

142 - 152 Plymouth Road, Tavistock, Devon

An Archaeological Watching Brief



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142 - 152 Plymouth Road, Tavistock, Devon

An Archaeological Watching Brief

For

Lidl Ltd

By



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Non-Technical Summary

Context One Archaeological Services Ltd (COAS) carried out an Archaeological Watching Brief at 142 - 152 Plymouth Road, Tavistock, Devon, (centred on NGR SX 48067 73027) over 6 days between the 9th and the 18th of June 2009. The investigation was commissioned and funded by Lidl Ltd.

The Watching Brief represents the second phase stage of an archaeological programme of works, which commenced with an archaeological desk based assessment (DBA), carried out by COAS in May 2009. The DBA was requested by the Local Planning Authority (West Devon Borough Council) on the advice of Ms Stephanie Knight (Archaeological Officer, Devon County Council (DCC)) as a condition of granting planning permission for the erection of a Lidl food store with associated access and parking (Outline Planning Application No: 12008/2008/TAV; Planning Application No: 12364/2008/TAV). The results of which concluded that upstanding remains of a 19th century Bone Mill existed in the south west corner of the site and that further remains were likely to exist below the ground. Based on these results, a Watching Brief was subsequently requested by West Devon Borough Council, on the advice of Ms Stephanie Knight, as a condition of planning consent for the above works.

The Watching Brief recorded substantial remains of the 19th century Bone Mill, the principal components of which were two contemporary stone built east to west aligned buildings with a cobbled alley running between them. These were clearly the structures shown on the first edition OS map of 1885.

The northern Bone Mill building was floored with paving bricks produced by Candy & Co.; a local brick and tile manufacturer that was founded in the 1860s and is still in operation today. There was no evidence for any earlier structures on the site which strongly suggests that the Bone Mill was constructed between 1860 and 1885. If this is the correct then it is a surprisingly late date, given that most Bone Mills were established in the first half of the 19th century and by this date the industry was facing competition from early chemical fertilisers.

The location of the Bone Mill adjacent to the fast flowing Tiddy Brook, suggests that the Bone Mill was probably water powered. If this were the case then it is likely that the bone crushing machinery was located in the building nearest the brook with the larger northern building used to process and dry the bone prior to milling.

Excavation beneath the site of the Bone Mill and a geotechnical survey undertaken in advance of the project established that the Bone Mill was built directly onto natural shale and that a possible east to west aligned palaeochannel existed to the north of it. This suggests that the natural topography of the site had been substantially altered at some point before 1885 and that the current course of the Tiddy Brook is probably an artificial channel. There are two possibilities for when this may have occurred; the first is that this section of the Tiddy Brook forms part of a leat known to have been constructed in 1677 for Brook Mill to the west of the site, or alternately, it could have been dug in the 19th century to provide power for the Bone Mill itself.

1. Introduction

- 1.1 Context One Archaeological Services Ltd (COAS) carried out an Archaeological Watching Brief at 142 - 152 Plymouth Road, Tavistock, Devon, (centred on NGR SX 48067 73027) (hereafter referred to as the Site) over 6 days between the 9th and the 18th of June 2009. The investigation was commissioned and funded by Lidl Ltd.
- 1.2 The Watching Brief represents the second phase stage of an archaeological programme of works, which commenced with an archaeological desk based assessment (DBA), carried out by COAS in May 2009. The DBA was requested by the Local Planning Authority (West Devon Borough Council) on the advice of Ms Stephanie Knight (Archaeological Officer, Devon County Council (DCC)) as a condition of granting planning permission for the erection of a Lidl food store with associated access and parking (Outline Planning Application No: 12008/2008/TAV; Planning Application No: 12364/2008/TAV). The results of which concluded that upstanding remains of a 19th century Bone Mill existed in the south west corner of the site and that further remains were likely to exist below the ground. Based on these results, a Watching Brief was subsequently requested by West Devon Borough Council, on the advice of Ms Stephanie Knight, as a condition of planning consent for the above works.
- 1.3 The Watching Brief was monitored by Ms Stephanie Knight (Archaeological Officer, Devon County Council) and Bill Horner (Archaeologist, Devon County Council), with a site visit on 16th of June 2009.
- 1.4 At the request of Ms Stephanie Knight, COAS issued a *Written Scheme of Investigation for an Archaeological Watching Brief: 142 - 152 Plymouth Road, Tavistock, Devon* (COAS June 2009), which provided a strategy for the archaeological works. This was submitted to and approved by DCC Historic Environment Service (HES) prior to the commencement of the Watching Brief.
- 1.5 The request for the archaeological work follows advice given by Central Government as set out in *Planning Policy Guidance Note 1* (PPG1), *General Policy and Principles, 1997*, and *Planning Policy Guidance: Note 16* (PPG16), issued by the DoE in 1990. The recommendation also conforms to County Structure and Local Plans.
- 1.6 This report summarises the topographical, geological, archaeological setting of the site, and presents the results of the Watching Brief.

2. Definition and Objectives of a Watching Brief

- 2.1 An Archaeological Watching Brief is defined by the Institute for Archaeologists (IfA) (formerly the Institute for Field Archaeologists) as:

“...a formal programme of observation and investigation conducted during any operation carried out for non-archaeological reasons. This will be within a specified area or site on land, inter-tidal zone or underwater, where there is a possibility that archaeological deposits may be disturbed or destroyed. The programme will result in the preparation of a report and ordered archive.” (IfA rev.1999)

- 2.2 The purpose of a Watching Brief is also defined by the IfA as:

“To allow, within the resources available, the preservation by record of archaeological deposits, the presence and nature of which could not be established (or established with sufficient accuracy) in advance of development or other potentially disruptive works.

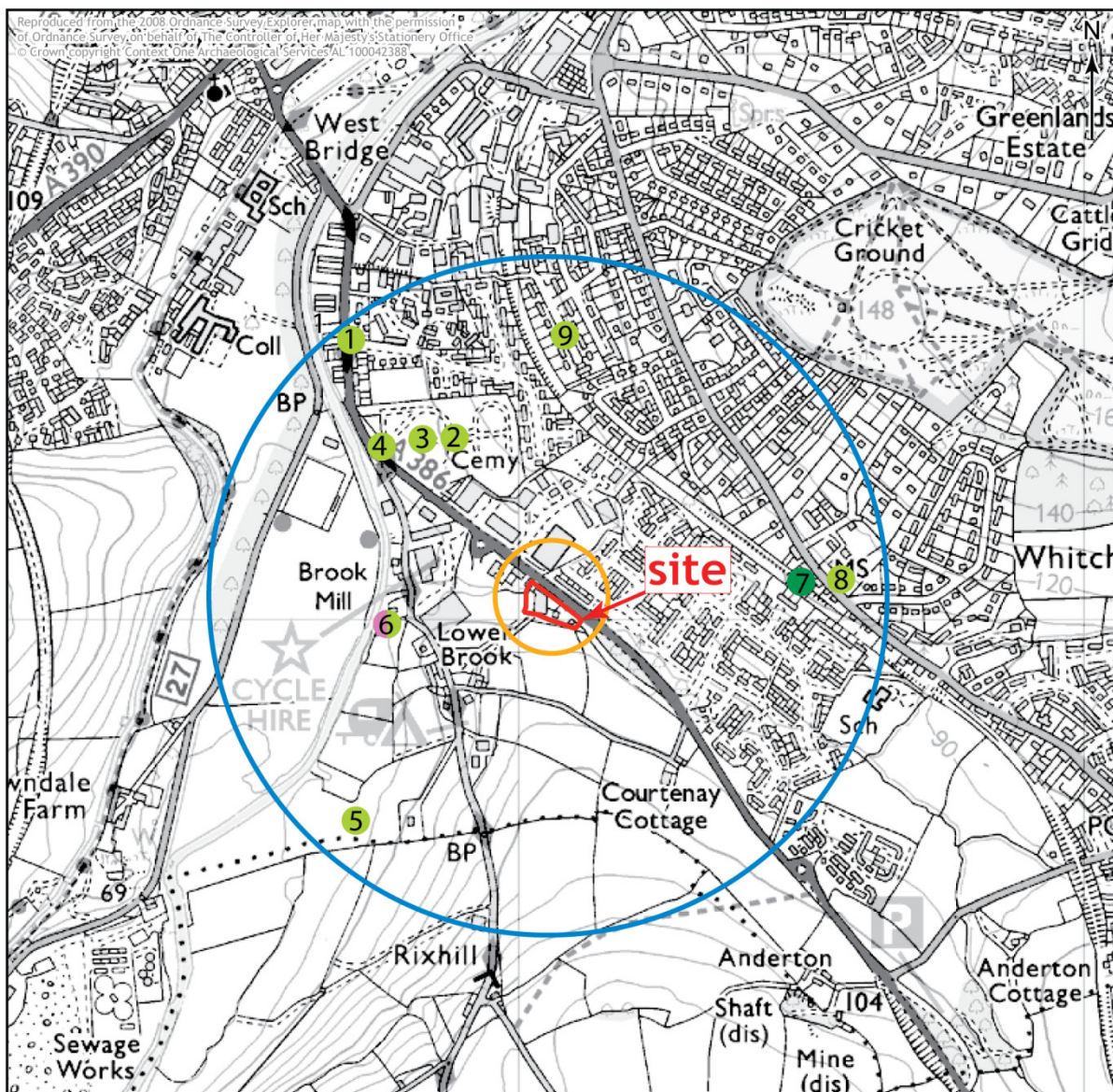
To provide an opportunity, if needed, for the watching archaeologist to signal to all interested parties, before the destruction of the material in question, that an archaeological find has been made for which the resources allocated to the Watching Brief itself are not sufficient to support treatment to a satisfactory and proper standard.” (IfA rev. 1999)

2.3 The results of a watching brief are used to:

- produce a record of the location, nature and date of any archaeological remains encountered on the site;
- add to the knowledge about the previous history of activity on the current site and its surroundings; and
- provide information to influence planning decisions in the area.

3. Site Location, Topography and Geology

- 3.1 The Site (centred on NGR SX 48067 73027) is situated on the southern side of Plymouth Road (A386) on the south-western edge Tavistock in Devon (**Figure 1**). The Site occupies an area of land which is generally level but falls slightly from east to west, with minimal variation between 73m AOD and 74.5m AOD. The site was formerly occupied by a warehouse/ retail unit, a café, a shop (once a petrol station and garage) and car parking areas.
- 3.2 Ground conditions and underlying geology were established by a geotechnical survey previously undertaken on the site; the investigations showed that made ground up to 1.9m deep overlay Middle Devonian weathered shale of the Tavy Formation.



| | | | | | |
|----|---------------|--------------------|----|---------------|---------------------|
| 1. | HER No. 1593 | industrial housing | 6. | HER No. 21287 | mill |
| 2. | HER No. 19958 | chapel | 7. | HER No. 4066 | milestone |
| 3. | HER No. 51349 | cemetery | 8. | HER No. 51358 | milestone |
| 4. | HER No. 23132 | New Cemetery Lodge | 9. | HER No. 58395 | Crelake Mine, shaft |
| 5. | HER No. 51353 | mine | | | |

0 1km



- 200m radius (see figure 2)
- 1000m radius
- medieval
- post-medieval
- modern

| | | |
|--|--|-------------------------------|
| PROJECT TITLE 142-152 Plymouth Road, Tavistock, Devon. | | |
| FIGURE TITLE Site setting and known archaeological landscape between a 200m and 1km radius | | |
| SCALE as shown | PROJECT CODE COAS/WBF/09/PRD | FIGURE NO. 1 |

4. Archaeological Background

4.1 The archaeological background for the Site has been previously summarised in the desk-based assessment (COAS 2009) and is repeated in summary here to provide a context for the findings of the current work. Where relevant, the Devon Historic Environment Record (HER) reference number has been included.

4.2 The site is located in the north western corner of Whitchurch parish, approximately 1km south of the medieval settlement of Tavistock and is situated in what was, until recently, open countryside.

4.3 Relevant archaeological events within the immediate environs of the Site are listed below:

- Medieval gallows possibly located to the south west of the site at Werydon (HER 16971);
- Medieval deer park recorded to the south west of the site in the 16th century (HER 56176);
- In 1677 Mill leats were constructed to channel water from the Tiddy Brook to Brook Mill (HER 21287), located c. 225m to the west. The extent of these leats is not clear, but may have included the stretches of the Tiddy Brook that form the western and southern boundaries of the site;
- Between 1817 and 1820 Plymouth Road was constructed, which forms the eastern boundary of the site;
- A small-scale survey of the town in 1835 (**Plate 1**) shows the site as undeveloped open land;
- The 1st edition OS map of 1885 (**Plate 2**) shows the south western corner of the site occupied by a Bone Mill (HER 51351) comprising two parallel east to west aligned rectangular structures with a footbridge crossing the Tiddy Brook adjacent to them. The site boundaries were defined by Plymouth Road to the north and Tiddy Brook to the south. As the main Bone Mill structure was located adjacent to the Tiddy Brook, which forms the southern boundary of the Site, the Mill machinery might have been water-powered although the water may only have been utilised for cleaning the bone (see below).
- The 2nd edition OS map of 1904 (**Plate 3**) continued to identify the main building on the site (an amalgamation of the two structures shown on the 1885 map) as a Bone Mill. An additional small rectangular structure is also shown to the east of the Bone Mill. The footbridge across the Tiddy Brook continues to be shown and whilst the site remains predominantly surrounded by open fields, a small row of houses known as Glanville Terrace had been built along Plymouth Road immediately to the west of the site.
- The 1938 edition OS map (**Plate 4**) continued to identify the main building as a Bone Mill. This appears to have been surrounded by an enclosure probably defining a yard. A small structure is also shown along the northern boundary of the site with a possible small structure near the western boundary. The site remained predominantly surrounded by open fields.
- Aerial photographs taken in 1947 showed the Bone Mill unchanged from the previous map, but with the addition of two structures that may be holding tanks to the north of the building. An additional building is shown at the eastern end of the site.
- The 1962 edition OS map (**Plate 5**) showed the Site apparently divided into three plots; the western plot contained the Bone Mill building labelled 'works'. The central plot contained two structures, including one first shown on the 1904 map and a further rectangular structure immediately to the north of this. The eastern plot contained a garage. Despite some

additional development along the Plymouth Road to the west of the site, the site remained predominantly surrounded by open land.

- 4.4 Cartographic evidence suggests that the Bone Mill in the south western corner of the site was constructed between 1835 and 1885. These mills produced bone meal for use as an agricultural fertiliser using animal bones obtained from slaughterhouses. This involved first boiling the bones to remove fat, which was often used to make soap (Tyler & Brown 2005); they were then dried for several months before being milled into bone meal, which can be used as a slow release fertiliser. The effectiveness of bone meal as a fertiliser can be improved by dissolving the bone meal in sulphuric acid to produce an early form of superphosphate.
- 4.5 Bone meal was first used as an agricultural fertiliser in the late 18th century, but its use was not widespread until after 1815 when Bone Mills were established in Yorkshire (Greenwood 1867). The majority of known Bone Mills were established in the first half of the 19th century and by the early 1840s some, such as the *Steam Mill Bone Manure Company* (Anchor Warehouse) in Penryn (Archaeological Consultancy Ltd. 2009), and several factories in Lambeth (Greenwood 1867) had begun using sulphuric acid to produce superphosphates. In the 1850s commercial quantities of coprolites that could be refined into superphosphates more economically were discovered in East Anglia and by the 1870s these were being imported from America in vast quantities (Grove 1976). The result was that by the 1880s coprolite based chemical fertilisers were supplanting bone meal as a fertiliser (Russel & Williams 1977). Many Bone Mills continued producing bone meal into the early 20th century, but few continued in operation beyond the 1930s when true synthetic fertilisers produced by major industrial manufacturers such as Fisons and Imperial Chemical Industries supplanted both bone meal and coprolite based superphosphates as the most commonly used fertilisers (Competition Commission 1959).

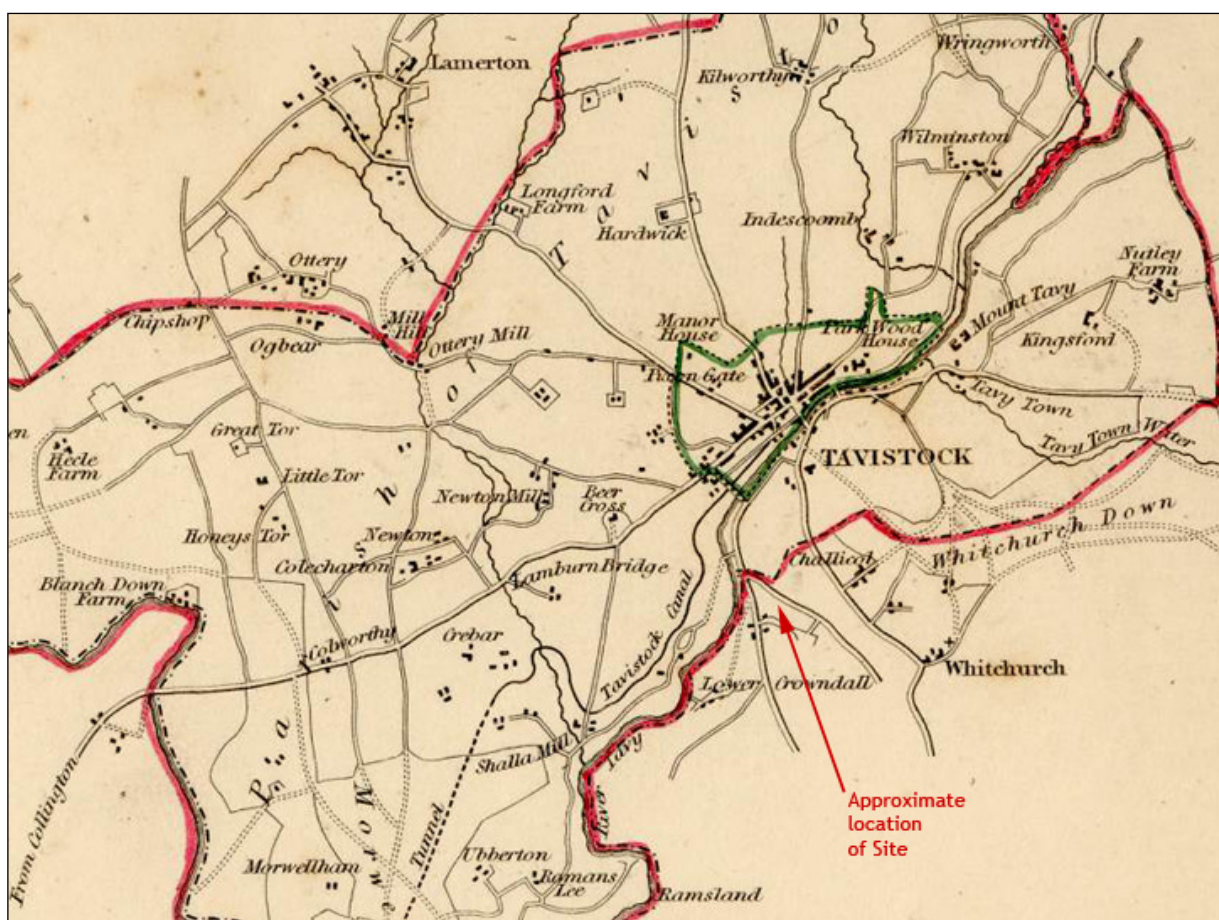


Plate 1. Extract: Tavistock Parish, Robert Creighton, engr. J. & C. Walker for Lewis' Topographical Dictionary, 1835

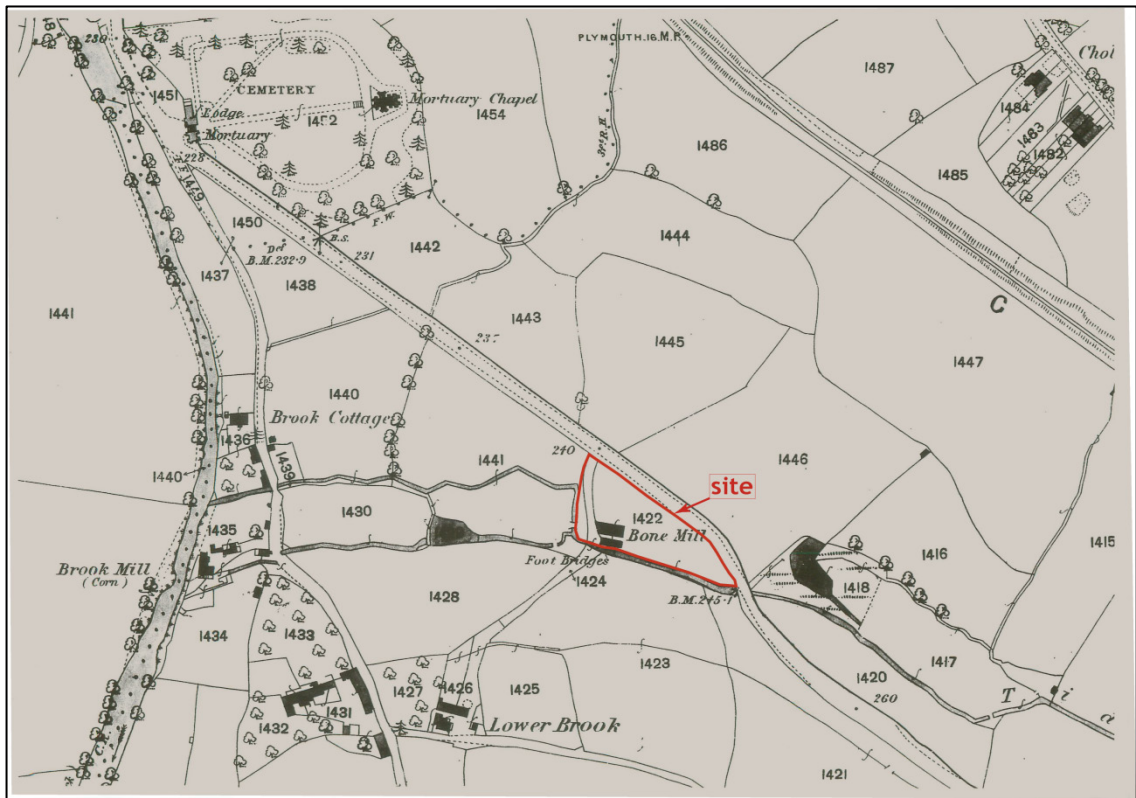


Plate 2. Extract: 25" Ordnance Survey Map, 1885 (site outlined in red)

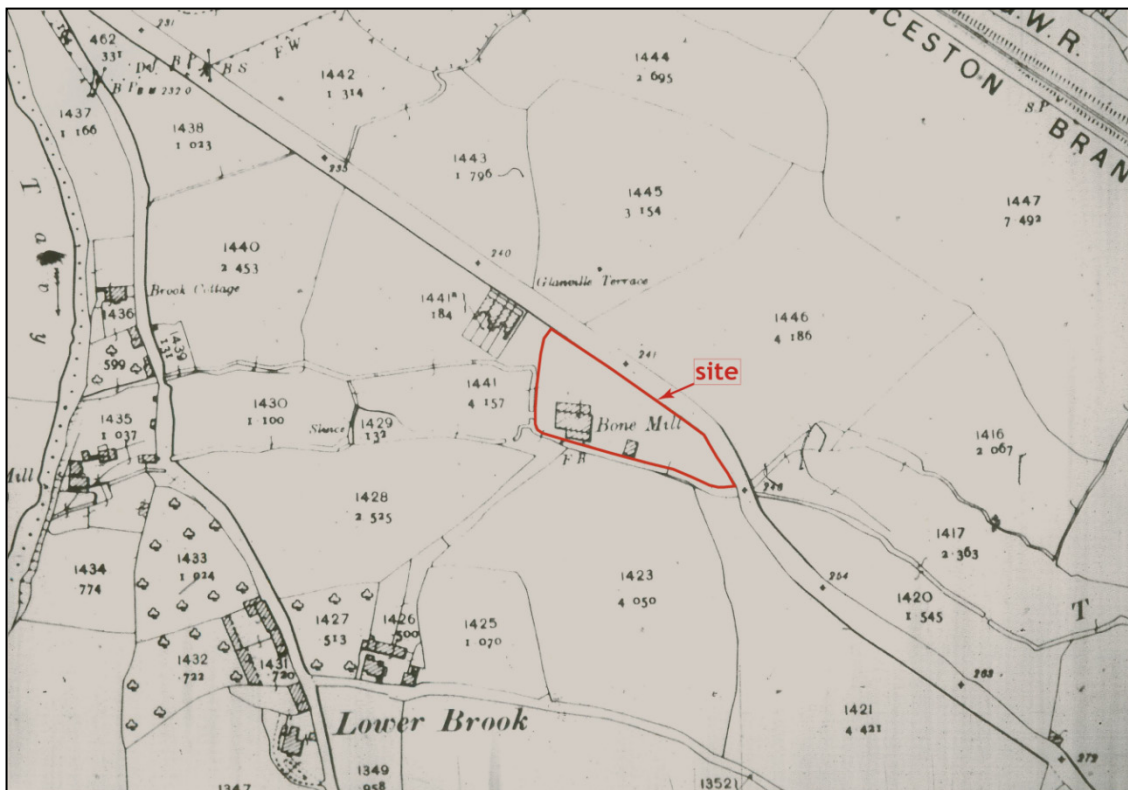


Plate 3. Extract: 25" Ordnance Survey Map, 1904 (site outlined in red)

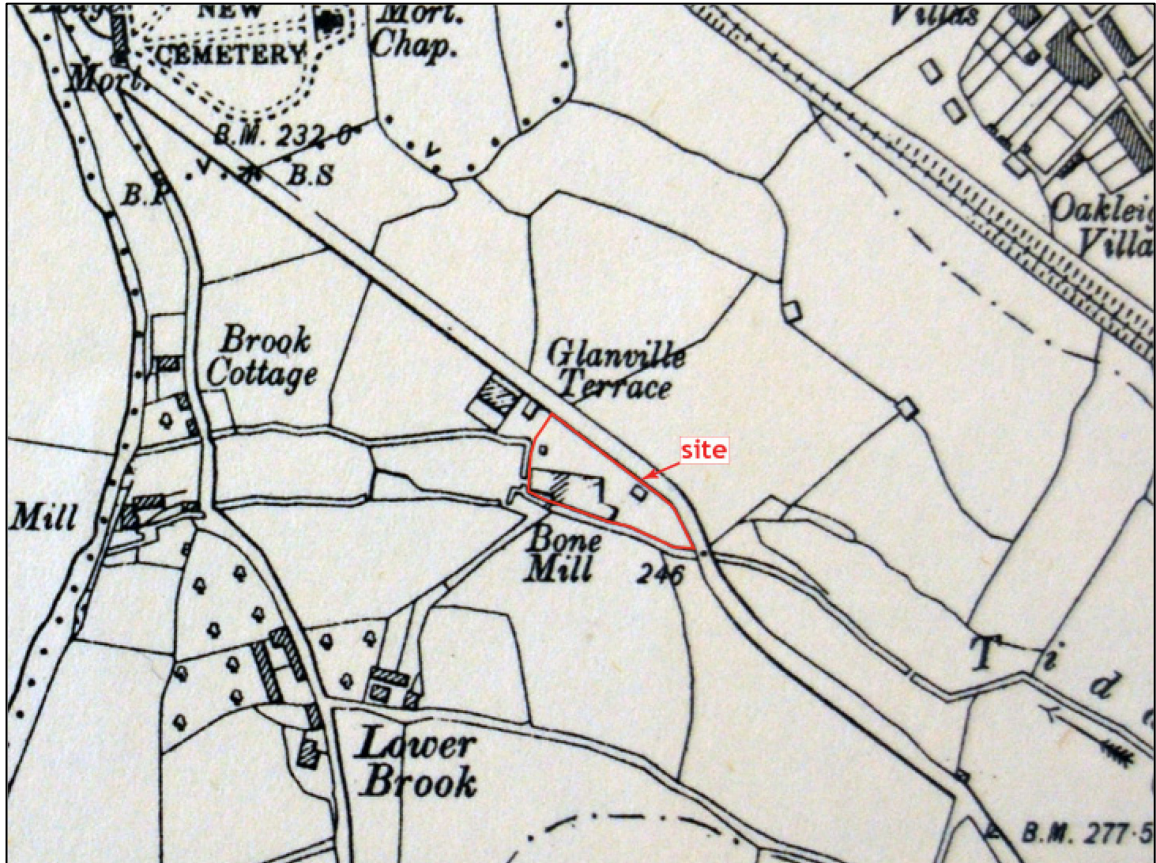


Plate 4. Extract: 25" Ordnance Survey Map, 1938 (site outlined in red)



Plate 5. Extract: 25" Ordnance Survey Map, 1962 (site outlined in red)

5. Methodology

Demolition Methodology

- 5.1 Following the demolition of all upstanding buildings, a machine equipped with a toothless bucket was used, under archaeological supervision, to remove the concrete slab covering the area of the site where remains of the former Bone Mill were expected to survive. A machine equipped with a toothed bucket was then used to remove all remaining concrete and tarmac surfaces, foundations and petrol tanks.

Archaeological Methodology

- 5.2 The programme of archaeological work was carried out in accordance with the *Standards and Guidance for an Archaeological Watching Brief* published by the Institute of Field Archaeologists (IfA) in 1995 (revised 1999). COAS adhered to the *Code of Conduct* issued by the IfA in 1985 (revised 2000), and *Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology* (1990, revised September 2000), at all times during the course of the investigation. Current Health and Safety legislation and guidelines were followed on site.
- 5.3 The upstanding remains of the Bone Mill, identified during the desk based assessment (COAS 2009), were largely cleared of vegetation and recorded by digital photography. The upstanding remains were also recorded on dimensionally stable media at a scale of 1:100 (plans) and 1:50 (Profile).
- 5.4 The vegetation on the upstanding remains could not be completely cleared due to the strong adhesive nature of the ivy present on Site. The complete removal of the plant may have caused the masonry to collapse prior to any recording and become a hazard for those on Site.
- 5.5 A qualified archaeologist was present on site to monitor the grubbing out of foundations during the demolition phase to the development for the purpose of identifying and recording any archaeological features/deposits present in areas where there was potential for archaeological remains to be impacted.
- 5.6 The Archaeological Officer at DCC was kept fully informed of the fieldwork schedule.
- 5.7 A GPS survey of all features identified during the watching brief, including the upstanding remains, was undertaken using a Topcon GRS-1 instrument capable of up to 20mm accuracy. At the request of Stephanie Knight and Bill Horner a machine dug section was excavated across the site of the Bone Mill; this was recorded at a scale of 1:50.
- 5.8 All features/deposits were recorded using standard COAS pro-forma recording sheets. Stratigraphic relationships were recorded using a "Harris-Winchester matrix" diagram. Soil colours were recorded using a Munsell soil colour chart. A photographic record of the work was prepared and involved the use of digital images. The photographic record included shots of the excavated area, individual features and working shots to illustrate the nature of the archaeological operation mounted.
- 5.9 Artefacts collected from archaeological features/deposits were bagged using a combination of site code and context numbers. All finds from the Site were retained for processing in preparation for further analysis and archiving. The specialist report of the artefact assemblage was compiled using a descriptive format (see **Section 7**). Discussions as to the disposal of any artefactual material will be held with the Curator of Archaeology at Plymouth City Museum & Art Gallery.

6. Results

- 6.1 The weather varied between overcast with occasional sunny intervals or heavy rain.

- 6.2 The deposits and features encountered during fieldwork are listed and described in Appendix 1. In the text, context numbers for cuts appear in square brackets, e.g. [1004]; layer, structure and fill numbers appear in standard brackets, e.g. (1002). Where a feature is discussed, it is referenced with its cut and associated fill numbers.

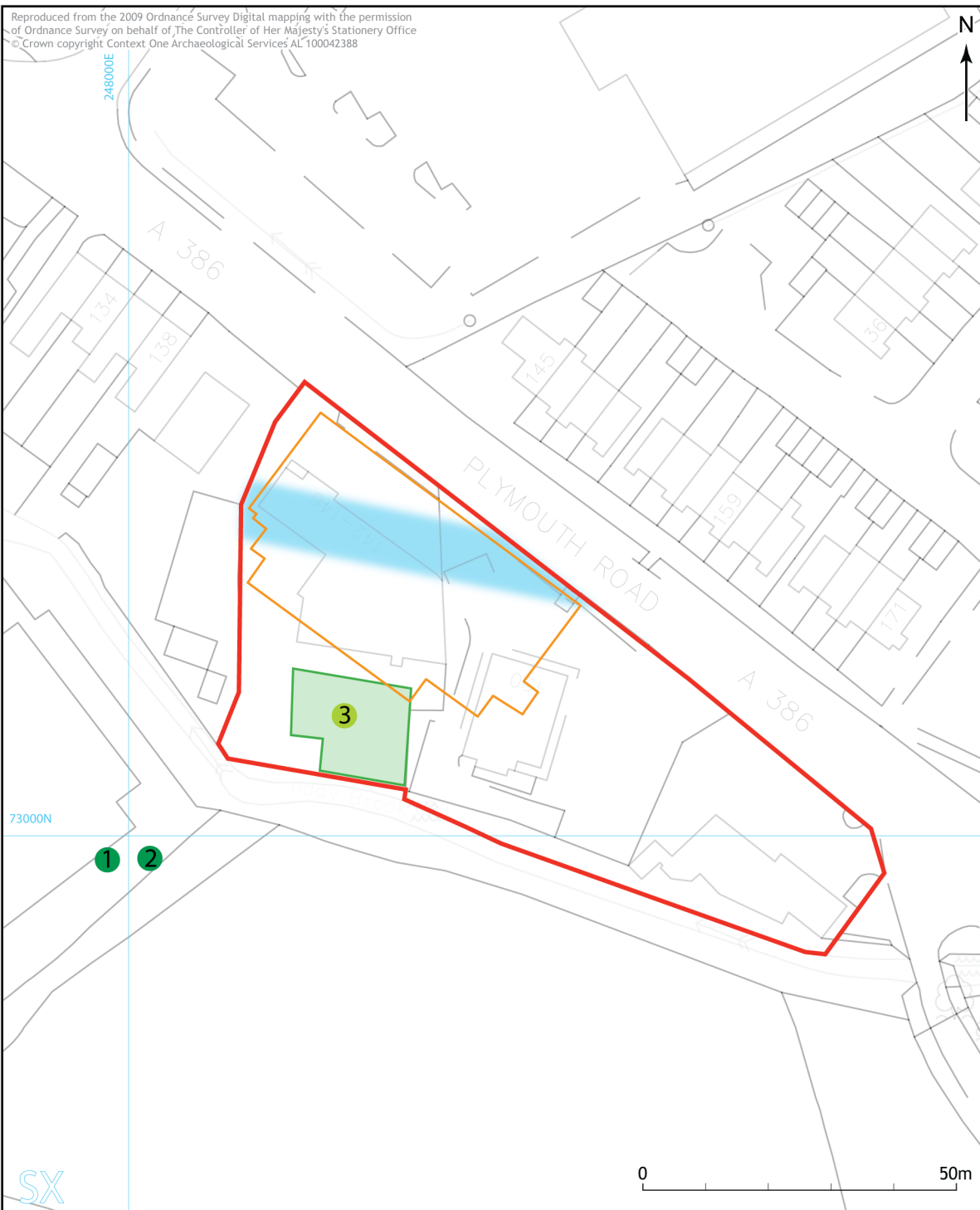
Soil Sequence and Geology

- 6.3 A geotechnical survey undertaken in advance of the construction project established that a reasonably uniform and simple vertical sequence made ground over alluvium, underlain by weathered shale of the Tavy Formation, existed across the site. The made ground varied between 0.65m and 1.9m in depth and consisted predominantly of reworked river gravel (medium dense gravels - consisting of slate and quartz in a silty sandy matrix) overlain by imported sub-base and tarmac surfacing. Alluvium was described as medium dense gravel (slate and quartz) in a silty sandy matrix with lenses of firm sandy gravelly silt. Bedrock was recorded between 69.72m AOD and 72.17m AOD; i.e. between 1.85m and 3.95m below ground level. A marked variation in the surface of the bedrock was interpreted as a possible buried palaeochannel (see **Figure 2**) running east to west across the site.
- 6.4 A section excavated across the site of the Bone Mill revealed that in this location modern surfaces and structures directly overlay a compact degraded natural greyish brown (10YR 5/2) shale with clay; this deposit is equivalent to the weathered shale described in the geotechnical report.

Archaeological Features

- 6.5 Following the removal of a modern concrete floor surface (103) well preserved remains of the former Bone Mill were revealed that included upstanding walls and floor surfaces. The principal structures were two parallel east to west aligned buildings with a cobbled alleyway running between them.
- 6.6 The most southerly of the buildings, (**Plate 6, Figure 3**) measuring 11.5m x 4m, was defined by wall (101) (**Figure 5**) at its eastern end, wall (114) to the west and wall (121) to the north. Walls (101) and (114) were constructed with randomly coursed granite and slate blocks bonded with a soft white lime mortar. Wall (121) was constructed with concrete slab foundations. An upstanding wall (101) up to 2m high defined the east end of the building which originally had a 3m wide entrance; this was later narrowed to a 1m wide doorway which was in turn blocked entirely (**Plate 7**). These blocking walls were constructed using the same materials and methodology as the original wall. There was no visible evidence of wall (121) having been keyed into wall (101) above ground, suggesting that either wall (121) originally abutted and is later than wall (101), or alternately, an entrance from the alleyway into the building may have existed at the eastern end of wall (121).
- 6.7 Within this building two floors could be identified; a cobbled surface (104) at the eastern end and a concrete surface (113) at the western end. The concrete floor had iron stains and an impression that is likely to have marked the position of some sort of machinery. Between these two floors a shallow sump (122) (3m x 2.5m x 0.2m) constructed with concrete slabs was recorded; this was backfilled with modern demolition rubble (112). Imbedded within the concrete used to construct this sump was a large cog that could have formed part of the bone crushing machinery used on the site (see **section 7**). A stone step was also recorded in the centre of the western end of the building suggesting there was an entrance there too.

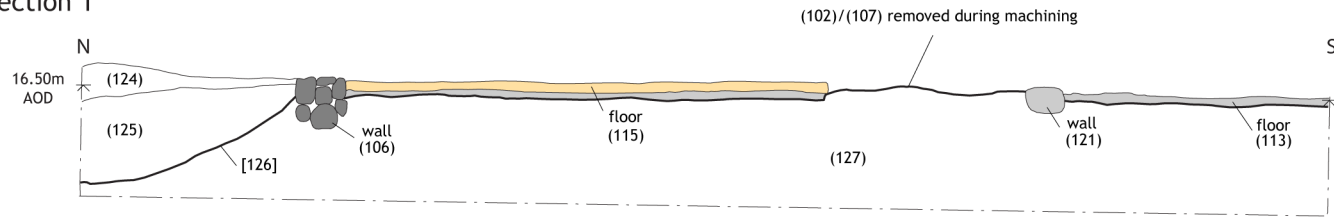
- 6.8 The larger northern building, measuring 20m x 7.5m externally, was also defined by wall (101) (**Figure 5**) at its eastern end, wall (100)/(105) to the west and wall (106) to the north. These walls were constructed using the same materials and methodology as the stone built walls of the southern building. A doorway was located in the centre of the eastern wall (101); the surviving corner of this entrance had the corners chamfered at a 45 degree angle (**Plate 8**), presumably to prevent the materials being carried in and out of the building from damaging the corner of the wall. The southern side of the building was defined by a row of four round iron column bases ((116), (117), (118) and (119)) with the remains of an 'H' section rigid steel girder attached (**Plate 9**). These would originally have supported the roof and left that side of the building open to the cobbled alley (102)/(107) outside (**Plate 9**). The floor (115) in this building (**Plate 9**) was constructed with pale yellow paving bricks with the word CANDY impressed on the underside, which overlay a concrete bedding layer. Several contemporary concrete pads were also recorded in this floor ((109), (110), (111), (120) and (123)), all of which had iron bolts set in them and were presumably used to mount machinery or other structures associated with the bone milling process.
- 6.9 Both the cobbled surfaces (102)/(107) (**Plate 9**) and (104) were constructed with light grey (10YR 7/1) sub-rounded granite setts that directly overlay natural (127). To the north of the Bone Mill complex a concrete slab floor (108) was recorded; this is probably a 20th century addition.
- 6.10 A cut [126] recorded in section outside the north wall of the Bone Mill may be the edge of a large pit, or alternately represents the natural fall of the land away to the north. This was filled with a reddish brown (5 YR 3/2) silty clay (125) with gravel, that was overlain by a very dark greyish brown (10YR 3/2) silty clay with coal (124). Both of these fills contained an assortment of 19th or early 20th century refuse, which included pottery, glass, metal and a few small unidentifiable bone fragments.



| | | | | |
|---|---|--|---------------------------------------|--|
| <ul style="list-style-type: none"> ● medieval ● modern | <ul style="list-style-type: none"> 1. HER No. 56178 deerpark 2. HER No. 16971 gallows 3. HER No. 51351 Bone Mill | <p>PROJECT TITLE 142-152 Plymouth Road, Tavistock, Devon.</p> | | |
| <ul style="list-style-type: none"> proposed new store site boundary site of Bone Mill possible palaeochannel identified during geotechnical survey | <p>FIGURE TITLE Detailed site setting showing known archaeological landscape within a 200m radius</p> | | | |
| <p>SCALE as shown</p> | | <p>PROJECT CODE COAS/DBA/09/PRD</p> | <p>FIGURE NO. 2</p> | |



Section 1



- concrete
- stone
- brick

(000) context number
 [000] cut number
 XX.Xm AOD \nearrow height above ordnance datum (AOD)



PROJECT TITLE
 142-152 Plymouth Road, Tavistock,
 Devon

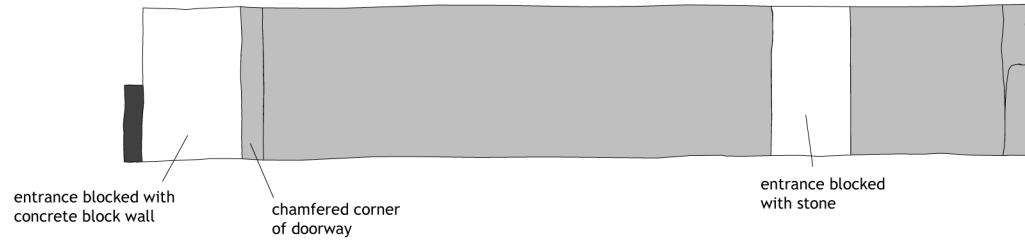
FIGURE TITLE
 Section across Bone Mill

SCALE
 as shown

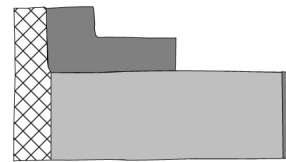
PROJECT CODE.
 COAS/WBF/09/PRD

FIGURE NO.
4

Profile 1
west facing profile



Profile 2
north facing profile



- stone column
- stone wall
- concrete blocks
- concrete blocks, south wall of Bone Mill
- stone wall, east wall of Bone Mill



| | | |
|---|---|---------------------------------------|
| <p><i>PROJECT TITLE</i> 142-152 Plymouth Road, Tavistock, Devon</p> | | |
| <p><i>FIGURE TITLE</i> Profiles of the east and south standing walls of Bone Mill</p> | | |
| <p><i>SCALE</i> as shown</p> | <p><i>PROJECT CODE.</i> COAS/WBF/09/PRD</p> | <p><i>FIGURE NO.</i> 5</p> |



Plate 6. Southern Bone Mill building, viewed from the south east across sump (122).



Plate 7. Blocked doorway near southern end of wall (101), viewed from the west.



Plate 8 . Wall (101) viewed from the north showing chamfered corner of doorway.



Plate 9. Cobbled alleyway (102)/(107) viewed from the west, with floor (115) and iron column bases (116), (117), (118) and (119) on the left.

7. The Finds

- 7.1 All the finds recovered from the watching brief will be suitably stored and labelled with the accession number issued by Plymouth City Museum & Art Gallery (AR.2009.10). Bulk finds such as post-medieval and modern brick, tile, slate and modern pottery and glass were noted but not collected. A request will be made to the site owner to transfer the title of all finds to the above Museum.
- 7.2 Two metal objects were recovered from the watching brief, both of which are parts of industrial machinery.
- 7.3 A copper alloy pulley wheel (Small find (sf 1)) (diameter 65mm x 29mm thick), weighing 716g, was recovered from the modern demolition backfill of a concrete sump (112). Its exact function is unknown.

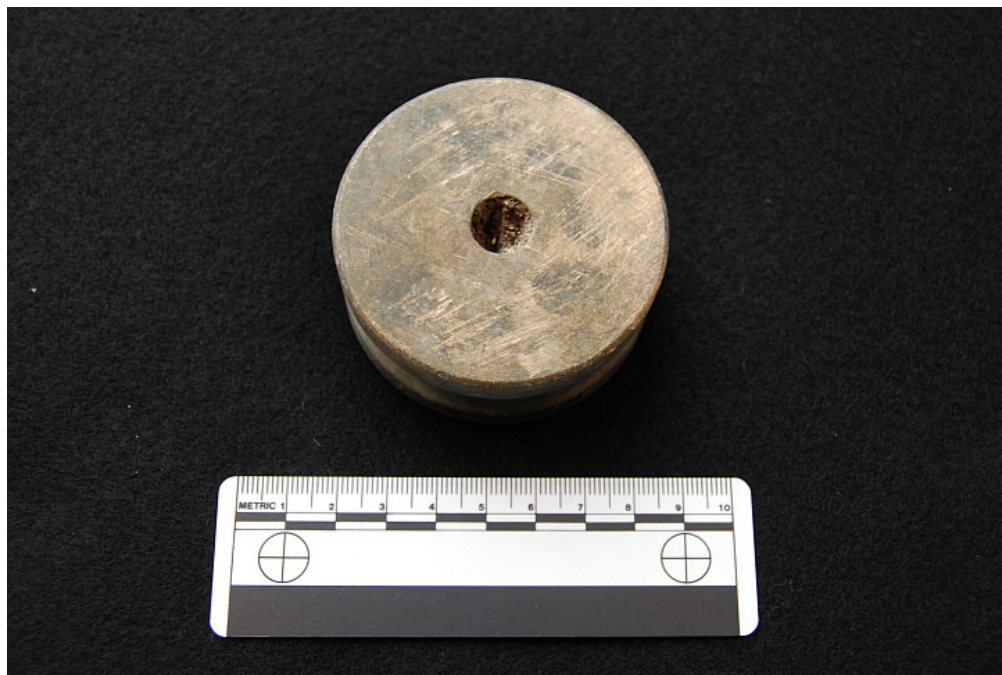


Plate 10. Plan view of copper pulley wheel (sf 1)



Plate 11. Profile view of copper pulley wheel (sf 1)

- 7.4 A fragment from a large iron cog (sf 2) (280mm long x 57mm wide) was found embedded in the concrete slabs that formed the sides of sump (122). This cog would originally have been approximately 1.00m in diameter and clearly formed part of a large industrial or agricultural machine. This may have formed part of the bone milling machinery. If this were the case it would suggest that sump (122) was a later addition to the Bone Mill, perhaps added following the dismantling of the bone crushing machinery and the conversion of the site to other uses in the 20th century.

8. Discussion and Conclusions

- 8.1 The Watching Brief and standing building survey recorded substantial and well preserved remains of a 19th century Bone Mill, the principal components of which were two stone built parallel east to west aligned buildings with a cobbled alley running between them. These are clearly the structures shown on the first edition OS map of 1885. Despite evidence for modifications in the 19th and 20th centuries it is likely that these two buildings are contemporary; this is supported by the fact that they share a common east wall and have similar construction methods employed throughout.
- 8.2 The floor of the northern Bone Mill building was floored with paving bricks produced by Candy & Co.; a local brick and tile manufacturer based in Newton Abbot that was founded in the 1860s and is still in operation today. There was no evidence of any earlier surfaces within this building and this floor surface was certainly contemporary with the external cobbled surface. Given that there is no evidence for any structures predating these buildings it strongly suggests that the Bone Mill was the first building on the site and was constructed between 1860 and 1885. If this is the correct then it is a surprisingly late date, given that most Bone Mills were established in the first half of the 19th century and by this date the industry was facing competition from early chemical fertilisers. It is possible that this Bone Mill was manufacturing the more effective superphosphate fertiliser produced by dissolving bone meal in sulphuric acid, and whilst the presence of a concrete tank inserted into the smaller building could conceivably have been used for this purpose, there is no conclusive evidence to confirm this suggestion.
- 8.3 The location of the Bone Mill adjacent to the fast flowing Tiddy Brook, a watercourse already used to power a mill further downstream, suggests that the Bone Mill too was probably water powered. If this were the case then it is likely that the bone crushing machinery was located in the building nearest the brook with the larger northern building used to process and dry the bone prior to milling. This is supported by a comparison with a remarkably similar floor plan, produced in 1859, for the Bone Mill at the Anchor Warehouse in Penryn; this also shows pair of parallel buildings joined by an alleyway. The smaller building on that site was used to house the stream powered bone milling machinery. The larger building was divided into two rooms, described as a bone shed and a phosphate shed.
- 8.4 A trench excavated across the site of the Bone Mill revealed that the Mill itself was built directly onto natural shale, this is surprising given much of the site was covered by deep deposits of made ground and these would be expected to be deepest adjacent to the Tiddy Brook. A possible explanation for this is that the current course of the brook is in fact an artificial channel. This is supported by the geotechnical survey that located a possible east to west aligned palaeochannel to the north of the Bone Mill that was backfilled with up to 1.9m of made ground; this could indicate the original course of the brook. If this interpretation is correct then there are two possibilities for when this may have occurred; the first is that this section of the Tiddy Brook forms part of the leat constructed in 1677 to power Brook Mill to the west. Alternately, the channel could have been dug in the 19th century to provide power for the Bone Mill itself.
- 8.5 Cartographic evidence suggests that at some point in between 1885 and 1904 the two Bone Mill buildings were joined and the alleyway between them roofed over. A map produced in 1938 continued to describe the building as a Bone Mill which suggests it may have remained in operation at this late date. By 1962 the Bone Mill was simply described as a "Works", suggesting it had been adapted to other industrial uses by then. At some point after the building was demolished and the majority of the walls reduced to ground level. No attempt was made to remove the foundations or the floor surfaces, which were then utilised as an external yard surface until the current works were undertaken.

9. Archive

- 9.1 The site archive is currently held at the offices of Context One Archaeological Services Ltd and consists of digital images in .jpg format, drawn plans and sections on stable drawing film and the written paper record - including context sheets, and various registers. The archive will be prepared to comply with guidelines set out in *Environmental Standards for the Permanent Storage of Excavated Material from Archaeological Sites* (UKIC 1984, Conservation Guidelines 3)/ *Guidelines for the Preparation of Excavation Archives for Long-term Storage* (UKIC 1990)/ *Standards in the Museums Care of Archaeological Collections* (Museum and Galleries Commission 1992)/ *Management of Archaeological Projects 2* (English Heritage 1991). Arrangements will be made to deposit the archive with Plymouth City Museum & Art Gallery within 12 months following the submission of this report.
- 9.2 Following the completion of the report, an OASIS form will be completed and submitted (OASIS ID: contexto1-62905).
- 9.3 Copies of the Watching Brief report will be deposited with:

Lidl UK
Ground Floor Suite
Falcon House
Eagle Road
Plympton
PL7 5JY

Historic Environment Service
Devon County Council
Environment, Economy and Culture
Directorate
Matford Offices
County Hall
Exeter
EX2 4QW

10. COAS Acknowledgements

- 10.1 Context One Archaeological Services Ltd would like to thank Oliver McGuinness (Lidl) and Phil Dyer (Lidl - Site Manager), for their kind assistance throughout the course of the investigation, and Ms Stephanie Knight (Archaeological Officer, Devon County Council), for curatorial advice.

11. Bibliography

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|--|--|
| Archaeological Consultancy Ltd. 2009. | www.archaeologicalconsultancy.com/pdf_publications/Anchor Warehouse East Panel.pdf |
| British Geological Survey, 2001 | Geological Map of Great Britain 1:625,000 (England & Wales south sheet) 4 th Edition: Solid Geology |
| Competition commission, 1959 | www.mmc.gov.uk/rep_pub/reports/1950_1959/fulltext/023c04.pdf |
| Context One Archaeological Services Ltd. 2009 | <i>142-152 Plymouth Road, Tavistock, Devon - An Archaeological Desk-Based Assessment.</i> |
| Context One Archaeological Services Ltd. 2009 | <i>Written Scheme of Investigation for an Archaeological Watching Brief: 142-152 Plymouth Road, Tavistock, Devon.</i> |

- Department of the Environment,
1990
- Department of the Environment,
1997
- Grove, R., 1976
- Greenwood, J., 1867
- Institute of Field Archaeologists (IfA),
1985 (rev. 2000)
- Institute of Field Archaeologists (IfA),
1990 (rev. 2000)
- Institute of Field Archaeologists (IfA),
1994 rev. 1999
- Multi Agency Geographic Information
for the Countryside (MAGIC), 2006
- Museum of London Archaeological
Service, Archaeological Studies Series
15, Tyler K. & Brown J., 2005
- Soil Science Society of America,
Russel, D. A. & Williams G. G., 1977
- Planning Policy Guidance Note 16:
Archaeology and Planning*, London: Her
Majesty's Stationery Office
- Planning Policy Guidance Note 1:
General Policy and Principles*, London:
Her Majesty's Stationery Office
- The Cambridgeshire Coprolite Mining
Rush*
- Unsentimental Journeys; or Byways of
the Modern Babylon, IX The Bones Of
London*
- Code of Conduct*, Reading: IfA
11.1
- Code of Approved Practice for the
Regulation of Contractual Arrangements
in Field Archaeology*, Reading: IfA
- Standard and Guidance for an
Archaeological Excavation*
www.magic.gov.uk
- 11.2
*The Doulton stoneware pothouse in
Lambeth - Excavations at 9 Albert
Embankment London*
- History of Chemical Fertilizer
Development*

Appendix 1. Context summary

| Context No. | Period | Type | Description | Length | Width/ Diameter | Thickness/ Depth | Drawing Nos. | Sheet No. | Stratigraphic Relationship |
|-------------|--------|-----------|---|--------|--------------------|---------------------|--------------|-----------|---|
| 100 | Modern | Structure | East wall of Bone Mill. Constructed with random coursed granite and slate blocks (0.1m - 0.25m x 0.1m - 0.5m x 0.1m x 0.2m) bonded with a soft white lime mortar with sand and gravel inclusions. | 11.00m | 0.40m | 0.30m | 1, 4 | 1,4 | Butted by (115); Covers (127); Same as (105), (106) |
| 101 | Modern | Structure | West wall of Bone Mill. Constructed with random coursed granite and slate blocks (0.1m - 0.3m x 0.1m - 1m x 0.1m x 0.2m) bonded with a soft white lime mortar with sand and gravel inclusions. | 14.40m | 0.40m | 2.00m | 1, 2, 3, 4 | 1,2,3, 4 | Butted by (115); Covers (127) |
| 102 | Modern | Structure | Cobbled surface forming alleyway. Constructed with light grey (10YR 7/1) sub-rounded granite setts. | 19.00m | 2.70m | 0.10m | 3 | 4 | Covered by (103); Butts (121); Same as (107) |
| 103 | Modern | Structure | Concrete surface covering interior of former Bone Mill. | - | - | 0.10m | - | - | Covers (102), (107), (108), (109), (110), (111), (113), (115), (116), (117), (118), (119) |
| 104 | Modern | Structure | Cobbled surface forming floor surface within Bone Mill. Constructed with light grey (10YR 7/1) sub-rounded granite setts. | 1.30m | 3.00m | 0.10m | 3 | 4 | Covered by (103); Butts (100), (121) |
| 105 | Modern | Structure | West wall of Bone Mill. Constructed with random coursed granite and slate blocks (0.1m - 0.3m x 0.1m - 1m x 0.1m x 0.2m) bonded with a soft white lime mortar with sand and gravel inclusions. | 7.50m | 0.30m | 0.30m | 3 | 4 | Butted by (115); Covers (127); Same as (100), (106) |
| 106 | Modern | Structure | North wall of Bone Mill, Constructed with random coursed granite and slate blocks (0.1m - 0.3m x 0.1m - 1m x 0.1m x 0.2m) bonded with a soft white lime mortar with sand and gravel inclusions. | 20.00m | 0.40m | 0.30m | 3, 4 | 4, 5 | Butted by (115); Covers (127); Same as (105), (100) |
| 107 | Modern | Structure | Cobbled surface forming alleyway. Constructed with light grey (10YR 7/1) sub-rounded granite setts. | 19.00m | 2.70m | 0.10m | 3 | 4 | Covered by (103); Butts (121); Same as (102) |
| 108 | Modern | Structure | Concrete slab floor. Forms external surface of Bone Mill. | 11.00m | 5.00m | 0.10m | 3 | 4 | Covered by (103); Butts (106); Covers (124) |
| 109 | Modern | Structure | Concrete pad with iron bolts set in it. | 1.10 | 0.80m | - | 3 | 4 | Covered by (103); Part of (115); Covers (127) |
| 110 | Modern | Structure | Concrete pad with iron bolts set in it. | 0.80m | 1.10 | - | 3 | 4 | Covered by (103); Part of (115); Covers (127) |
| 111 | Modern | Structure | Concrete pad with iron bolts set in it. | 1.10 | 0.80m | - | 3 | 4 | Covered by (103); Part of (115); Covers (127) |

| | | | | | | | | | |
|-----|---------|-----------|---|--------|-------|-------|-----|-----|--|
| 112 | Modern | Fill | Fill of concrete tank. Demolition debris containing stone rubble and asbestos roofing panel fragments. | 2.00m | 2.20m | - | 3 | 4 | Fill of (122) |
| 113 | Modern | Structure | Concrete floor within Bone Mill. Marks in the concrete suggest it formerly supported some form of machinery | 3.50m | 3.00m | - | 3,4 | 4,5 | Covered by (103) |
| 114 | Modern | Structure | North to south aligned wall defining west end of southern mill building. Constructed with random coursed granite and slate blocks (0.1m - 0.3m x 0.1m - 1m x 0.1m x 0.2m) bonded with a soft white lime mortar with sand and gravel inclusions. | 3.00m | 0.50m | - | 3 | 4 | Covered by (103) |
| 115 | Modern | Structure | Brick paved floor. Constructed with Yellow paving bricks embossed with the word <i>CANDY</i> set in concrete. | 20.00m | 7.00m | 0.10m | 3,4 | 4,5 | Covered by (103); Butts (100), (101), (105)(121) |
| 116 | Modern | Structure | Iron roof support. Iron girder used to support roof of Bone Mill. | - | 0.30m | - | 3 | 4 | Covered by (103) |
| 117 | Modern | Structure | Iron roof support. Iron girder used to support roof of Bone Mill. | - | 0.30m | - | 3 | 4 | Covered by (103) |
| 118 | Modern | Structure | Iron roof support. Iron girder used to support roof of Bone Mill. | - | 0.30m | - | 3 | 4 | Covered by (103) |
| 119 | Modern | Structure | Iron roof support. Iron girder used to support roof of Bone Mill. | - | 0.30m | - | 3 | 4 | Covered by (103) |
| 120 | Modern | Structure | Concrete support for machinery could be internal wall division. | - | 7.00m | 2.00m | 3 | 4 | Covered by (103) |
| 121 | Modern | Structure | East to west aligned wall of defining north wall of southern Bone Mill building. Constructed with grey (10YR 5/1) random coursed stones and slate bonded with a hard mortar on a concrete slab foundation (0.2 - 0.3m x 2.0 - 2.2m x 0.4m). | 19.50m | 0.40m | 0.25m | 3,4 | 4,5 | Butted by (102), (107), (113), (104), (122); Covers (127) |
| 122 | Modern | Structure | Sump. Constructed with large concrete slabs (1.2m x 0.3m x 0.4m). Contained a fragment from a large industrial cog. | 3.50m | 2.50m | 0.20m | 3 | 4 | Filled by (112); Butts (100), (121) |
| 123 | Modern | Structure | Remains of concrete structure which may have held machinery. Heavily disturbed by later activity | 3.00m | 3.00m | 0.20m | 3 | 4 | Covered by (103) |
| 124 | Modern | Fill | Fill of possible pit. Very dark greyish brown 10YR 3/2 soft silty clay with 80% Coal inclusions. Contained brick, bone, glass, metal and slate. | - | 3.00m | 0.40m | 4 | 5 | Covered by (108); Covers (125) |
| 125 | Modern | Fill | Fill of possible pit. Reddish brown (5R 3/2) silty clay with frequent rounded gravels. Contained brick, glass, metal, pottery, tile and slate. | - | 3.00m | 1.10m | 4 | 5 | Covered by (124); Covers (126) |
| 126 | Modern | Cut | Cut of possible pit. Cut of C19 rubbish pit with concave sides and a sloping base. | - | 3.00m | 1.50m | 4 | 5 | Filled with (124), (125); Cuts (128) |
| 127 | Unkonwn | Layer | Natural. Greyish brown 10YR 5/2. Silty clay with frequent shale fragments; platy <0.20m. | - | - | - | 4 | 5 | Cut by [126]; Covered by (100), (101), (105), (106), (114),(116), (121), (126) |

Appendix 2: Brief for archaeological monitoring and recording

BRIEF FOR ARCHAEOLOGICAL MONITORING AND RECORDING

Location: 142-152 Plymouth Road, PL19 9DS

Parish: Tavistock

District: West Devon

County: Devon

NGR: SX4806773027

Planning Application no: 12364/2008/TAV

Proposal: Erection of foodstore with associated access and parking (outline application)

Historic Environment Service ref: Arch/dc/wd 14094

1. INTRODUCTION AND ARCHAEOLOGICAL BACKGROUND

1.1 This brief has been prepared by the Devon County Council Historic Environment Service (HES), at the request of Stuart Milby of Context One Archaeological Services Ltd (COAS), with regard to the *second stage* of archaeological works required as a condition of planning consent for the above works at 142-152 Plymouth Road. A desk based assessment of archaeological potential has been produced by COAS as the first stage of archaeological works (Allum & Place 2009).

1.2 In accordance with PPG16 (1990) Archaeology and Planning Policy, and the Local Development Framework Policy on archaeology, consent has been granted, conditional upon a programme of archaeological work being undertaken. This condition requires that: *'No development shall take place until the applicant has secured the implementation of a programme of archaeological work in accordance with a written scheme of investigation which has been submitted by the applicant and approved by the Local Authority.'* The development shall be carried out at all times in strict accordance with the approved scheme, or such other details as may be subsequently agreed in writing by the Local Planning Authority.

1.3 The principal objective of the programme shall be to observe, investigate, excavate and record any surviving below-ground archaeological artefacts and deposits across the area affected by the proposed development.

1.4 The County Historic Environment Record (HER) records that a *'Bone Mill'* is located within the proposal area on the 1880s-1890s Ordnance Survey mapping, and the Desk Based Assessment concludes that this is likely to date to between 1835 and 1895. The proposal area is close to the Cornwall and West Devon Mining Landscape World Heritage Site and several mine sites are located within a kilometre of the site, so there is potential for further unrecorded mines to be present. The development site also lies within the Whitchurch area of Tavistock, which is documented as the site of a medieval deerpark. In addition, the area may contain the site of a medieval gallows, which has not been precisely located. The desk based assessment indicated that archaeological remains may survive below the levels of modern impact, including the area of the former bone mill. As details of the final design were not available, it was not possible to determine the exact impact of the development on the potential archaeological resource. The ground level in some areas may be raised, and this will reduce any impact, however in other areas foundations and services may have a significant impact.

1.5 This Brief covers the application area as defined in the plans submitted in support of this application.

2. WRITTEN SCHEME OF INVESTIGATION

2.1 This document sets out the scope of the works required to record the extent and character of any surviving archaeological deposits within the application area and will form the basis of the *Written Scheme of Investigation* (WSI) to be prepared by the archaeological consultant and approved by the HES and the Local Planning Authority (LPA).

2.2 The Written Scheme of Investigation must be submitted by the applicant or on their behalf by their agent or archaeological consultant and approved by the HES and the Local Planning Authority *prior* to any development commencing on site.

3. PROGRAMME OF ARCHAEOLOGICAL WORKS

3.1 The consultant shall refer to the Desk Based Assessment that has been produced (Allum & Place 2009) to place the development area into its historic and archaeological context.

3.2 All groundworks shall be undertaken with the site archaeologist in attendance, with the exception of areas of modern impact (where all archaeological levels affected by the development can be demonstrated to have been removed) - see below. The archaeological consultant shall include in the WSI, for approval by the LPA and the HES in its role as an archaeological adviser to the LPA, a plan indicating areas where archaeological monitoring is to be undertaken. This will be based on demonstrable modern impacts, the impact of the current development, and archaeological potential. It will be suitably annotated and justified in the text of the WSI. It is expected that the area of the bone mill and other areas will be monitored. Wherever possible ground reduction and all groundworks across the site will be undertaken by a 360° tracked or wheeled JCB-type mechanical excavator fitted with a toothless grading bucket to allow the identification of archaeological deposits with minimal disturbance. Should archaeological or palaeoenvironmental remains be exposed, machining will cease in that area to allow the site archaeologist to investigate, record and sample such deposits. The upstanding remains of the bone mill shall be recorded photographically and any phasing sketched and described (equivalent to a Level 1-2 record as set out in *Understanding Historic Buildings: A guide to good recording practice* - English Heritage 2006 which is available on-line at the English Heritage website).

3.3 Archaeological features and deposits will be cleaned and excavated by hand and will be fully recorded by context as per the Institute of Field Archaeologists' *Standards and Guidance for an Archaeological Watching Brief* (1994 - revised 2001). All features shall be recorded in plan and section at scales of 1:10, 1:20 or 1:50. All scale drawing shall be drawn at a scale appropriate to the complexity of the deposit/feature and to allow accurate depiction and interpretation.

As a minimum:

- i) small discrete features will be fully excavated;
- ii) larger discrete features will be half-sectioned (50% excavated); and
- iii) long linear features will be sample excavated along their length - with investigative excavations distributed along the exposed length of any such feature and to investigate terminals, junctions and relationships with other features.

Should the above % excavation not yield sufficient information to allow the form and function of archaeological features/deposits to be determined full excavation of such features/deposits will be required. Additional excavation may also be required for the taking of palaeoenvironmental samples and recovery of artefacts. Any variation of the above, based on new information gained during works, will be undertaken in agreement with the HES.

3.4 Spoil will be examined for the recovery of artefacts.

3.5 Should deposits be exposed that contain palaeoenvironmental or datable elements appropriate sampling and post-excavation analysis strategies will be initiated. The project will be organised so that specialist consultants who might be required to conserve or report on finds or advise or report on other aspects of the investigation (e.g. palaeoenvironmental analysis) can be called upon and undertake assessment and analysis of such deposits - if required.

3.6 In the event of particularly significant discoveries, the HES will be informed and a site meeting between the consultant, the HES and the client/applicant to determine the appropriate mitigation.

3.7 The photographic record shall be made in B/W print supplemented by digital or colour transparency. If digital imagery is to be the sole photographic record then suitably archivable prints must be made of the digital images by a photographic laboratory. Laser or inkjet prints of digital images, while acceptable for inclusion in the report, are not an acceptable medium for archives. The drawn and written record will be on an appropriately archivable medium.

3.8 Human remains must initially be left in-situ, covered and protected. Removal can only take place under appropriate Ministry of Justice and environmental health regulations. Such removal must be in compliance with the relevant primary legislation.

3.9 Any finds identified as treasure or potential treasure, including precious metals, groups of coins or prehistoric metalwork, must be dealt with according to the Treasure Act 1996 Code of Practice (2nd Revision)

(Dept for Culture Media and Sport). Where removal cannot be effected on the same working day as the discovery, suitable security measures must be taken to protect the finds from theft.

4. MONITORING

4.1 The archaeological consultant shall agree monitoring arrangements with the HES and give two weeks notice, unless a shorter period is agreed, of commencement of the fieldwork. Details will be agreed of any monitoring points where decisions on options within the programme are to be made.

4.2 Monitoring will continue until the deposition of the site archive and finds, and the satisfactory completion of an OASIS report - see 5.5 below.

5. REPORTING

5.1 The reporting requirements will be confirmed with the HES on completion of the site work. In the event that few or no archaeological remains are exposed, only minimal reporting would be required. The results may be presented in the form of a short entry to the Historic Environment Record (HER), sent to the HES either digitally or as a hard-copy. If archaeological deposits or remains are exposed during the course of the works, then more detailed reporting would be required, in the form of an illustrated summary report submitted both in hard-copy and digitally and, if merited, wider publication.

5.2 The report shall be prepared collating the written, graphic, visible and recorded information outlined above. The report shall include the results of the desk-based work, along with plans of exposed archaeological features, including their location, description of deposits and artefacts together with their interpretation. Photographic images and drawings of elevations of standing remains of the bone mill will be included and described with any phasing. It is recommended that a draft report is submitted to the HES for comment prior to its formal submission to the Local Planning Authority. A copy of this brief shall be included in the report.

5.3 The HES would normally expect to receive the report within three months of completion of fieldwork - dependent upon the provision of specialist reports, radiocarbon dating results etc the production of which may exceed this period. If a substantial delay is anticipated then an interim report will be produced.

5.4 On completion of the report, in addition to copies required by the Client, hard copies of the report shall be supplied to the HES on the understanding that one of these copies will be deposited for public reference in the HER. In addition to the hard copies of the report, one copy shall be provided to the County Historic Environment Service in digital format - in a format to be agreed in advance with the HES - on the understanding that a digital version of the report may in future be made available to researchers via a web-based version of the Historic Environment Record.

5.5 The archaeological consultant shall complete an online OASIS (*Online AccesS to the Index of archaeological investigationS*) form in respect of the archaeological work. This will include a digital version of the report. **The report or short entry to the Historic Environment Record will also include the OASIS ID number.**

5.6 Should particularly significant archaeological remains, finds and/or deposits be encountered, then these, because of their importance, are likely to merit wider publication in line with government planning guidance (PPG16). If such remains are encountered, the publication requirements – including any further analysis that may be necessary – will be confirmed with the HES.

6. PERSONNEL

6.1 The work shall be carried out by a recognised archaeological consultant, agreed with the HES. Staff must be suitably qualified and experienced for their project roles. All work should be carried out under the control of a Member of the Institute of Field Archaeologists (MIFA), or by a person of similar standing. The Written Scheme of Investigation will contain details of key project staff and specialists who may contribute during the course of the works - excavation and post-excavation.

6.2 Health and Safety matters, including site security, are matters for the consultant. However, adherence to all relevant regulations will be required.

6.3 The work shall be carried out in accordance with *IFA Standards and Guidance for Archaeological Watching Brief (1994)*, as amended (2001).

7. DEPOSITION OF ARCHIVE AND FINDS

7.1 The archaeological consultant shall contact the museum that will receive the site archive to obtain an accession number and agree conditions for deposition. *The accession number will be quoted in the Written Scheme of Investigation*, and within the final report or the short entry to the Historic Environment Record.

7.2 Archaeological finds resulting from the investigation (which are the property of the landowner), should be deposited with the appropriate museum - in a format to be agreed with the museum, and within a timetable to be agreed with the HES. The museum's guidelines for the deposition of archives for long-term storage should be adhered to. If ownership of all or any of the finds is to remain with the landowner, provision and agreement must be made for the time-limited retention of the material and its full analysis and recording, by appropriate specialists.

7.3 The artefact discard policy must be set out in the Written Scheme of Investigation.

7.4 The condition placed upon this development will not be regarded as discharged until the report has been produced and submitted to the HES and the LPA, the site archive deposited and the OASIS form submitted.

8. CONTACT NAME AND ADDRESS

Stephanie Knight, Archaeological Officer, Devon County Council, Environment, Economy and Culture Directorate, Matford Offices, County Hall, Exeter EX2 4QW
Tel: 01392-382421 Fax: 01392-383011 E-mail: stephanie.knight@devon.gov.uk
3rd June 2009

9. REFERENCES

Allum, C. & Place, C. (2009) *142-152 Plymouth Road, Tavistock, Devon. An Archaeological Desk-Based Assessment for Lidl UK. Context One Archaeological Services Ltd. COAS/DBA/09/PRD*