Bank Bridge (1790) and Tarleton Bridge (1821). A warehouse north of the A59, contemporary with Bank Bridge, also appears and survives in the modern landscape.

1.2.12 By the 1894 OS map, several field boundaries in the northern part of the site had been removed to create a larger enclosure. No further changes to the site's land use are shown on subsequent historic maps.

2 PROJECT AIMS AND OBJECTIVES

2.1 Aims

2.1.1 The aims of the project as presented in the Written Scheme of Investigation (WSI) produced by Lanpro Services Ltd (James 2025) are as follows:

'*obtain sufficient information to establish the presence/absence, character, extent, state of preservation, and date of any archaeological deposits within the proposed development area'*. This was undertaken to inform recommendations regarding the planning application and to determine any need for further archaeological mitigation.

2.2 Objectives

2.2.1 The WSI also contained the following objectives:

- To determine the location, extent, date, character, condition and significance of any archaeological remains within the site
- To determine the presence of alluvial deposits within the site
- To excavate and record identified archaeological features and deposits to a level appropriate to their extent and significance
- To assess vulnerability/sensitivity of any exposed remains
- To assess the impact of previous land use on the site
- To assess the potential for survival of environmental evidence
- To inform a strategy to avoid or mitigate impacts of the proposed development on surviving archaeological remains
- To undertake sufficient post-excavation assessment to confidently interpret identified archaeological features
- To report the results of the evaluation and place them in their local and regional context
- To compile and deposit a site archive for deposition with the Lancashire County Council Museum Service and to provide information for accession to the Lancashire HER.

2.3 Regional Research Themes and Objectives

2.3.1 The archaeological investigation has the potential to contribute to research priorities outlined in the North West Regional Research Framework (NWRRF, 2025). It will also address national research objectives and themes set out in the Historic England Research Strategy (2016) and Research Agenda (2017).

3 FIELDWORK METHODOLOGY

3.1 Mechanical Excavation

3.1.1 The location of trenches was determined in accordance with the WSI provided by Lanpro Services Ltd. and chosen to verify a lack of archaeological features observed through geophysical survey and to test the alluvium across site.

3.1.2 Trenches were located using a Leica TRTK differential GS07, with reference to the Ordinance Survey National Grid to an accuracy of 0.02m. The use of this equipment was undertaken by a suitably qualified and experienced member of staff.

3.1.3 Details of all evaluation trenches are presented below and locations are shown in Figure 2.

3.1.4 Machining was completed using a toothless ditching bucket under continuous supervision by a suitably qualified and experienced archaeologist. Excavated topsoil and subsoil were kept separate at a safe distance from the trench edge, in preparation for reinstatement.

3.1.5 Stratigraphy was removed in layers no greater that 200mm thick to allow the supervising archaeologist to observe and direct the process as necessary. Trenches were excavated to the first archaeological horizon, natural substrate, or to a maximum safe depth, whichever was encountered first.

3.1.6 The table below summarises basic trench information.

Table 1: Excavation Areas

Trench Number	Length (m)	Width (m)	Orientation	Archaeology Present?	Average Excavation Depth (m)	Alluvial depths (m) Below ground level (BGL
1	50	2	E-W	Yes	0.54	n/a
2	50	2	N-S	No	0.5 – 1.3	0.45m - 0.95m BGL
3	50	2	E-W	No	0.56	n/a
4	50	2	N-S	No	0.5 – 1.2	0.55m - 1.15m+ BGL
5	50	2	NE-SW	No	0.47	0.41m - 0.47m+BGL
6	50	2	E-W	No	0.48 – 1.00	0.48m - 1m+BGL
7	50	2	N-S	No	1.2 – 3.0+	0.45m - 2.5m+ BGL
8	50	2	NW-SE	No	0.57	0.47m -

						0.59m+
9	50	2	E-W	No	1.0 – 1.3	0.6m – 0.9m+ BGL
10	50	2	E-W	No	1.2	0.45m – 1.21m+ BGL
11	50	2	N-S	No	1 – 1.2	0.42m – 0.97m+ BGL
12	50	2	E-W	No	1.2	0.3m – 2.5m BGL

3.2 Excavation of features

3.2.1 Any archaeological features identified were hand-cleaned to identify their extent and morphology, where possible.

3.2.2 Following this, fills of features were excavated using hand tools in accordance with correct manual handling procedures, with attention given to contextual change (the smallest usefully definable unit of stratification). Substantial features were hand excavated to a maximum depth of 1.2m where safe to do so; features with unstable sides or other identifiable hazards were excavated to a safe limit where practicable, in accordance with the updated risk assessment for the site.

3.3 Recording

3.3.1 All aspects of the recording of the evaluation were conducted in accordance with the Chartered Institute for Archaeologists' Code of Conduct (2022) and Standard for Archaeological Evaluation (2023).

3.3.2 Trench locations were surveyed using a Leica CS18/GS18 RTK Differential GNSS in accordance with the YAT survey manual (2024a), and showed the top and the base of the trench both with levels expressed as O.D. values, the trench number and any features, drawings and interventions as a minimum. As appropriate, truncations, disturbances and natural features were also recorded.

3.3.3 Plans of all features were surveyed using a Leica CS18/GS18 RTK Differential GNSS, and showed at least: context numbers, principal slopes, levels expressed as O.D. values, and sufficient details to locate the subject in relation to OS 1:2500 mapping.

3.3.4 Sections were drawn on drafting film in pencil at a scale of 1:10/1:20/1:50 (as appropriate) and showed the same information, however levelling information was given in the form of a datum line with O.D/arbitrary value. The locations of all sections were surveyed.

3.3.5 Upon the opening of each individual trench, a photographic record was established using a DSLR camera of minimum 10MP to conform to industry best practice (Historic England 2015b). Digital images of each context were taken together with general views illustrating the principal features of the excavations.

3.3.6 Written records were maintained as laid down in the YA recording manual (York Archaeology 2024b).

3.4 Paleoenvironmental Sampling

3.4.1 No appropriate features were identified on site for environmental sampling.

3.5 Finds

3.5.1 No finds were retrieved during the evaluation.

4 RESULTS

4.1 Trench 1 (Figures 2 and 3; Plates 1 and 2; Table 2)

4.1.1 Trench 1 was the northern most trench located to the northeast of site (Figure 2). The excavation in Trench 1 reached a depth of 0.54m BGL.

4.1.2 Trench 1 contained three field drains all roughly aligned north-south, the eastern most of which was truncated by ditch [103].

4.1.3 A linear feature [103] (Plate 2) was located towards the eastern end of trench 1 and oriented northwest-southeast and has been interpreted as a hedgerow or field boundary ditch. It contained four fills, the basal of which is (107), likely formed through natural silting during use, a fragment of modern field drain and a shard of glass were recovered from this context. This was overlain by (106) which could represent the first deliberate deposition post use/disuse. Next was (105) which, just like (106), contained no artefactual inclusions but did contain occasional small-medium angular stones. The top fill (104) contained dark patches throughout which could indicate the presence of organic material. A fragment of modern iron, likely a nail stem was recovered from this context but it was not retained.

Table 2: Trench 1 summary

Context number	Category	Context name	Description	Thickness/Depth
100	Layer	Topsoil	Sticky, light greyish black, silty clay topsoil	0.13m
101	Layer	Subsoil	Loose, crumbly, light greyish white, sandy clay subsoil	0.13m
102	Geological	Natural	Soft, pale yellow with black spots, sand, superficial tidal flat deposits	-
103	Cut	Cut of linear	Cut of linear feature containing four contexts, possible hedgerow or field boundary	0.60m
104	Fill	Fill of [103]	Sticky, compact, mid greyish black, silty clay, upper most fill of linear [103]	0.18m
105	Fill	Fill of [103]	Compact, plastic, mid brownish grey, silty clay, ditch fill	0.12m
106	Fill	Fill of [103]	Sticky, spongy, light brownish grey, clay ditch fill	0.09m
107	Fill	Fill of [103]	Loose, crumbly, dark greyish black, sandy clay, basal ditch fill of linear [103]	0.21m

4.2 Trench 2 (Figures 2 and 4; Plate 3 and 4; Table 3)

4.2.1 Trench 2 was located in the north of site (Figure 2). The excavation in Trench 2 reached a depth of between 0.50m-1.30m BGL.

4.2.2 Trench 2 contained one field drain aligned northwest-southeast which was present diagonally across the trench.

4.2.3 The only archaeological feature observed in trench 2 was a linear feature [204], aligned northwest-southeast and terminating in the centre of the trench (Plate 4). Due to the shape, alignment and diffuse edges likely caused by rooting this was interpreted as a hedgerow.

4.2.4 A spongy dark organic/alluvial layer (202) was observed to overlay the natural superficial tidal flat deposits (203) (Plate 3). The natural sands (202) were identified at a depth of 0.95m BGL. A sondage was excavated in the southern end of Trench 2 to a depth of 1.3m BGL and the natural geology was observed to contain a large volume of manganese inclusions (Plate 3).

Table 3: Trench 2 summary

Context number	Category	Context name	Description	Thickness/Depth
200	Layer	Topsoil	Loose, crumbly, mid grey/yellow brown, silt topsoil	0.35m
201	Layer	Subsoil	Friable, light greyish brown, sandy clay	0.10m
202	Layer	Alluvial/ Organic rich layer	Spongy, mixed dark brown with yellow sandy lenses	0.50m
203	Geological	Natural	Mottled pale yellow with black spots, natural superficial tidal flat deposits	-
204	Cut	Cut for hedgerow	Irregular shape in plan, NW-SE aligned hedgerow cut at edge of trench	0.03 – 0.40m
205	Fill	Fill of [204]	Friable, compact, dark greyish brown. Mottled/diffuse at base likely through root action and leaching	0.03 – 0.40m

4.3 Trench 3 (Figure 2; Plate 5; Table 4)

4.3.1 Trench 3 was located towards the northern side of site (Figure 2). The excavation in trench 3 reached a depth of 0.56m BGL.

4.3.2 Trench 3 contained three field drains aligned northwest-southeast and across the southern half of the trench.

4.3.3 No archaeological features were observed in this trench and the natural sands (202) were observed at 0.56m BGL (Plate 5; Table 4).

Table 4: Trench 3 summary				
Context number	**Category**	**Context name**	**Description**	**Thickness/Depth**
300	Layer	Topsoil	Loose, crumbly, friable, mid grey/yellow brown silt, agricultural topsoil	0.36m
301	Layer	Subsoil	Friable, light greyish brown, sandy clay subsoil	0.20m
302	Geological	Natural	Loose, pale yellow with mottled black spots sand, natural superficial tidal flat deposits	-

4.4 Trench 4 (Figure 2; Plate 6; Table 5)

4.4.1 Trench 4 was located centrally towards the eastern site boundary (Figure 2). The excavation in trench 4 reached a depth of between 0.50m-1.20m BGL.

4.4.2 Trench 4 contained four parallel field drains aligned roughly east-west and spread evenly across the trench (Plate 6).

4.4.3 Natural superficial tidal sand flat deposits (402) were observed at 0.5m at the southern end of trench 4. However, (402) was observed to be sloping downwards towards the north of the trench and was overlain by an organic alluvial layer (401). A sondage was dug at the northern end of the trench to test the depth of this deposit but the safe working limit of 1.2m was reached before the base of (401) (Plate 6). Deposit (401) likely formed partly through alluvial processes associated with the two stretches of the River Douglas bounding site to the east and west.

Table 5: Trench 4 summary				
Context number	**Category**	**Context name**	**Description**	**Thickness/Depth**
400	Layer	Topsoil	Loose, friable, mid grey/yellow brown, silt agricultural topsoil	0.55m
401	Layer	Organic/alluvial layer	Spongy, dark greyish black with black lenses, sandy clay	>0.65
402	Geological	Natural	Loose, pale yellow mottled with black spots, sand superficial tidal sand flat deposits	-

4.5 Trench 5 (Figure 2; Plate 7; Table 6)

4.5.1 Trench 5 was located centrally to site (Figure 2). The excavation in trench 5 reached a depth of 0.47m BGL.

4.5.2 Trench 5 contained two crossing field drains [503] which were aligned north-south and northwest-southeast. These were recorded in plan and were 0.50m and 0.30m wide respectively.

4.5.3 No archaeological features were observed in trench 5. However, an organic layer (502) was encountered in the northern eastern end of trench 5 to be overlaying the natural sands (504). This layer tapers off towards the south western end of the trench until only the natural sands (504) are visible (Plate 7), similar to what was observed in trench 4, and are likely indicative of alluvial processes associated with the nearby bodies of water bounding site.

Table 6: Trench 5 summary

Context number	Category	Context name	Description	Thickness/Depth
500	Layer	Topsoil	Loose, crumbly, friable, mid grey/yellow-brown, silt	0.36m
501	Layer	Subsoil	Friable, light greyish brown, silty clay subsoil	0.05m
502	Layer	Organic / alluvial layer	Compact, light greyish brown, sandy clay	>0.06m
503	Cut and Fill	Field drain	Cut and fill for two crossing field drains	0.3 – 0.5
504	Geological	Natural	Loose, pale yellow with mottled black spots sand, natural superficial tidal flat deposits	-

4.6 Trench 6 (Figure 2; Plate 8; Table 7)

4.6.1 Trench 6 was located centrally and towards the eastern boundary of site (Figure 2). The excavation in trench 6 reached a depth of 0.48m-1.00m BGL.

4.6.2 One field drain was observed in trench 6, aligned northwest-southeast and crossing through the eastern half of the trench.

4.6.3 An alluvial silty organic layer (603) was observed to overlay the natural sands (602) in the eastern half of trench 6 extending 30m to the west (Plate 8). In order to ascertain the thickness of this deposit a machine sondage was excavated in the eastern end of the trench to a depth of 1.0m BGL, but the natural sands (602) could not be observed before a safe working depth was exceeded (Plate 8).

Table 7: Trench 6 summary

Context number	Category	Context name	Description	Thickness/Depth
600	Layer	Topsoil	Loose, friable, crumbly, mid grey/yellow brown, silt. Occasional sub-angular stone inclusions	0.36m
601	Layer	Subsoil	Friable, light greyish brown, sandy clay	0.12m

Table 7: Trench 6 summary				
Context number	**Category**	**Context name**	**Description**	**Thickness/Depth**
602	Geological	Natural	Loose, pale yellow mottled with black spots, sand superficial tidal sand flat deposits	-
603	Layer	Alluvial/ Organic layer	Compact, mixed orangey brown with greyish black lenses, sandy clay (Eastern end of trench)	>0.60m

4.7 Trench 7 (Figure 2; Plate 9 and 10; Table 8)

4.7.1 Trench 7 was located in the centre of site (Figure 2). The excavation in trench 7 reached an average depth of 1.20m BGL, with a sondage at the southern end of the trench reaching depths of approximately 2.50m BGL.

4.7.2 Three parallel field drains were observed in the southern half of trench 7 and aligned northwest-southeast

4.7.3 No subsoil or archaeological features were observed in trench 7. Beneath the topsoil (700) an organic layer (701) was exposed covering the entire base of the trench (Plate 9). To determine the thickness (701) a sondage was excavated by machine in the southern end of the trench to a depth of approximately 2.50m (Plate 10). Unfortunately, the natural superficial tidal flat sand deposits were not observed at this depth.

Table 8: Trench 7 summary				
Context number	**Category**	**Context name**	**Description**	**Thickness/Depth**
700	Layer	Topsoil	Loose, friable, crumbly, mid grey/yellow brown, silt	0.45m
701	Layer	Organic layer	Spongy, mixed dark brown with lenses of light yellowish brown and blueish grey, clay	>2.0m

4.8 Trench 8 (Figure 2; Plate 11; Table 9)

4.8.1 Trench 8 was located in the south eastern end of site (Figure 2). The excavation in trench 8 reached a depth of 0.57m BGL.

4.8.2 A number of field drains were observed across Trench 8, with four clustered at the eastern end of the trench, most were aligned NE/SW or E/W.

4.8.3 No archaeological features were observed in trench 8. Beneath the topsoil (800) and subsoil (801) was natural (802). At the eastern third of the trench was a mixed colluvial and alluvial deposit (803). This was only seen on the eastern side of the trench where the hill sloped down slightly to the water.

Table 9: Trench 8 summary				
Context number	**Category**	**Context name**	**Description**	**Thickness/Depth**
800	Layer	Topsoil	Loose, friable, crumbly, light greyish brown, silty clay	0.34m
801	Layer	Subsoil	Friable, light greyish brown, sandy clay	0.13m
802	Geological	Natural	Soft, pale yellow with black spots, sand	>0.10m
803	Layer	Alluvial/ Colluvial	Compact, dark brown with greyish brown lenses, sandy clay	>0.12m

4.9 Trench 9 (Figure 2; Plate 12; Table 10)

4.9.1 Trench 9 was located on the southern end of site (Figure 2). The excavation in trench 9 reached a depth of 1.00m-1.20m BGL.

4.9.2 Two field drains were located within the trench, both parallel in a NW/SE alignment.

4.9.3 No archaeological features were observed in trench 9. Beneath the topsoil (900) and subsoil (901) were organic layers (902, 903 and 904) identified as alluvial deposited material, likely from periods of flooding. Natural deposits were not reached below these deposits.

Table 10: Trench 9 summary				
Context number	**Category**	**Context name**	**Description**	**Thickness/Depth**
900	Layer	Topsoil	Loose, friable, crumbly, light greyish brown, silty clay	0.30m
901	Layer	Subsoil	Friable, mid grey brown. clay silt	0.30m
902	Layer	Alluvial	Friable, mixed reddish grey brown, clayey silt	0.16m-0.30m
903	Layer	Alluvial	Plastic, pale to mid-brown grey, silty clay	0.16m-0.30m
904	Layer	Alluvial	Sticky, plastic, mid brown grey, silty clay	N/A

4.10 Trench 10 (Figure 2; Plate 13; Table 11)

4.10.1 Trench 10 was the south-western most trench excavated (Figure 2). The excavation in trench 10 reached a depth of 1.20m BGL.

4.10.2 Three field drains were observed in trench 10, all parallel in a SE/NW alignment.

4.10.3 No archaeological features were observed in trench 10. Subsoil was not clear below the topsoil (1000) in this area and instead immediately below the topsoil was an alluvial deposit (1001) which extended beyond the safe working depths of 1.2m BGL. Natural geology was not encountered in this trench.

Table 11: Trench 10 summary

Context number	Category	Context name	Description	Thickness/Depth
1000	Layer	Topsoil	Friable, crumbly, light greyish brown, silty clay	0.45m
1001	Layer	Alluvial	Spongy, mid grey, yellowish brown with reddish brown lenses, clay	0.76m

4.11 Trench 11 (Figure 2; Plate 14; Table 12)

4.11.1 Trench 11 was located on the southern part of site (Figure 2). The excavation in trench 11 reached a depth of 1.00m-1.20m BGL.

4.11.2 Two field drains were identified on the southern end of the trench, parallel in an E/W alignment.

4.11.3 No archaeological features were identified in trench 11. The profile in trench 11 was similar to the other trenches in this area (namely trenches 10 and 12) with no subsoil identified and alluvial deposit (1101) immediately below the topsoil (1100). Natural was not identified as the alluvial deposit (1101) extended beyond the safe working depths of 1.20m BGL.

Table 12: Trench 11 summary

Context number	Category	Context name	Description	Thickness/Depth
1100	Layer	Topsoil	Friable, crumbly, light greyish brown, silty clay	0.42m
1101	Layer	Alluvial	Spongy, mid grey, yellowish brown with reddish brown lenses, clay	>0.55m

4.12 Trench 12 (Figure 2; Plates 15 and 16; Table 13)

4.12.1 Trench 12 was the southern-most trench in the excavation (Figure 2). The excavation here reached a depth of 1.20m BGL, with a sondage at the eastern end of the trench reaching a depth of approximately 2.50m BGL.

4.12.2 Trench 12 has one field drain located in the centre of the trench, aligned NW/SE.

4.12.3 Like trenches 10 and 11, the profile of the deposits was topsoil (1200) immediately on to alluvial deposits (1201). A sondage was excavated at the eastern end of the trench to identify the depths of natural geology. Due to safe working depths all recording was done from outside

of the trench with approximate depths taken. The alluvial deposit (1201) reached a depth of approximately 2.50m BGL with geological natural clay (1202) appearing below this.

Table 13: Trench 12 summary

Context number	Category	Context name	Description	Thickness/Depth
1200	Layer	Topsoil	Friable, crumbly, light greyish brown, silty clay	0.30m
1201	Layer	Alluvial	Spongy, dark brown with lenses of yellowish brown, silty clay	C. 2.20m
1202	Geological	Natural	Compact, light grey, clay	C. >0.20m

5 RESIDUAL RISKS AND POTENTIAL FOR ARCHAEOLOGICAL IMPACT

5.1.1 The proposed works for creating the new energy park are all of relatively low impact but are detailed below and in Appendix 1. Details of the scheme can be found in 2022-143-002D - Full Proposed Site Layout; 2022-143-012 - Temporary Work Arrangements; 2022-143-011E- General Arrangement to Solar Farm; 2022-143-013A – General Arrangement to Electric Compound; 2022-143-020C - HV Cable Route to Bretherton; 2022-143-021 - General Arrangement and Details of HV Cable Route Under River and Road; 2022-143-022A - Plan on HV Route to Plocks Farm.

5.1.2 Wind turbine: The proposed location for the wind turbine is over the position of trench 1. This will only result in further truncation of possible hedgerow [103] and (102) and the superficial tidal flat deposits. As these are identified as natural features, the impact is assessed as low.

5.1.3 Solar panels arrays: the design is not finalised but the only impact below-ground is likely to be a driven steel pile, of c.2.5m depth of small diameter. However, as no excavation is planned the impact on below-ground deposits is low.

5.1.4 Cable routes: within the site the cable trenches are proposed as 1.2m wide and a maximum of 1m deep and will therefore only impact upon geological deposits to a low extent.

5.1.5 CCTV, BESS, solar sub foundation solutions and any fencing around the site are unlikely to be deeper than 1.2m, and usually far shallower, at any point indicating a low risk to any geological deposits within the site.

5.1.6 Landscaping within the site and the creation of a Habitat Bank in the residual land is following the RSPB Wet Scrapes Advice and will be no more than 1m deep. The risk is low to geological deposits within the site.

5.1.7 Outside of the site the HV cable route is to be laid in trenches 1m in depth, starting from the site across fields and towards Bretherton along Eyes Lane and South Road to the Bretherton Battery buildings. The risk to archaeological deposits can only be assessed within the site evaluated. Within the site, Horizontal Directional Drilling (HDD) is being used under the river and the launch and receiving pits are proposed as 2m by 1m by 1m indicating a low risk to geological deposits. The HDD drilling itself is also unlikely to present more than a low risk. The route lies just to the outside of the north end of trench 2, where the 1m depth may impact onto the darker deposit (203) which lies above the superficial tidal flat geology. The impact on this deposit – which is unlikely to extend along the entire cable trench route – is of low significance.

5.1.8 Outside of the site there are two locations for Battery Buildings; Bretherton North is within an existing building and poses no risk to archaeological deposits. Bretherton South is a new small single-storey building on land to the north side of South Road (B5247), Bretherton. The depth of these foundations is unlikely to pose a high risk to archaeological deposits, although it is outside of the area that has been evaluated.

Table 14: Summary of impacts upon alluvial/geological deposits				
Proposed works	**Proposed depth of works**	**Trench**	**Depth of alluvial/ geological deposits**	**Impact**
Wind turbine		1	None observed	None
Solar panel array	Driven steel pile to c. 2.5m BGL	2-12	Varied: from minimum 0.3m, averaging c. 0.45m BGL	Negligible
Cable routes	1m BGL	2-12	Varied: from minimum 0.3m, averaging c. 0.45m BGL	Low
CCTV, BESS, solar sub foundation, fencing	Max 1.2m BGL	2, 7, 11	0.42 – 0.95, to up to 2.5m+ BGL	Low
Landscaping	Max 1m	All	Varied: from minimum 0.3m, averaging c. 0.45m BGL	Low
HV Cable route	Max 1m	2	0.45m – 0.95m BGL	Low
Battery Buildings; Bretherton North	No new ground breaking	Outside of evaluation area	Unknown	None
Battery Buildings; Bretherton South	Unknown	Outside of evaluation area	Unknown	Unknown

6 CONCLUSIONS

6.1.1 The archaeological evaluation at Asland Walks Energy Park aimed to investigate the geophysical results which identified no archaeological features, only natural features and former hedgerow/field boundaries. The 12 trenches that were excavated across the site identified only modern hedgerows and field drains and therefore supported the geophysical survey. A ditch [103] in Trench 1 was identified in the geophysical survey as a former field boundary; this was confirmed after excavation. The feature in Trench 2 was identified as part of a hedgerow/natural feature, this may represent the geophysical feature located slightly at the north of the trench. No other archaeological features were identified that corresponded with the geophysical survey.

6.1.2 Within a number of the trenches (2, 4, 5, 6, 7, 8, 9, 10, 11, 12) alluvial deposits were identified, extending beyond the safe working depths of the trench at 1.20m BGL and in trenches where deep sondages were excavated (7 and 12) these alluvial deposits were observed to depths of approximately 2.5m BGL. This is expected within the site location between two water courses and within low ground levels, although in general these changes in soil do not correspond to features, or anomalies identified within the geophysical survey. Only the soils in trenches 7 and 12 may correspond to the geological feature identified (ASDU 2025: Figure 8).

6.1.3 The trenches located on the south-western area of the site, which were closer to the waterways, had similar alluvial deposits. This concentration suggested flooding events or the result of sediment deposition from earlier courses, or meanders from the River Douglas which were identified on the geophysical survey (ASDU 2025).

6.1.4 There were some dark, more organic, alluvial deposits in trenches 2, 4, 7 and potentially in trench 12. These are interpreted as natural depositions of soil in flooded, organic rich environments. These are expected, isolated deposits within the flood zone and meander of rivers and are unlikely to have archaeological significance.

6.1.5 The results of this archaeological evaluation therefore demonstrate that archaeological features or finds are not present on this site and that flooding events over a number of years have resulted in significant alluvial deposits in a number of the trenches.

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8.1.1 York Archaeology thanks the client The Bretherton Energy Co-Operative and GA Pet Food and Lanpro for commissioning the work and their support during the work.

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FIGURES

FIGURES

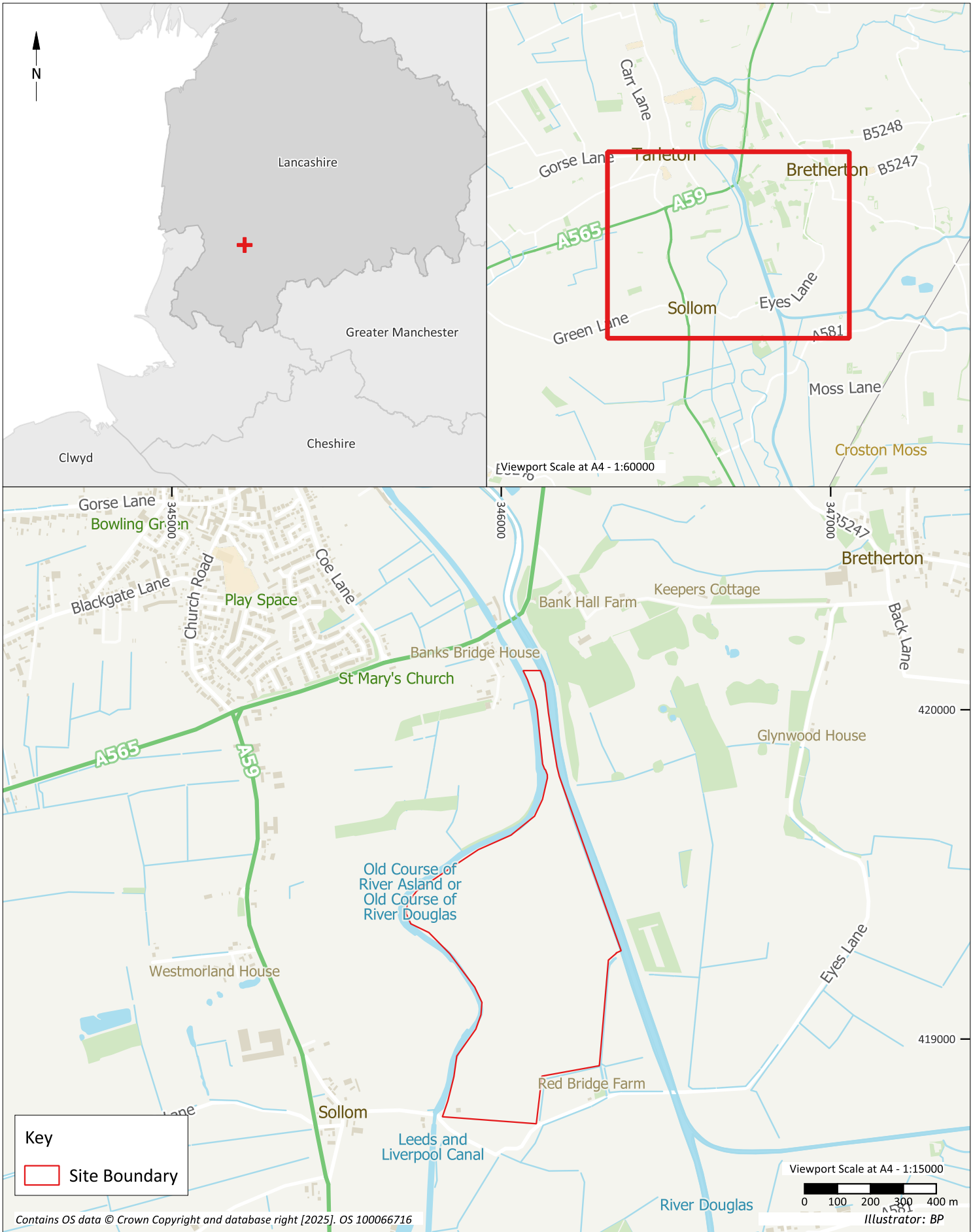


Figure 01 - Location Map
10577 - Asland Walks, Chorley

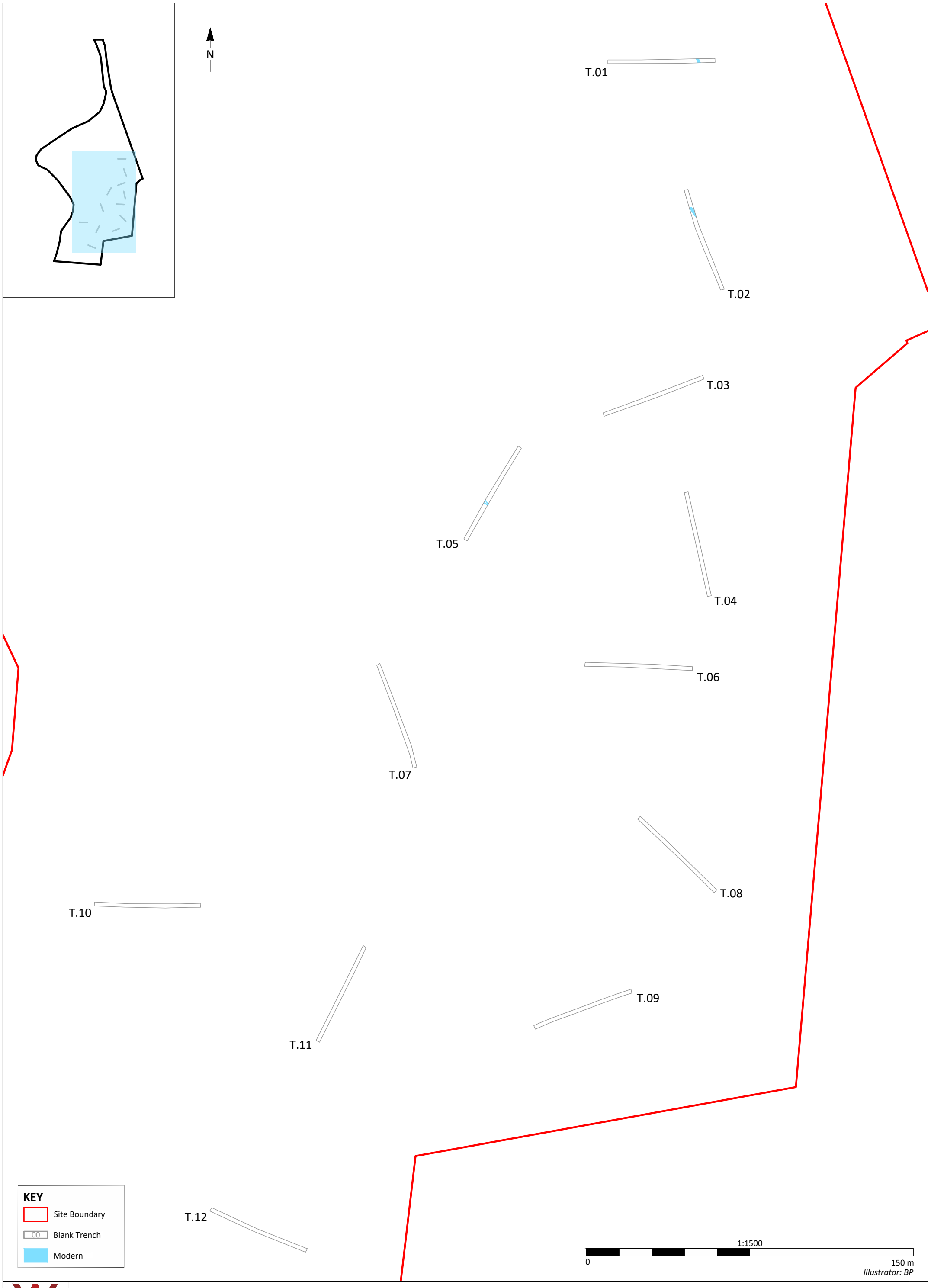
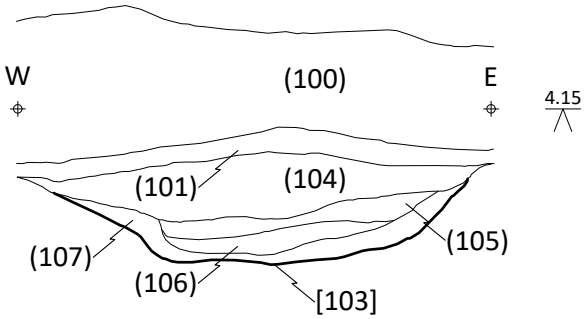


Figure 02 - Site Plan
10577 - Asland Walks, Chorley

D.1
South facing section [103]



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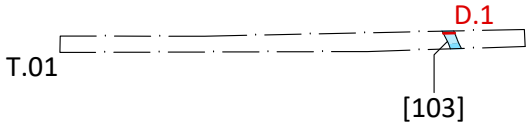

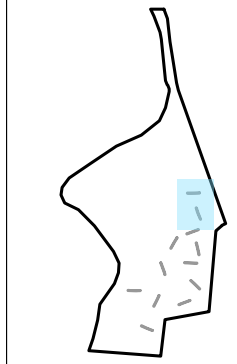

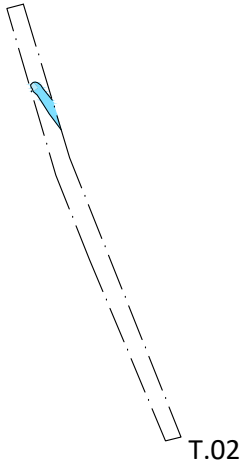

KEY

Modern

D.00.0 Section Figure

1:800

0 40 m

Illustrator: BP

Figure 03 - Plan of Trenches 01 and 02, and Section Figure
10577 - Asland Walks, Chorley

PLATES

Plate 1: Trench 1, looking east. 0.5m scale units.

Plate 2: Ditch [103], post-ex, looking north. 0.5m scale units.

Plate 3: Trench 2, looking northwest. 0.5m scale units.

Plate 4: Hedgerow [204], post-ex, looking northeast. 0.10m scale units.

Plate 5: Trench 3, looking west. 0.5m scale units.

Plate 6: Trench 4, looking south. 0.5m scale units.

Plate 7: Trench 5, looking northeast. 0.5m scale units.

Plate 8: Trench 6, looking west. 0.5m scale units.

Plate 9: Trench 7, looking northwest. 0.5m scale units.

Plate 10: Sondage in southern end of Trench 7 through (701), looking northeast. 0.5m scale units.

Plate 11: Trench 8, looking southeast. 0.5m scale units.

Plate 12: Trench 9, looking southwest. 0.5m scale units.

Plate 13: Trench 10, looking northwest. 0.5m scale units.

Plate 14: Trench 11, looking south. 0.5m scale units.

Plate 15: Trench 12, looking east. 0.5m scale units.

Plate 16: Sondage in Trench 12, looking north. 0.5m scale units.

APPENDIX 1: LANDSCAPE CONCEPT ASLAND WALKS (BCAL / AVIAN PLAN '22.522-BCAL-ZZ-00-DR-L-103-3-CONSULTATION - LANDSCAPE STRUCTURE)

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