

Archaeological Record & Written Scheme of Investigation

Proposed Residential Development
Former Sladen Mill
Littleborough
Rochdale

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Reference: rep-tjba-mere grp-slade n mill-Phs 2+3 Env-250322.docx

Revision	Date	Reason
0	May 2023	Original.

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1. INTRODUCTION.

1.1. Planning History

T. J. Booth Associates have been appointed by Mere Group to undertake an Archaeological Assessment & Written Statement of Investigation for the former Sladen Mill Site.

The Site was previously occupied by Alderburgh Ltd, manufacturers of uPVC products for civil engineering applications. Historical records indicate the Site has been used for industrial purposes prior to 1850, with multiple phases of redevelopment being undertaken between then and the present day.

The current pre-development Site comprised predominantly masonry buildings and steel frame/clad warehouses & storage buildings.

Planning approval for the Site was granted in October 2015, Outline planning application, ref: 18/01235/OUT, for the: 'Outline planning permission for residential development (including access) and demolition of the existing buildings on site'.

As part of the planning application package, a Heritage Impact Assessment was undertaken by Wardell Armstrong.

The outline planning application permission notice was granted in June 2018. It is understood that the above Wardell Armstrong heritage assessment as well as archaeological policy resulted in Condition No.11 being included on the approval, and which related to archaeological assessment, and is detailed below:

- 11** No development shall take place until the applicant or their agents or their successors in title have secured the implementation of a programme of archaeological works. The programme of archaeological works should be undertaken in accordance with a Written Scheme of Investigation (WSI) which has been submitted to and approved in writing by the local planning authority. The WSI shall cover the following:
1. A phased programme and methodology of site investigation and recording to include:
 - geophysical evaluation
 - evaluation trenching i) targeting geophysical anomalies and ii) including targeted evaluation trenching of buildings identified in the desk-based assessment and iii) providing an adequate spatial sample of the development site.
 - (depending upon the results of the evaluation) area excavation and recording
 2. A programme for post investigation assessment to include:
 - analysis of the site investigation records and finds
 - production of a final report on the significance of the archaeological, architectural and historical interest represented.
 3. Provision for publication and dissemination of the analysis and report on the site investigation.
 4. Provision for archive deposition of the report, findings and records of the site investigation.
 5. Nomination of a competent person or persons/ organisation to undertake the works set out within the approved WSI.

The Site buildings were subsequently demolished in 2019 as part of the planning approval by the previous Site owners, under a Building Notice (Appendix).

In June 2021, A reserved matters application, ref: 21/00950/REM was submitted to the LPA by the new & current Site owners.

1.2. Greater Manchester Archaeological Advisory Scheme.

As of May 2022, the Greater Manchester Archaeological Advisory Scheme (GMAAS) was contacted by the current Site owner.

GMAAS indicated that Condition 11 as included on the outline approval ref: 18/01235/OUT was written c2018, and specifically prior to demolition of the Site buildings by the previous owner.

GMAAS acknowledged that as all former structures had been demolished and ground conditions changed, the wording of Condition 11 may not still be fully appropriate.

It was noted that ideally, the former Site buildings should have been recorded prior to demolition due to the wording around 'geophysical evaluation'. It was also noted that as the building have been demolished, a geophysical survey would no longer be required as it would be likely to yield any meaningful results.

GMAAS specifically requested a Written Scheme of Investigation detailing any method statements, scopes of archaeological works, and methodology to be employed including for a scheme of evaluation trenching.

1.3. Wardell Armstrong Heritage Statement.

As indicated, Wardell Armstrong undertook a heritage statement (ref job No. CP11528, rep No. Ver1/arch) which was viewed by GMAAS prior to the inclusion of Condition 11 on the Site outline planning permission.

The report detailed the archaeological history of the Site in Section 3, and conclusions in Section 6. Both sections have been taken from the report and are quoted below:

"3.3 Historical and Archaeological Background

3.3.1 Introduction: This background is compiled mostly from secondary sources, including the records consulted at the Greater Manchester HER and Rochdale Local Studies Archive.

It is intended only as an overview of historical developments in the wider proximity of the study area, in order to assess its archaeological potential. The majority of finds in this area date from the late medieval to industrial period, consisting mainly of grade II listed or non-designated buildings (industrial and farm buildings).

3.3.2 Prehistoric (up to c.AD 72): There is little evidence for prehistoric activity in the study area, although there is a background of material from the Mesolithic period onwards in the Rochdale borough. The majority was situated in the central Pennine uplands (Middleton and Cowell 1996, 19). Only sporadic evidence is found dating from the Neolithic, Bronze and Iron Ages, in form of spot finds of stone-axes, flint tools and some metalwork (Street 2015). The finds include a Quern found at Swaindrod Lane, Littleborough, dating to the Iron Age, within the study area (see Appendix 2, Asset 12).

3.3.3 Roman (c.AD 72 – c.410): No Roman finds are known within the study area. The ancient stone trackway along Blackstone Edge is considered potentially of roman origin. Some evidence for Roman activity can be found all across the borough, including finds of pottery, coins, and metalwork.

3.3.4 Medieval (c.410 – c.1540): The first reference to Sladen is to the water corn mill at Sladen Mill indicating that the settlement of Sladen itself was in existence at this time. A water corn mill at Sladen Fold was recorded in the 14th century (Appendix 2, asset 19, see HER: 2652.1.0).

3.3.5 The first reference to Littleborough is in 1560 when it appears to be a single messuage only (Farrer and Brownbill 1911, 228 note 56). Both Littleborough and Sladen were settlements within the hamlets of Blatchinworth with Colderbrook, themselves part of the ancient township of Hundersfield which occupied the upper part of the Roch Valley and the southern side of the Caulder Valley above Todmorden (Farrer and Brownbill 1911, 222). Hundersfield was a division within the parish of Rochdale which is mentioned in the Domesday book of 1086 and is part of the Hundred of Salford. Later, with the growth in the late 19th century of Littleborough into a small town with its own board of administration, Littleborough subsumed the townships of Blatchinworth with Colderbrook along with neighbouring townships in the parish of Rochdale (Farrer and Brownbill 1911, 188).

3.3.6 The place name evidence for Sladen suggests an Old English origin meaning valley. The term slaed was widely used for a short valley (Gelling 1984, 122). Also of Old English is the term –den, or denu, referring to a main valley. Most of these valleys were long and sinuous (Gelling 1984, 97). The suffix –den may also be derived from Old English ton meaning a farmstead. There is no historical or archaeological evidence that Sladen was existent prior to the 12th century. There is no known archaeological evidence of medieval occupation within the study area besides a medieval farmhouse with datestones from 1454 and 1706 (Appendix 2, asset 14).

3.3.7 Post-Medieval and Modern (c.1540 – present): The majority of heritage assets within the study area date from the 18th to 20th centuries, the period of the Industrial Revolution. The borough of Rochdale went through a sustained period of urbanisation and industrial development in the 19th century (Barrowclough 2008, 25), during which time the textile settlement of Littleborough developed and textile mills were established in the countryside surrounding it, wherever suitable watercourses supported them. The industrialisation and urbanisation of Littleborough and its environs were thus a consequence of the growth of the wool and cotton industry from the mid-19th century (Fowler 2003, 1).

3.3.8 The area became influential for textile manufacturing and finishing in the 19th century, this was characterised by the high number of purpose built textile and fulling mills situated along the fast flowing rivers of

Rochdale. Several new settlement and industrial buildings were established around Littleborough in the 19th century, including several cotton and woollen mills, mines and quarries.

3.3.9 An auction announcement dating from 1789 refers to a farmhold and mill called Sladen Mill, containing 25 acres land, in the occupation of Mr. Richard Hold and Samuel Lomar, to be auctioned on the 29th and 30th October 1789 (see Rochdale Local Studies Archive documents). It is not certain that this is a reference to the current site, because it is possible that it may refer to the medieval corn mill known as Sladen Corn Mill, however by the 19th century Sladen Mill was a specific name applied to the proposed development area only.

3.3.10 During the demolition of eight industrial workers cottages associated with Sladen Mill in the 1970s a coin, a local truck token, was found. It depicts a weaving man and a sheep, with the writing 'Payable at the warehouse of John Kershaw'. Interestingly, the earliest known building at Sladen Mill with a datestone of 1856 was established by Charles Kershaw and run by the 'Kershaw Brothers'. The evidence of the 1791 token may suggest that the Kershaws were involved with textile industry on the site from at least the 18th century. Whilst not conclusive the evidence seems to indicate that Sladen Mill was in existence as a textile mill by the late 18th century (Rochdale archives 1970).

3.3.11 The 1856 datestone perhaps relates to a mid-19th century rebuilding of the woollen mill. Associated with this building are the now demolished Woodcock Inn and the residential stone house called Hollow Field, on the hillside above the mill (Street 1999, 172). 3.3.12 A fire gutted Sladen Mill on the 24th May 1901. It destroyed the whole carding and spinning department. The mill was rebuilt and differences in the floorplan can be seen between the OS maps of 1893 and 1910 (Figure 5 and 6) The mill continued its use as woollen manufactory, the still present brick and sandstone building to the west of the property (Plate 1) probably dates from this time. Another fire in January 1926 extensively damaged the mill, apparently destroying all buildings except of the raising section (Observer 1926). This may mean that the still standing structure considered to date from the rebuilding from the early 1900 is the surviving raising section. Until 1926, Sladen Mill was one of the largest employers in Littleborough. In 1964, a bleaching and dyeing section was added to the rebuilt site of Sladen Mill, then a cotton raising and finishing mill, after another fire destroyed the Kershaw second mill, the Wellfield Mill, Littleborough. Sladen Mill closed in the 1980s, and was separated into several industrial units (Street 1999, 173).

3.3.13 Previous Archaeological Projects: There are no previous archaeological investigations within the site or the study area."

6 CONCLUSION

6.1 Development Impacts on the Designated Heritage Assets 6.1.1 There are no direct impacts on any designated heritage assets within the study area.

6.2 Impacts on Sladen Mill

6.2.1 Sladen Mill is a heritage asset of local significance (appendix 1, table 1) that will be substantially impacted by the development proposals. The overall impact on the heritage significance of the area, however, is limited and can be mitigated through appropriate evaluation and recording measures.

6.2.2 No other heritage assets are known to be impacted by the development proposals.

6.3 Development Risk

6.3.1 The site is situated within an area characterised by 18th and 19th century industrial development associated with the textile industry. The site was a textile mill, possible dating to the late 18th century. Several fires, followed by rebuilding and modernisation of the buildings on site significantly influenced the potential of any archaeological and historical significant material. The site has little upstanding historic fabric, with the exception of an early 20th century red brick and sandstone building with a large window front facing the west. The datestone of 1856 is also situated at this building. The area is currently dominated by mainly mid- to late 20th century structures. The extensive use and frequent rebuilding is likely to have removed any pre-mill remains from before the 19th century. Any below ground archaeological material is likely to relate to mill buildings from the 1850 rebuild primarily but earlier structures possibly dating to the 18th century may survive. There are no other heritage assets in close proximity to the site, and there is no intervisibility with the assets within the 0.6km radius.

6.3.2 Further evaluatory work may be considered necessary to identify the below ground remains of earlier phases of textile mill buildings and to assess their state of preservation, in order to clearly define a mitigation strategy ahead of development.

1.4. Recent Detailed Site History.

For corresponding mapping, information & supporting documentation, refer to Appendix C under 'Historic Maps & Supporting Documentation' which is ordered to correspond with this timeline.

1848. Historic records & photographs show that there was a mill on the Site at this time, albeit smaller than ones that were to be built later in the Site history. The mill structures were nominally central to the lower western part of the Site. There were also additional structures to the north-eastern elevated part of the Site which appear to be separate buildings, perhaps residential cottages, farmhouses & outbuildings etc.

1854. The 1850s map shows the 'original' Sladen Mill (noted in the 1948 maps) to have been demolished & replaced by a substantially larger woollen mill. The new mill was typical of 19th century mills of the area, and comprised the main weaving/spinning mill central to the lower western part of the Site, with an associated raised bund mill pond and chimney to the south side of the building. In addition, an office block adjacent to the access road is noted, as well as small holding ponds to the north side of this are shown. The former residential farmhouse to the north of the Site is now demolished and replaced by two blocks of what appear to be residential back-to-back cottages named Sladen Mill Fold.

1905. The mill retained this layout until it was destroyed by fire c1905. The damage was severe with only the external walls surviving, and all internal floors, machinery, and roofs lost.

c1910. By 1910, maps show a new mill erected on the northwest part of the Site, essentially butted up to the old mill structure. All building structures in the wider area are hatched in this map, with the old mill outlined unhatched suggesting it was left as a ruin. Some filter beds were also built to the north part of the Site, outside of what is now the development boundary. Sladen Mill Fold remains although the southern cottage block appears to have been incorporated into the Sladen Mill complex.

1930. Upper mill ponds on what is the access road are now removed from Site.

1950. Maps from this period show the mill works to be concentrated to the north part of the Site. The former mill building central to the Site is now shown to be demolished, with a dotted road between the former mill building outline and a small 'refuse tip' to the southeast Site corner. It is assumed that the refuse tip is formed from the demolition material from the former mill structure, and map features indicate this material is stockpiled on the ground surface beside the access road for removal.

1985. Site remains as above.

1989. The two mill structures to the north side of the lower Site were retained in this period. However, all former buildings to the lower central and south areas were demolished including the remaining parts former mill and chimney. Two new steel-clad warehouses to the south side of the Site are now shown as well as the current substation building central to the Site, adjacent the watercourse. There is also a new warehouse shown to the northeast elevated part of the Site.

2014. The Site remained as above until 2014 when the former boiler house central to the Site was proposed for demolition under a building notice, ref: 14/00179/DEM, 'Prior notification of proposed demolition of mill'. The former boiler house was known at the time to contain asbestos. Documentation for the demolition is included in the Appendix: Section 80 LABC Building Notice; the C Smith & Sons (Contractor) Method Statement excerpts; and the Dunelm Asbestos Survey Report excerpt. These documents indicate that the asbestos had been surveyed, managed, risk assessed, and removed prior to demolition. The building was subsequently demolished.

2015. An outline planning application for the demolition of all Site buildings, and construction of a residential housing development was submitted in 2015, ref: 18/01235/OUT, for the: 'Outline planning permission for residential development (including access) and demolition of the existing buildings on site'.

As part of the application pack for development, and prior to any further demolition, the Brownfield Solutions Ltd PRA report and associated Site walkover was undertaken. The report detailed the layout and risks to the Site on the BSL Pertinent Site Features & Potential Constraints Plan (see inset image). At the time of the walkover, the site layout and remaining structures were as follows:

The warehouses to the south side included an older asbestos cement wall & roof clad storage shed, with a connected and more recent plastisol clad steel shed. These were the buildings that were erected in the late 1980s.

To the east side was a masonry office block adjacent the access road, which was the original office block built in the 1850s.

To the northeast (on the elevated part of the Site) was a masonry storage warehouse with asbestos cement sheet panel roof (erected late 1980s).

To the centre west side of the Site adjacent the watercourse was a masonry building understood to have been used as a control/utility building for Site electrics etc, and is adjacent to the masonry substation to the south side. It was formerly part of the larger masonry mill building erected to the northwest side of the Site in the aftermath of the 1905 fire. At the time of the BSL PRA, the majority of this structure had previously had its roof removed and part of the walls to the southeast corner. The remaining walls and ground slab were left intact, essentially turning it into a walled storage yard.

In addition to the above, the Site access roads, yards and loading bay remained. No 'natural' ground surfaces remained on-site.

2017. The remaining Site buildings except for the substation & utility part of the former mill to the north side were proposed for demolition under a building notice, ref: DEM/17/0122, 'Demolition of Existing Buildings'. The buildings were numbered as per the inset image.

Documentation for the demolition is included in the Appendix: Section 80 LABC Building Notice; the C Smith & Sons (Contractor) Method Statement & risk assessment excerpts.

Building 1 was noted to have an asbestos cement roof & masonry brick walls (overclad).

Building 2 comprised clad asbestos cement sheet walls & roof (assumed onto steel frame).

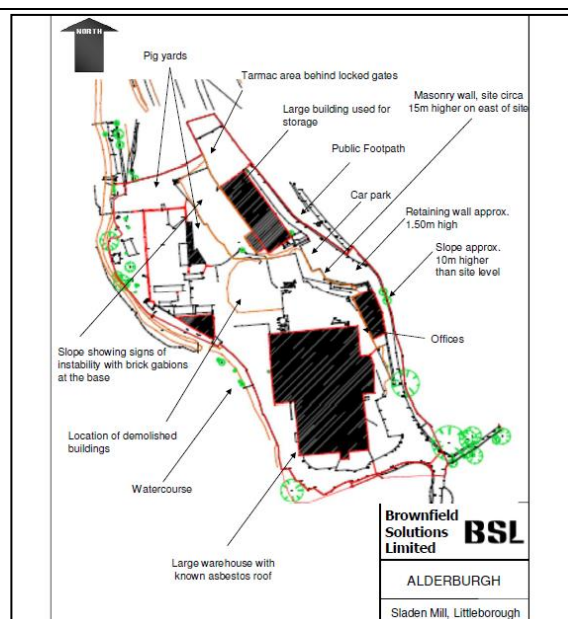
Building 3 comprised steel/plastisol coated cladding (assumed over steel frame). It was noted to still contain some earlier asbestos sheet cladding.

Building 4 comprise masonry stone & brick walls, slate roofing.

The building shell to the northwest corner of the Site comprised a concrete floor slab and masonry brick walls.

Buildings 1, 2, 3 & 4 were subsequently demolished. All materials were separated for recycling and salvage where possible. Remaining demolition material was crushed on-site and stockpiled close to the Site entrance to the south corner of the Site for later removal (supported by photographic evidence in the Appendix C).

2021. The Site was subsequently sold for development to the current owner. The stockpiled demolition crush had been previously removed from Site. A reserved matters application, ref: 21/00950/REM, was submitted to the LPA.



1.5. Desk Assessment & Report Objectives Summary.

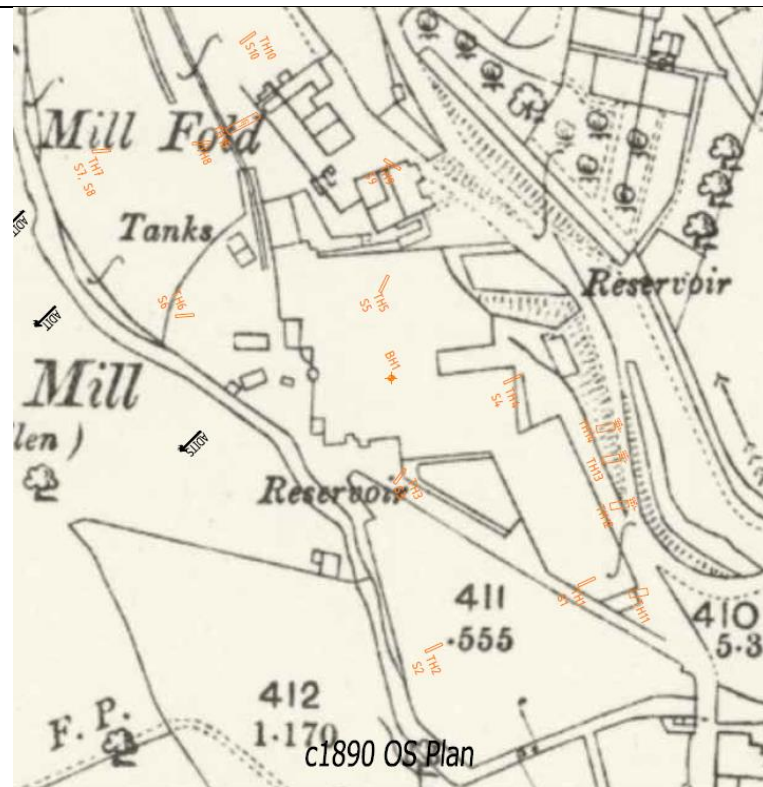
Analysis of recent history as indicated in the Wardell Armstrong & T J Booth Associates historic assessments has identified approximately 4No. defined instances of mill demolition & construction on the Sladen Mill Site as follows:

- 1848 'Original' woollen mill and cottages/outbuildings, assumed in existence from the late 1700s
- 1854 The 'original woollen mill & cottages were replaced with the 19th Century Victorian woollen mill to the lower part of the Site and newer cottages to the upper part of the Site. (This mill was destroyed by fire)
- 1910-60 Modern period masonry brickwork mill/factory extension & replacement structures. (Recently demolished)
- 1980-90 Recent steel framed structures.

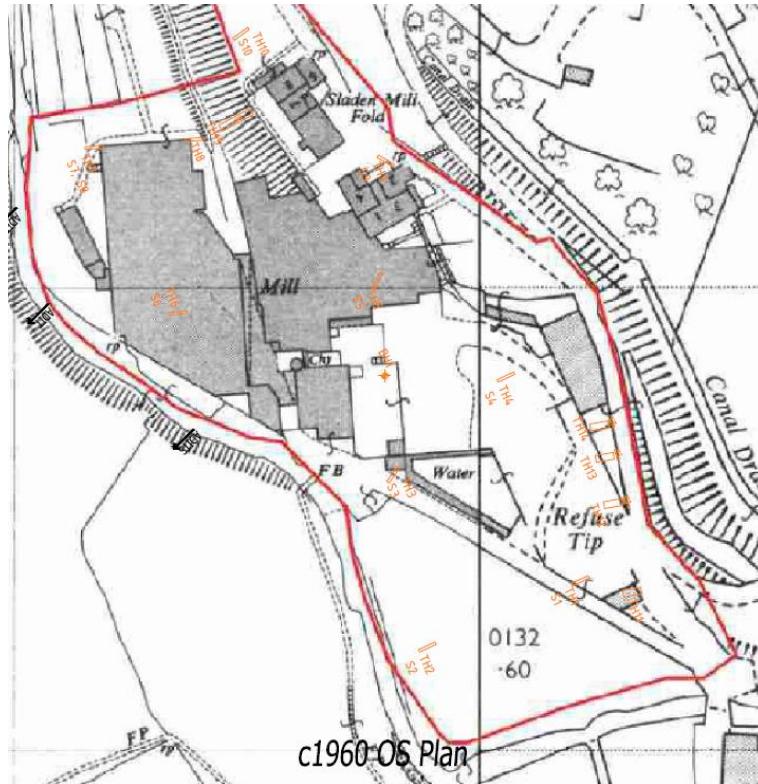
Proposals to undertake trial holes were undertaken by T J Booth Associates between May 2021 & March 2023 to enable the assessment of site geology, geo-environmental, and archaeological assessment as to whether any former inground structures remained in situ. Historic plans were overlaid on the Site and topographic surveys, and trial holes positioned according to historic structures, as illustrated below:



1848 plan showing THs 3 & 5 intercepting the 'original' woollen mill, and TH9 to the original cottages/outbuildings to the upper part of the Site.



1890s plan showing THs 1, 3, 4, 5, & 11 intercepting the Victorian mill structure, and TH9 intercepting a cottages to the upper part of the Site.



1960s map showing the replacement & extension structure to the Victorian mill post fire damage demolition. THs 5, 6, 7 & 8 intercept this structure.

1.6. Post Site Investigation Results & Analysis.

Lower Site.

The Site investigation undertaken so far has revealed no evidence of intact structures from any of the historic mill structures.

The investigations recorded a clayey made ground generally intermixed with building rubble, either directly over bedrock (in the case of THs 1, 2, 3, & 4), virgin ground (TH5), or clayey made ground over virgin alluvial deposits & bedrock (THs 6, 7, & 8).

The investigations suggest all former building structures on this part of the Site have been historically removed/grubbed out, and the Site reprofiled as required at the time of construction.

Upper Site.

The only structure noted in this part of the Site was the footing to one of the newer 1980s storage sheds, the footprint of which envelopes the historic cottage outlines.

The findings in this part of the Site were generally made ground over virgin alluvial and bedrock.

1.7. Conclusion, Further Work & Method Statement.

Extensive investigations have been undertaken on the lower part of the Site, and there is no evidence of any remaining historic structures in the ground profile. The majority of the trial holes were excavated to bedrock to ensure that former changes/increases in ground level would not result in potential archaeological structures being missed due to being deeply buried.

Due to the foundation and ground preparation required for constructing buildings as large as the former woollen & cotton mills, initial investigations suggest that all previous structures in the lower part of the Site were fully removed to make way for replacement structures.

Limited investigations to the upper part of the Site have so far not revealed any historic structures. As the more recent 1980s factory/storage shed footprint enveloped the historic cottages in this area, is likely that none of the structures remain.

However, a watching brief with regard to any further demolition should be undertaken, and should any historic foundations or structures be noted in the ground profile, then further archaeological investigations trenches shall be undertaken to record for the upper part of the Site. Any further trenches will follow the below method statement:

Method Statement.

Should any further remains be found, all further work shall be conducted following the CIfA Standards and Guidance for archaeological field evaluation. Further works will comprise the following:

- Scan and analysis of any service records (gas, water, electricity, telecoms, sewers).
- Excavation of the upper ground surface with a back acting excavator to break through recent structures with a toothed bucket & breaker as required.
- Should archaeological structures be noted, then toothless buckets of appropriate size will be used to the top of the first significant archaeological level, and then further & more careful excavations will be undertaken to reveal the full extent of any foundations, floors, and associated structures.
- This will be followed by a more in-depth manual excavation to record and date any finds.
- All information will be recorded stratigraphically with associated photographic evidence, and context recording including illustrative plans & sections as required.

- All excavation work will be supervised closely by a suitably experienced archaeologist.

1.8. Reporting and Archive Deposition.

Further to the above, depending on whether any archaeological structures or remains are found, and following the above framework for investigation, an update of this WSI and subsequent findings (if any) will be included in an evaluation report. The report will be submitted to GMAAs for evaluation and approval.

The results of the archaeological investigation and reporting will be in accordance with current Historic England & CIfA guidelines (2014) as follows:

- The project specification or research design.
- The schedule of works or similar documents.
- All original written records created throughout the course of the project.
- All original drawings, whether created during fieldwork, in analysis or for publication.
- Indexes to the drawings.
- All photographic negatives.
- An original copy of every transparency.
- A copy of every photographic print.
- Indexes to the photographic archive.
- All born-digital material.
- Digital material created from written, drawn or photographed original records.
- Documentation accompanying the digital archive, either in digital or written form.
- All finds and other archaeological materials selected for retention, and associated documentation.
- All scientific samples suitable for curation, and associated documentation.
- All original x-radiographs.
- All specialist reports.
- Drafts of the final project report.
- The final project report.
- Other work published during the life of the project.
- Relevant correspondence and incidental material.
- An index to the archive.
- A list of contents of the archive.

Any final report will initially be issued to GMAAS for approval and to address any outstanding planning conditions, and then all associated information will need to be issued/deposited as required to the Archaeological Data Service (ADS), Greater Manchester Historic Environment Record database, and Touchstones Rochdale.

Signed.....  .

D.S. Slattery BSc (Hons).

T J Booth Associates.

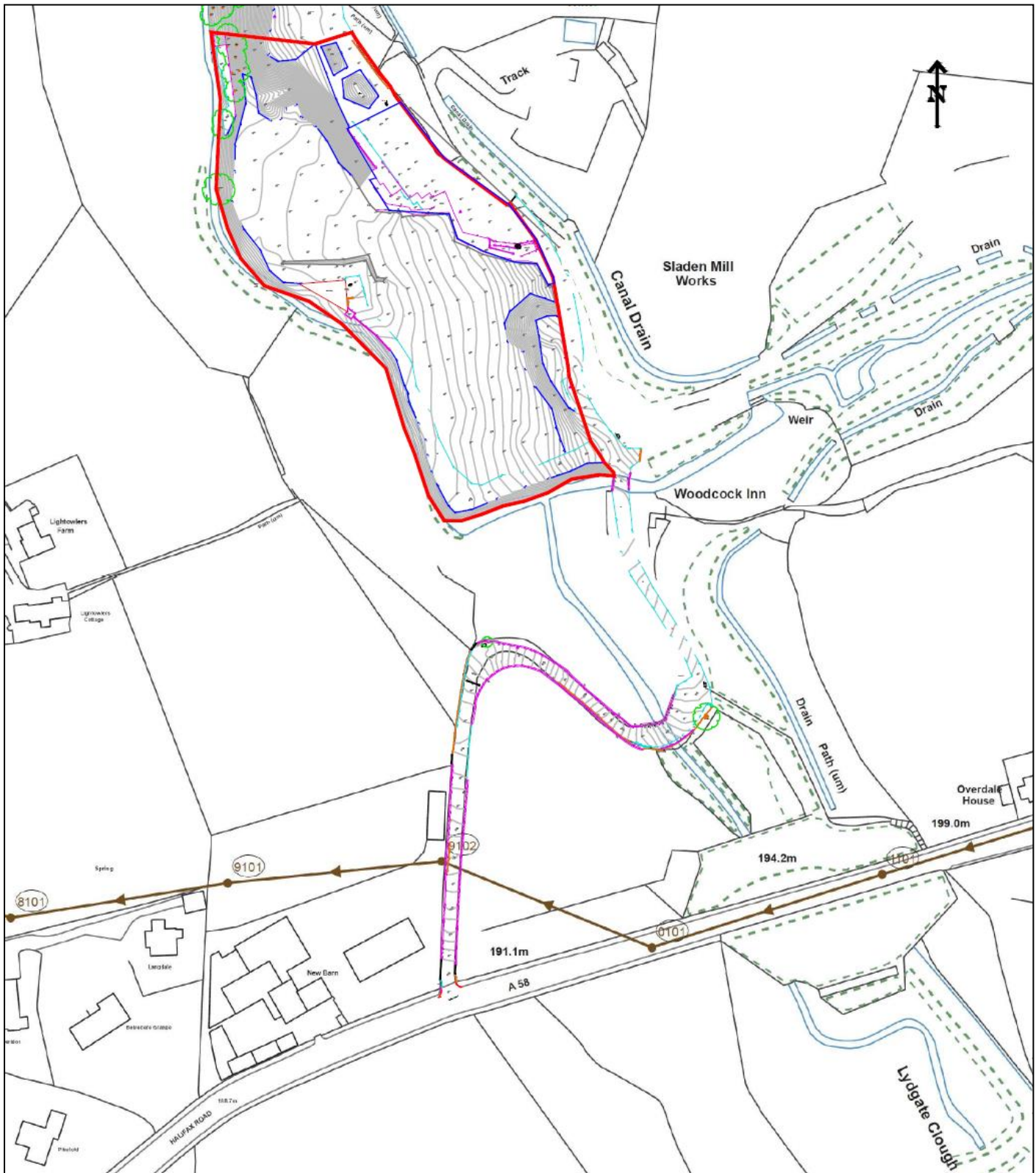
Authorised...  .

T J Booth BSc (Hons), C. Eng. C. Env. MICE.

T J Booth Associates.

2. APPENDIX A: PLANS & FIGURES.

2.1. Location Plan.





2.4. Borehole Logs.

Borehole reference BH1				Sheet 1 of 1
Water	Reduced Level (m)	Legend	Depth (m)	Description
	168.75			
	167.45	X X X X X X X X	(1.30) 1.30	Loose heterogeneous MADE GROUND
	164.75	X X X X X X X X X X X X X X X	(2.70) 4.00	Weathered grey MUDSTONE
	160.25	X X X X X X X X X X X X X X X X X X	(4.50) 8.50	Yellow SANDSTONE
	159.75	X X X	9.00	Grey SANDSTONE
	158.55	X X X X X X X X	(1.20) 10.20	Yellow SANDSTONE
	155.75	X X X X X X X X X X X X X X X	(2.80) 13.00	Grey SANDSTONE
	148.75	X X	(7.00) 20.00	Grey & yellow SANDSTONE
		X X X X X X X X X X X X X X X		Grey SANDSTONE

		X X	(10.00)	
	138.75		30.00	
				Borehole ends
Not shown to scale				
Additional notes: coal measures exploration, no coal seams or voids encountered				

2.5. Trial Hole Logs.

Trial pit reference TH1				Sheet 1 of 1
Water	Reduced Level (m)	Legend	Depth (m)	Description
	171.50			
	171.20	X X X X X	(0.30) 0.30	Light brown very gravelly, clayey MADE GROUND (topsoil). Gravel sized brick, stone, glass & ash.
	169.50	X X X X X X X X X X	(1.70) 2.00	Compact dark brown/black sand sized ash MADE GROUND occasional cobble size brick & stone. (S1)
	169.45	X X X	2.05	Light brown SANDSTONE BEDROCK
				Trial pit ends
Not shown to scale				
Additional notes:				

Trial pit reference TH2				Sheet 1 of 1
Water	Reduced Level (m)	Legend	Depth (m)	Description
	170.00			
	169.60	X X X X X	(0.40) 0.40	Brown slightly sandy very gravelly clay MADE GROUND, gravel sized brick, concrete, stone, occasional timber.
	168.00	X X X X X X X X X X	(1.60) 2.00	Dark brown/black very gravelly clay MADE GROUND, gravel sized brick, stone, concrete, occasional timber, with abundant cobble sized brick, stone, and concrete. Hydrocarbon odour (S2).
	167.80	X X X	2.20	Black SHALE BEDROCK
				Trial pit ends
Not shown to scale				
Additional notes:				

Trial pit reference TH3				Sheet 1 of 1
Water	Reduced Level (m)	Legend	Depth (m)	Description
	168.80			
	166.20	X X X X X X X X X X X X X X X	(2.60) 2.60	Light brown slightly sandy very gravelly clay MADE GROUND. Coarse gravel sized brick, stone, mortar, occasional shale & coal. Large cobbles of brick & stone - very loose to bottom 600mm. (S3)
	165.90	X X X	2.90	Black SHALE BEDROCK
				Trial pit ends
Not shown to scale				
Additional notes:				

Trial pit reference TH4				Sheet 1 of 1
Water	Reduced Level (m)	Legend	Depth (m)	Description
	170.50			
	168.20	X X X X X X X X X X X X X	(2.30) 2.30	Brown very sandy very gravelly silty MADE GROUND. Occasional clay. Gravel sized brick, stone, concrete, rare coal, ash & vitrified clay. (S4)
	167.90	X X X	2.60	Orange/brown very clayey sand MADE GROUND.
<u>v</u>	167.30	X X X	(1.40)	Very loose very coarse cobble sized brick & stone (demolition rubble fill) MADE GROUND.
	166.50	X X X	4.00	
				Trial pit ends
Not shown to scale				
Additional notes:				

Trial pit reference TH5				Sheet 1 of 1
Water	Reduced Level (m)	Legend	Depth (m)	Description
	169.30			
	168.95	X X X X X	(0.35) 0.35	Dark brown gravelly sandy MADE GROUND. Gravel sized stone, brick, shale & coal. Cobble sized brick & stone. (S5)
	167.30	: o : o : o : o : o : o : o : o : o : o	(1.65) 2.00	Loose to medium dense orange/brown silty SAND AND GRAVEL
	166.95	X X X	2.35	Light brown SANDSTONE BEDROCK (weathered)
	166.90	X X X	2.40	Light brown SANDSTONE BEDROCK
				Trial pit ends
Not shown to scale				
Additional notes:				

Trial pit reference TH6					Sheet 1 of 1
Water	Reduced Level (m)	Legend	Depth (m)	Description	
	167.80				
	166.10	X X X X X X X X X X	(1.70) 1.70	(firm) brown gravelly clay MADE GROUND. Occasional cobbles. Gravel & cobble sized stone, brick, slate, plastic. (S6)	
	164.90	- : - : - : : - : - : - - : - : - :	(1.20) 2.90	Soft to firm orange/brown slightly sandy CLAY becoming soft & damp towards the bottom with occasional sandstone boulders.	
	164.50	X X X	3.30	Black SHALE BEDROCK (weathered)	
	164.10	X X X	3.70	Black SHALE BEDROCK	
				Trial pit ends	
Not shown to scale					
Additional notes:					

Trial pit reference TH7					Sheet 1 of 1
Water	Reduced Level (m)	Legend	Depth (m)	Description	
	167.50				
	164.50	X X X X X X X X X X X X X X X	(3.00) 3.00	Black sandy, gravelly clay MADE GROUND with abundant cobbles. Gravel & cobbles of stone, brick & concrete. Rare cable, fabric (plastic) & timber. (S7). Hydrocarbon odour noted at 2500mm. (S7)	
<u>v</u>	163.80 163.00	o o o o o o o o	(1.50) 4.50	Loose orange/brown GRAVEL with occasional large boulders & very coarse to bottom. Very wet & hydrocarbon sheen to groundwater.	
				Trial pit ends	
Not shown to scale					
Additional notes:					

Trial pit reference TH8					Sheet 1 of 1
Water	Reduced Level (m)	Legend	Depth (m)	Description	
	167.80				
	166.80	X X X X X	(1.00) 1.00	Orange/brown clayey sand & gravel MADE GROUND	
	164.80	X X X X X X X X X X	(2.00) 3.00	Dark grey/black clayey sand & gravel MADE GROUND with abundant cobble sized brick. Rare vitrified clay pipe, fabric (plastic) & timber.	
	163.70	o o o o o o o o	(1.10) 4.10	Loose orange/brown coarse GRAVEL with abundant cobbles & occasional large boulders.	
	163.65	X X X	4.15	Orange/brown BEDROCK (weathered).	
				Trial pit ends	

Not shown to scale

Additional notes:

Trial pit reference TH9 Sheet 1 of 1

Water	Reduced Level (m)	Legend	Depth (m)	Description
	177.00			
	176.15	X X X X X	(0.85) 0.85	Dark brown/black very slightly silty slightly gravelly MADE GROUND. Gravel & cobble sized brick. Occasional cobble sized stone. (S9).
	175.65	x x x	1.35	Orange/brown very fine sandy SILT
	174.40	: o : o : o : o : o : o : o :	(1.25) 2.60	Light brown SAND AND GRAVEL with abundant sandstone cobbles.
	173.40	X X X X X	(1.00) 3.60	Light brown SANDSTONE BEDROCK (highly weathered)
	173.35	X X X	3.65	Light brown SANDSTONE BEDROCK
				Trial pit ends

Not shown to scale

Additional notes:

Trial pit reference TH10 Sheet 1 of 1

Water	Reduced Level (m)	Legend	Depth (m)	Description
	176.85			
	175.70	X X X X X X X X	(1.15) 1.15	Black very sandy slightly gravelly MADE GROUND with gravel & cobble size brick, & occasional cobble sized stone. (S10). Macadam & MOT to upper 200mm.
	175.45	x : x : x	1.40	Orange/brown sandy SILT
	174.45	: o : o : o : o : o	(1.00) 2.40	Light brown SAND AND GRAVEL with abundant cobbles.
	173.70	X X X X X	(0.75) 3.15	Light brown SANDSTONE BEDROCK (highly weathered)
	173.65	X X X	3.20	Light brown SANDSTONE BEDROCK
				Trial pit ends

Not shown to scale

Additional notes:

3. APPENDIX B: SITE INVESTIGATION PHOTOS.



Trial Hole 1.



Trial Hole 2.



Trial Hole 3.



Trial Hole 4.



Trial Hole 5.



Trial Hole 6.



Trial Hole 7.



Trial Hole 8.



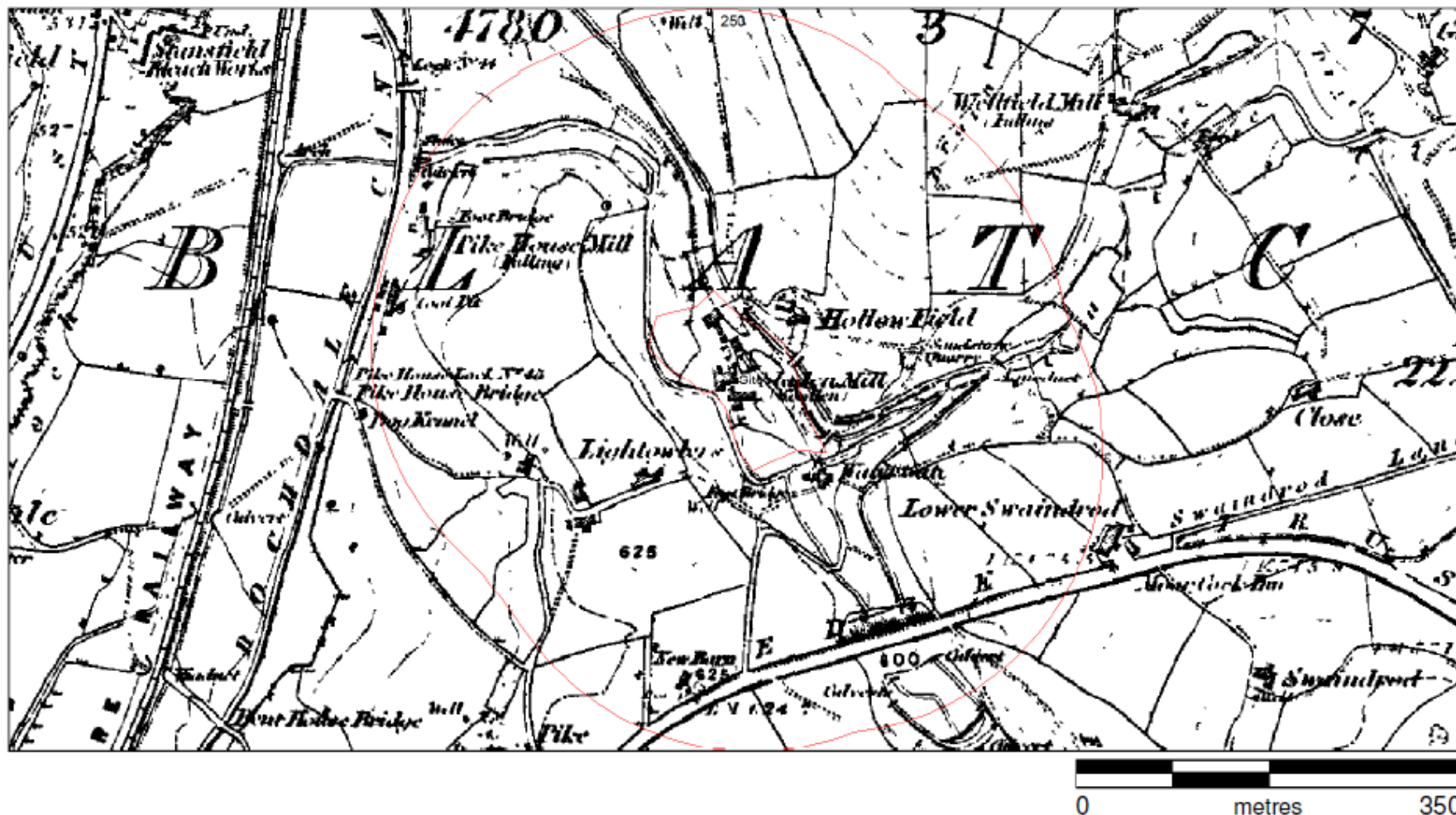
Trial Hole 9.



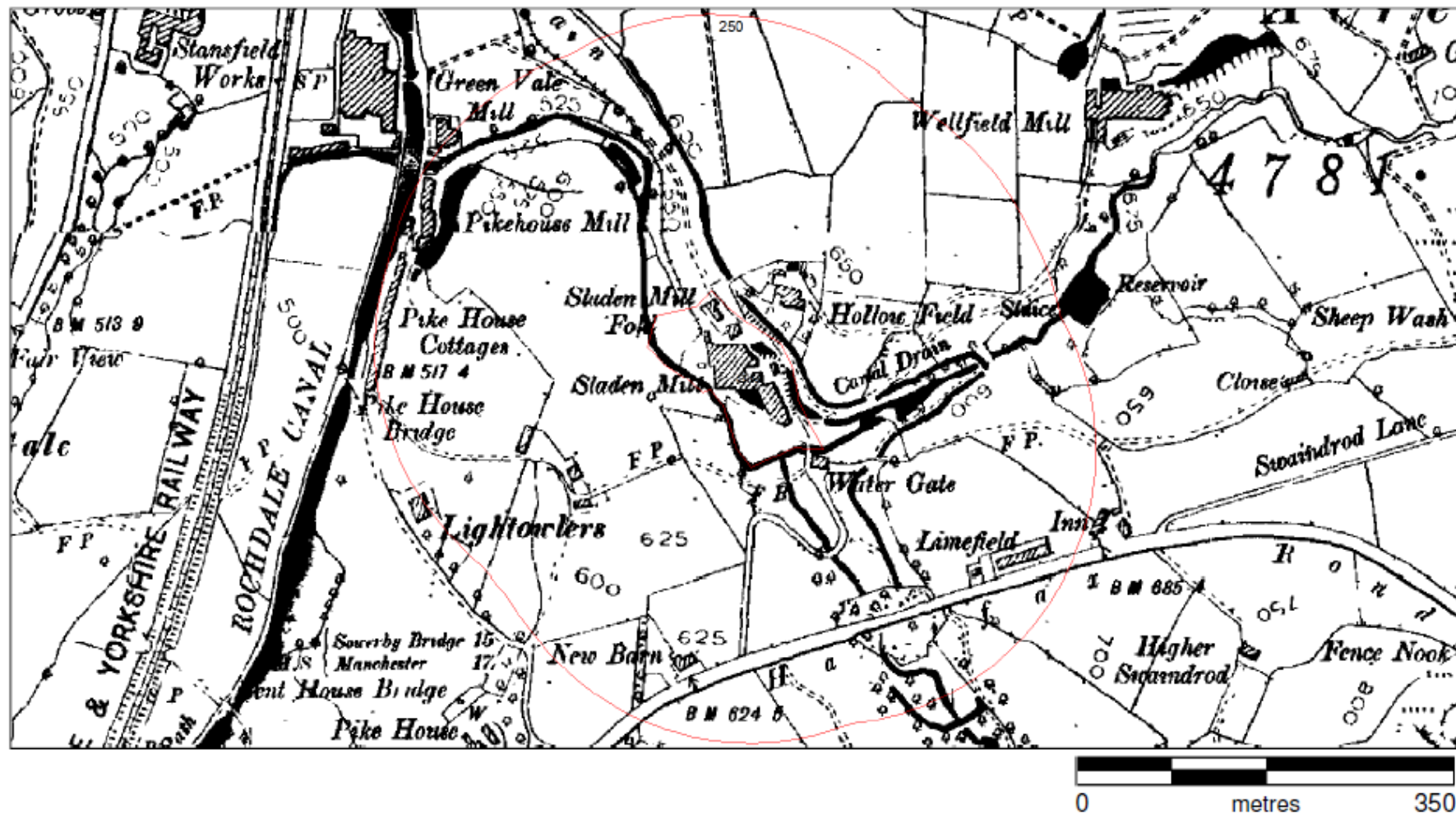
Trial Hole 10.

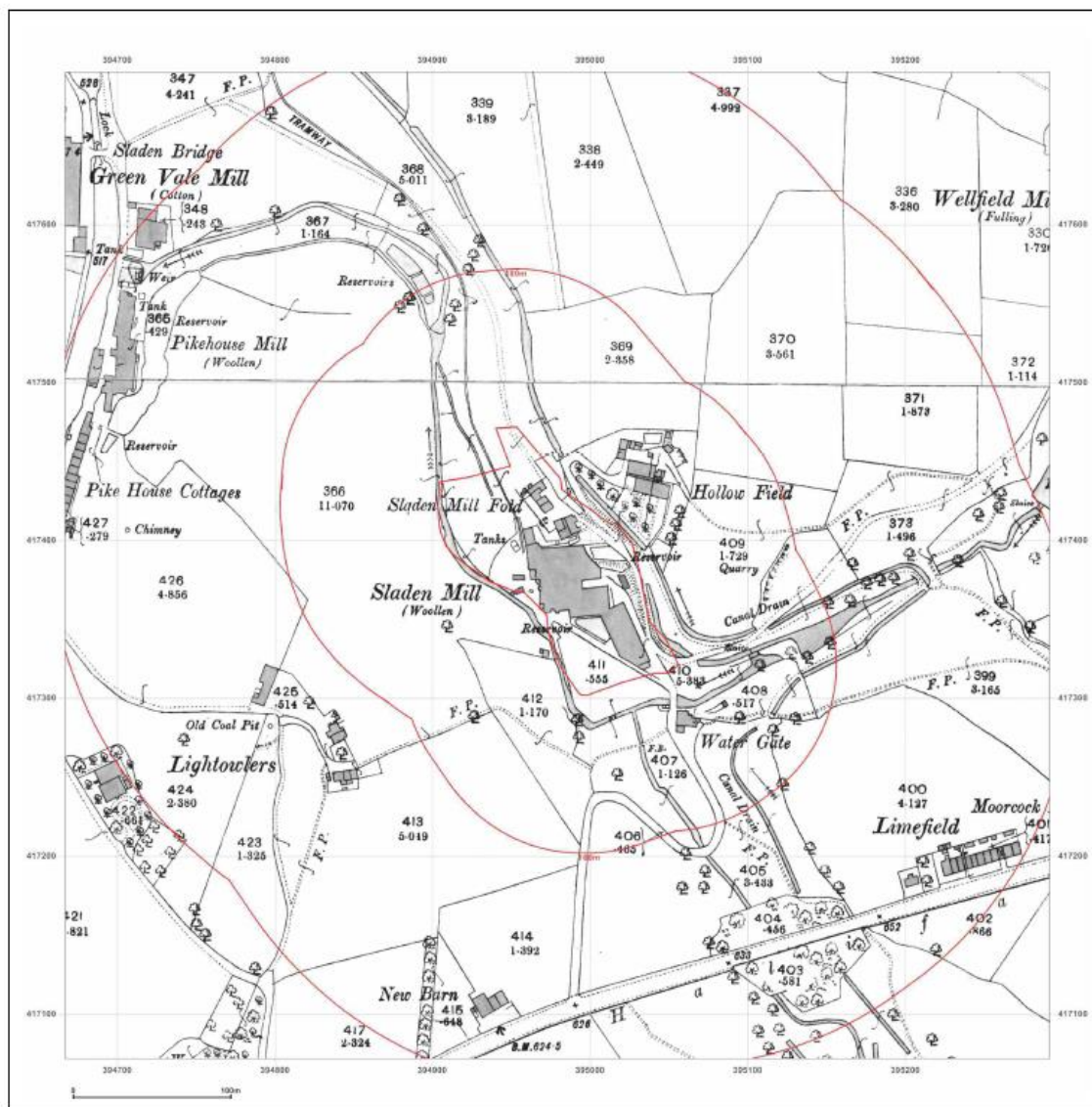
4. APPENDIX C: HISTORIC MAPS & SUPPORTING DOCUMENTATION.

5. Layer Name: 1848 map



6. Layer Name: 1854 map





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Site Details:

Sladen Mill

Client Ref: EMS_290434_393098

Report Ref: EMS-290434_393098

Grid Ref: 394979, 417384

Map Name: County Series

Map date: 1891

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1891
Revised 1891
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1891
Revised 1891
Edition N/A
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Site Details:

Sladen Mill

Client Ref: EMS_290434_393098
Report Ref: EMS-290434_393098
Grid Ref: 394979, 417384

Map Name: County Series

Map date: 1910

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1910
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Edition N/A
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Surveyed 1910
Revised 1910
Edition N/A
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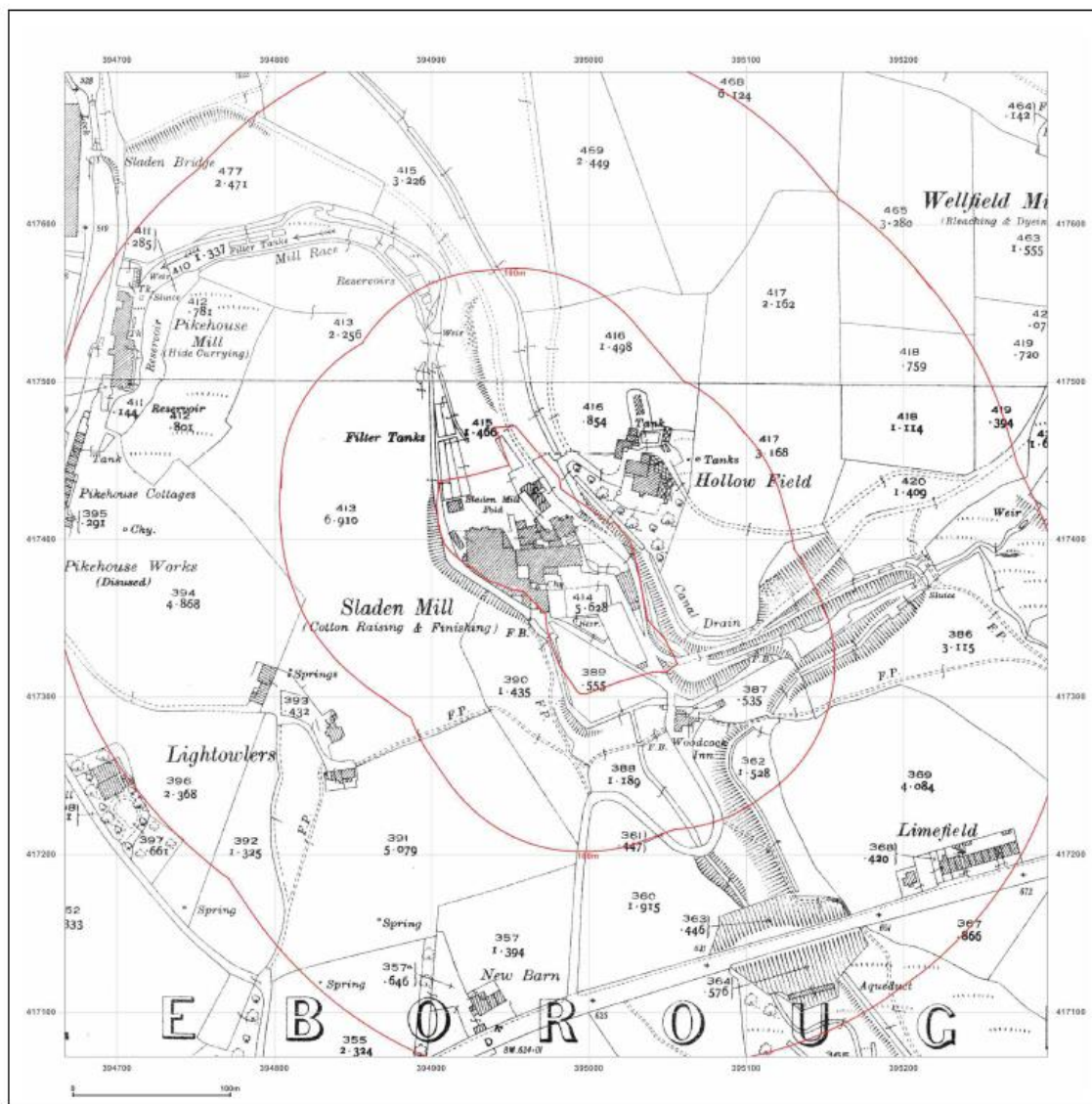


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Site Details:

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Client Ref: EMS_290434_393098

Report Ref: EMS-290434_393098

Grid Ref: 394979, 417384

Map Name: County Series

Map date: 1928-1930

Scale: 1:2,500

Printed at: 1:2,500

Surveyed 1930
Revised 1930
Edition N/A
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Surveyed 1928
Revised 1928
Edition N/A
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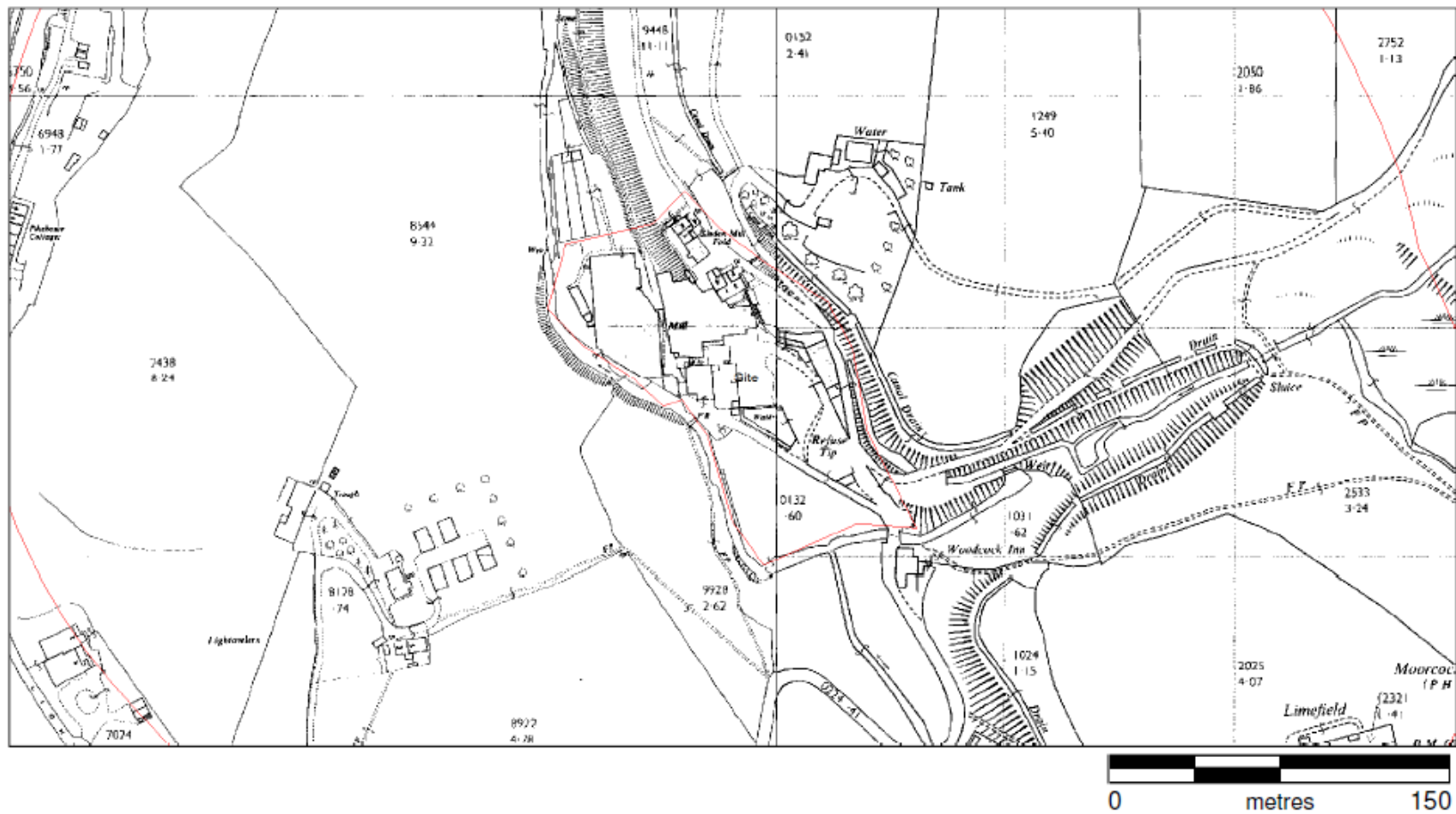
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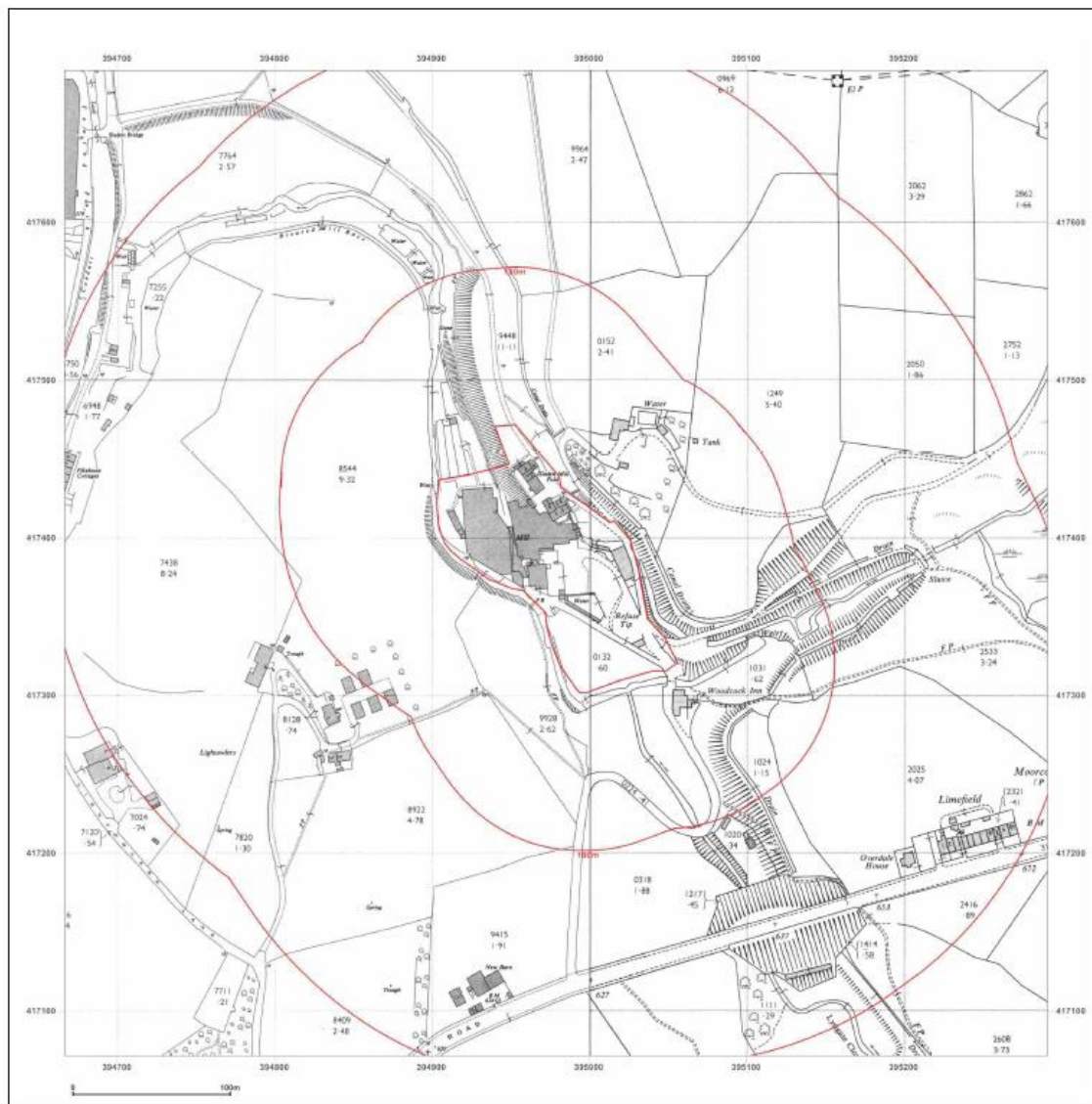
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18. Layer Name: 1950's map





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Site Details:

Sladen Mill

Client Ref: EMS_290434_393098

Report Ref: EMS-290434_393098

Grid Ref: 394979, 417384

Map Name: National Grid

Map date: 1961

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1961
Revised 1961
Edition 1963
Copyright 1963
Levelled 1962



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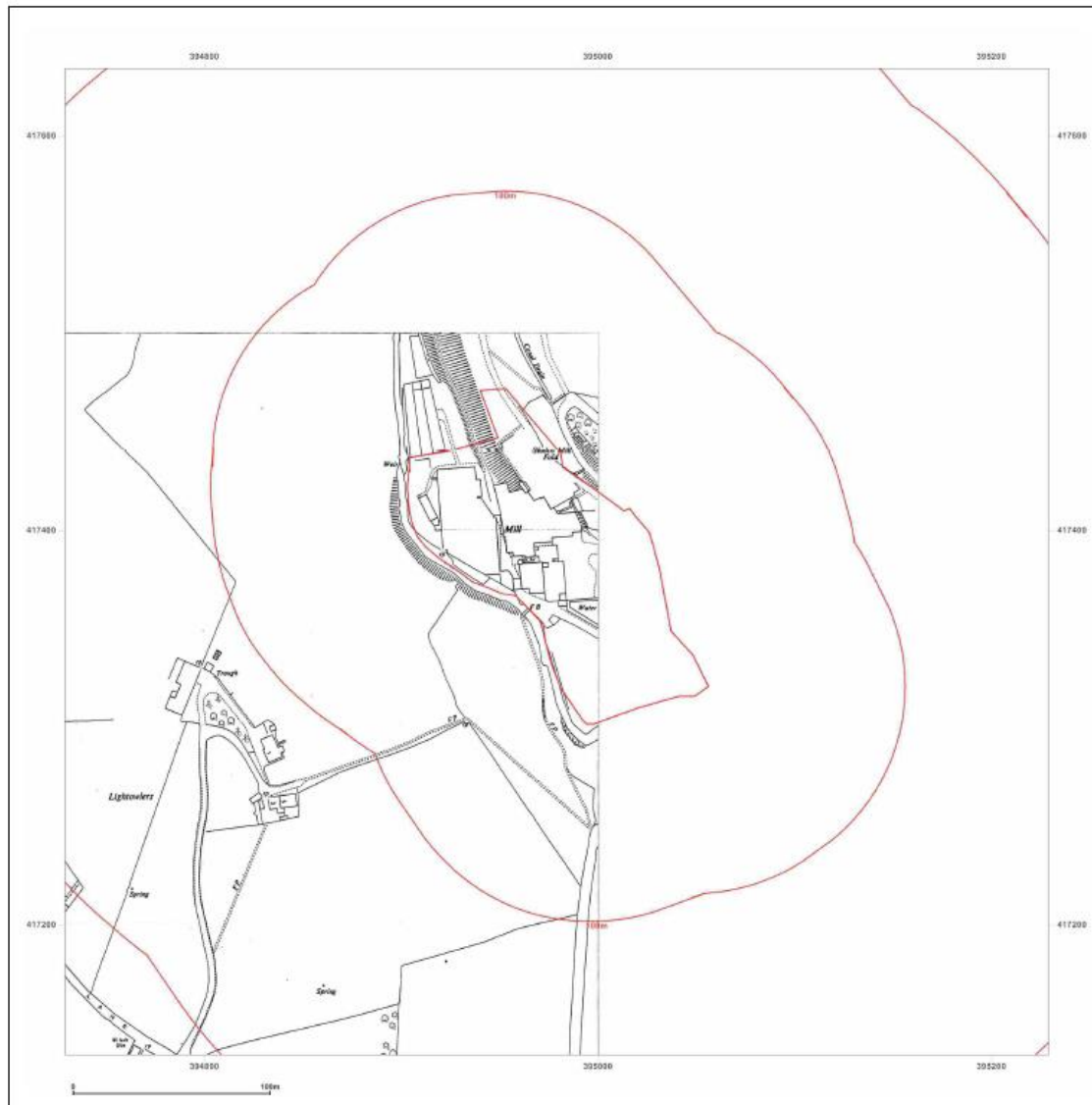


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Site Details:

Sladen Mill

Client Ref: EMS_290434_393098

Report Ref: EMS-290434_393098

Grid Ref: 394979, 417384

Map Name: National Grid

Map date: 1985

Scale: 1:1,250

Printed at: 1:2,000



Surveyed 1967
Revised 1985
Edition N/A
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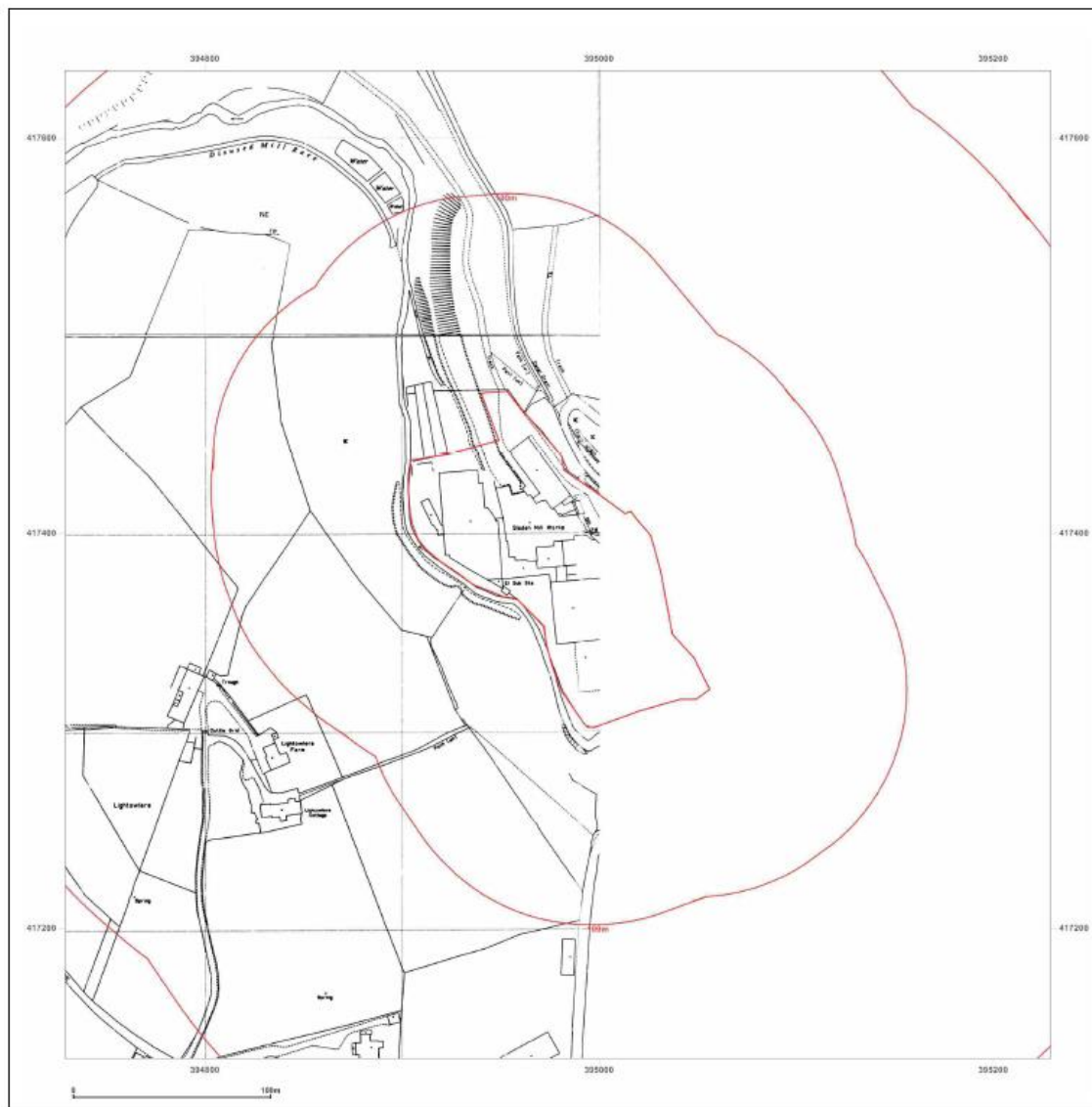


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Site Details:

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Client Ref: EMS_290434_393098

Report Ref: EMS-290434_393098

Grid Ref: 394979, 417384

Map Name: National Grid

Map date: 1989-1992

Scale: 1:1,250

Printed at: 1:2,000



Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

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Revised N/A
Edition N/A
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