

**CRUNDALE MILL, CRUNDALE,
PEMBROKESHIRE
ARCHAEOLOGICAL WATCHING BRIEF
AND BUILDING RECORDING
(SM98112 17827)**



Prepared by DAT Archaeological Services
For: Tree and Sons Ltd



DYFED ARCHAEOLOGICAL TRUST

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**CRUNDALE MILL, CRUNDALE, PEMBROKESHIRE
ARCHAEOLOGICAL WATCHING BRIEF
(ERN 108836)
AND BUILDING RECORDING
(ERN 110325)
(SM898112 17827)**

Gan / By

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CRUNDALE MILL, CRUNDALE, PEMBROKESHIRE
ARCHAEOLOGICAL WATCHING BRIEF AND BUILDING

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CRUNDALE MILL, CRUNDALE, PEMBROKESHIRE
ARCHAEOLOGICAL WATCHING BRIEF AND BUILDING RECORDING

SUMMARY

DAT Archaeological Services were commissioned by Mr Jack Tree of Tree And Sons Ltd to provide an archaeological scheme of works for building recording and a watching brief prior to and during the restoration of Crundale Mill, Crundale, Pembrokeshire (SM9811 17827). The condition had been placed on the development proposals as the site is recorded on the Historic Environment Record as a post-medieval mill (PRN 17768). The site was visited as part of a medieval and post-medieval mills project funded by Cadw in 2013 which demonstrated the site was not actually a mill, but a rural dwelling (small house). The building, though ruinous, was still considered significant as a rare survivor of a rural building relatively untouched by modern renovations.

Since the visit in 2013 the roof had been dismantled by the owner as it was in a dangerous state and had been pressing against the outer walls of the building and causing them to become displaced. The internal floors of the building and the brick chimneys were also removed at this time, again for safety reasons. Tree and Sons Ltd were commissioned to undertake the restoration works.

A Level 2 descriptive building recording and an archaeological watching brief were undertaken in January 2017. The building recording confirmed that Crundale Mill is not a mill but a single phased late nineteenth/early twentieth-century domestic house. Despite its dereliction, the building retained many of its original features. A fine cast iron range survived in the northern gable end and indeed the building retained all of its ground floor and first floor fireplaces. A stone built oven, likely to be a bread oven also survived in the rear, single storied cell of the house.

The historic mapping depicted an adjoining building at the northern gable end of the house. This is no longer extant but a cement ridge line on the external face of this gable end indicated its former position. A similar cement ridge line on the southern gable end also suggested that there was once a lean-to at this end of the house.

Surviving patches of painted lime plaster on the internal walls of the house provided rare insight into the domiciliary life of the building before its abandonment.

The archaeological watching brief monitored the excavation of foundation trenches for a new extension at the northern gable end of the house. The footprint of the proposed extension overlay that of the building shown on the 2nd edition Ordnance Survey map. The excavation of the foundation trenches in this area revealed little evidence of the former building aside from a narrow strip of loose, angular stones which may be a surviving remnant of a wall. No other deposits or features of archaeological significance were observed.

This watching brief also monitored the excavation of three test pits in the adjoining field, north-west of the house. The purpose of these test pits was to estimate the depth of topsoil in the field in advance of the installation of a sewage pipe, soakaway and septic tank. These excavations revealed a depth of up to 0.25m of rich loamy topsoil overlying shallow subsoil on shattered mudstone bedrock some 0.60m below ground level. No features or deposits of archaeological significance were observed.

Despite the results of the watching brief, significant archaeology may still survive within the vicinity, including surviving remains of the earlier "Crundale Mill" that once existed north of the existing house.

1 INTRODUCTION

1.1 Project Proposals and Commission

- 1.1.1 DAT Archaeological Services were commissioned by Mr Jack Tree of Tree and Sons Ltd to provide an archaeological scheme of works during the restoration of Crundale Mill, Pembrokeshire (SM9811 17827; Figure 1).
- 1.1.2 The requirement for the archaeological works had been placed on the development as a condition on planning permission (15/0948/PA) following advice from the archaeological advisor's to the planning authority; Dyfed Archaeological Trust-Development Management (DAT-DM). The condition stated that: *"No development shall take place until the applicant, or their agents or successors in title, has secured the implementation of a programme of archaeological work in accordance with a written scheme of investigation which has been submitted by the applicant and approved in writing by the local planning authority"*.
- 1.1.3 The condition was placed on the development proposals as the site is recorded on the Historic Environment Record as a post-medieval mill (PRN 17768). The site was visited as part of a medieval and post-medieval mills project funded by Cadw in 2013 (Ings 2014) which demonstrated the site was not actually a mill, but a rural dwelling (small house). The date of the construction of the building is not known, but three phases of construction were identified during the site visit.
- 1.1.4 The archaeological advice letter that was issued by DAT-DM to Pembrokeshire County Council in response to the application stated that a written scheme of investigation (WSI) should include *a programme of building recording prior to the commencement of the development and thereafter on an intermittent basis if new information comes to light*. It emphasised that recording should definitely be undertaken following the removal of ivy from the walls. It also requested that an archaeological watching brief should be carried out when the foundations for the proposed extension were dug.
- 1.1.5 Prior to the building recording the structure had been made safe. The roof structure was pressing against the outer walls of the building and causing them to become displaced, and therefore had to be dismantled. The internal floors of the building and the brick chimneys were also removed at this time, again for safety reasons. The eastern wall of the building was demolished and new concrete lintels were inserted over doorways and windows on the main western façade (again for safety reasons). Limited rebuilding of the walls between the upper and lower floor windows had been undertaken.
- 1.1.6 Following a site visit on 11/11/2015 it was evident that the majority of the shell of the building still remained clearly visible. All vegetation had been removed from the exterior of the walls. All floors, internal wall divisions and the majority of the plasterwork had been removed from within the building, but fireplaces survived.

1.2 Scope of the Project

- 1.2.1 A written scheme of investigation (WSI) for a watching brief and historic building recording was prepared by DAT Archaeological Services prior to the commencement of the works, which was approved by DAT-DM in their capacity as advisors to the local authority (Appendix 1). The project objectives were:

- Provision of a written scheme of investigation to outline the methodology by which DAT Archaeological Services will undertake the historic building recording and archaeological watching brief;
 - To carry out a scheme of historic building recording at the site;
 - To monitor ground works in order to identify the presence/absence of any archaeological deposits;
 - To establish the character, extent and date range for any archaeological deposits to be affected by the proposed groundworks;
 - To appropriately investigate and record any archaeological deposits to be affected by the groundwork and;
 - To produce an archive and report of any results.
- 1.2.2 The overall work was summarised as: *"A scheme of historic building recording and archaeological attendance during groundworks associated with the construction of a new extension to the northern end of Crundale Mill, Pembrokeshire, which are likely to expose, damage or destroy archaeological remains. Appropriate investigation and recording of any such remains will be undertaken if revealed. A report and archive of the results of the works will also be prepared."*

1.3 Report Outline

- 1.3.1 This report describes the location of the site along with its archaeological background, and provides a summary and discussion of the results of the archaeological building recording and watching brief.

1.4 Abbreviations

- 1.4.1 Sites recorded on the regional Historic Environment Record (HER) are identified by their Primary Record Number (PRN) and located by their National Grid Reference (NGR). Sites recorded on the National Monument Record (NMR) held by the Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW) are identified by their National Primary Record Number (NPRN). Scheduled Ancient Monument (SAM). Altitude is expressed to Ordnance Datum (OD). References to cartographic and documentary evidence and published sources will be given in brackets throughout the text, with full details listed in the sources section at the rear of the report.

1.5 Illustrations

- 1.5.1 Photographic images are to be found within the report. Printed map extracts are not necessarily reproduced to their original scale.

1.6 Timeline

- 1.6.1 The following timeline is used within this report to give date ranges for the various archaeological periods that may be mentioned within the text.

Period	Approximate date	
Palaeolithic –	c.450,000 – 10,000 BC	Prehistoric
Mesolithic –	c. 10,000 – 4400 BC	
Neolithic –	c.4400 – 2300 BC	
Bronze Age –	c.2300 – 700 BC	
Iron Age –	c.700 BC – AD 43	
Roman (Romano-British) Period –	AD 43 – c. AD 410	Historic
Post-Roman / Early Medieval Period –	c. AD 410 – AD 1086	
medieval Period –	1086 – 1536	
post-medieval Period ¹ –	1536 – 1750	
Industrial Period –	1750 – 1899	
modern –	20 th century onwards	

Table 1: Archaeological and historical timeline for Wales

¹ The post-medieval and industrial periods are combined as the post-medieval period on the Regional Historic Environment Record as held by Dyfed Archaeological Trust

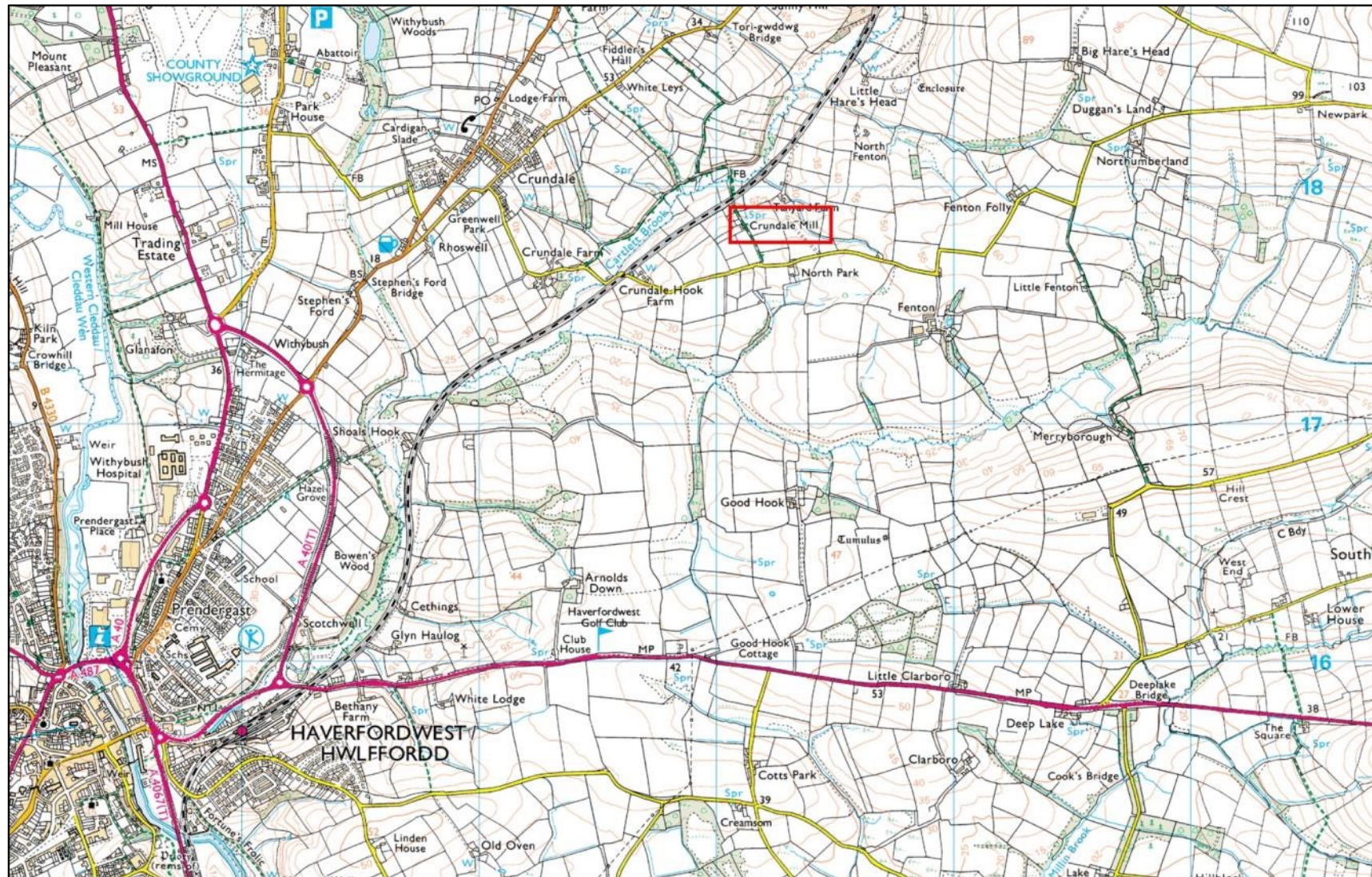


Figure 1: Map extract showing the location of Crundale Mill (outlined in red rectangle).

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2 SITE LOCATION AND TOPOGRAPHY

- 2.1 Crundale Mill is located approximately 1km south-east of the village of Crundale, and some 3.2km north-east of the nearest town of Haverfordwest, Pembrokeshire (SM9811217827). It is an isolated house situated within a discrete, small parcel of land, set within a patchwork of arable and pastoral fields (Figure 2). The house is positioned parallel to a trackway that runs northwards crossing a main railway line and the Carlett Brook some 200m north of the house. The house itself is orientated northwest-southeast.
- 2.2 The underlying solid geology is mudstones of the Slade and Redhill Formation. These are Sedimentary bedrock which formed approximately 444 to 451 million years ago in the Ordovician Period (Source: British Geological Survey).
- 2.3 The site comprises the remains of the house and an adjoining rectangular parcel of arable land situated to the north-west of the house; separated by post and wire fencing. The majority of the external and internal elevations were supported by scaffolding and the building was roofless.



Photo 1: The building remains of Crundale Mill farm (PRN 17768) at the start of the watching brief and building recording. View facing west (DAT Photo 110325_0044)

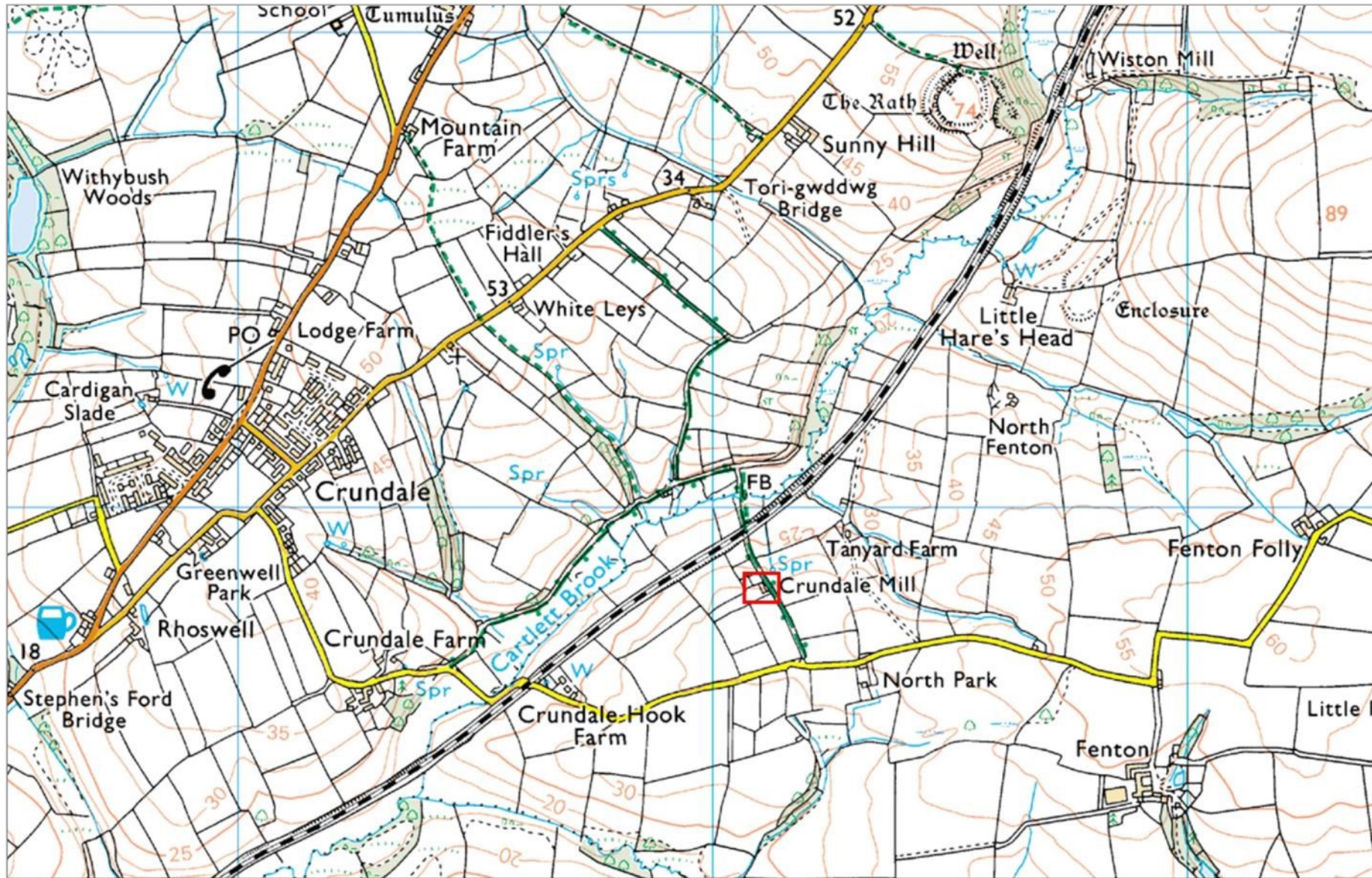


Figure 2: Map showing Crundale Mill (outlined in red square) in relation to the village of Crundale and the surrounding farmsteads.

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3 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

3.1 Archaeological Background

- 3.1.1 Crundale Mill (PRN 17768) was visited and recorded in 2013 as part of a Cadw funded regional survey of historic mills and mill sites within the old county of Dyfed. Upon visiting, it was evident that the building represented the remains of a house rather than a mill. Historic mapping suggests that there may once have been a mill north of the house, and within close proximity to the Cartlett Brook; an obvious water supply. During the visit to the house, a possible silted leat was identified running along the contour of the slope above the brook, north of the house, although no structural remains were identified.
- 3.1.2 Crundale Mill is neither a scheduled monument nor a listed building, and no further information regarding the site could be obtained from the Royal Commission on Ancient and Historical Monuments of Wales (RCAHMW) or National Library of Wales.
- 3.1.3 The Dyfed Historic Environment Record (HER) was searched for known archaeological sites within 250m of Crundale Mill house (PRN 17768; Figure 3). Only one record was returned within this search radius; an aircraft crash site is recorded some 220m south of the house (PRN 105196; NPRN 515396). The remains of this aircraft are designated as a Protected Place under the Protection of Military Remains Act 1986. The act makes it an offence to interfere with the wreckage of any crashed, sunken or stranded military aircraft without a licence.

3.2 Historic Mapping

Wiston Parish tithe map c.1844

- 3.2.1 Crundale Mill is located just within the northern boundary of Wiston parish. The tithe map of 1844 shows the field systems and the track which transverses north-south through the area (Figure 4). Crundale Mill house is absent for it has yet to be built. The present house is located in the narrow, linear field orientated northeast-southwest and annotated as field number "1008". This is listed in the accompanying apportionment as a "Burgage" plot. This field appears to be a relic of a medieval field system where tenants of the narrow plots of land, often associated with a house, paid rent to the lord of the manor. There is a small, rectangular building shown towards the northern end of the field which is perpendicular to the burgage field and running parallel with the track. The accompanying apportionments for this field ("1010") states that this building is Crundale "Homestead". A junction in the track opposite this building shows a second lane heading north-east.

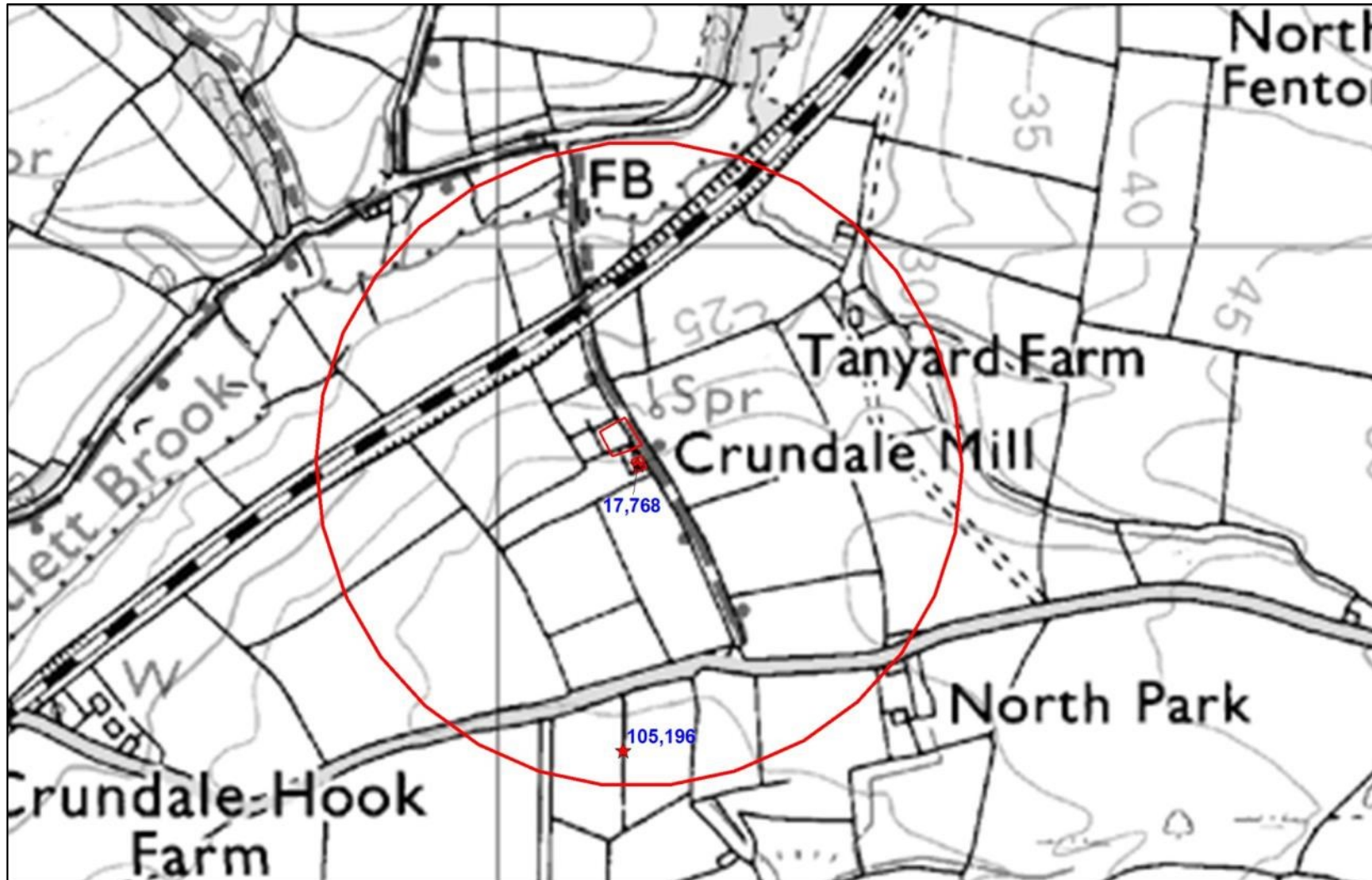


Figure 3: The location of the aircraft crash site (PRN 105196) recorded within 250m of Crundale Mill house (PRN 17768). The red circle shows the 250m search radius.

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Figure 4: An extract of the 1844 Wiston parish tithe map showing the field systems and trackways prior to the construction of Crundale Mill (the red rectangles show the location of the current 'Crundale Mill' house and adjoining field).

1st edition Pembrokeshire Ordnance Survey map of 1889, 1 "2500

3.2.2 The 1st edition 1:2500 Ordnance Survey map of 1889 shows that a number of buildings have now been built in the fields to the north of the current house which are labelled 'Crundale Mill' (Figure 5). This collection of buildings is shown situated around a linear yard with a broadly T-shaped dwelling presumed to be the mill building or even a house. The landscape has developed significantly since the tithe map with the introduction of the Great Western Railway to the north of the mill. The lane shown on the tithe map as heading towards the north-east is no longer depicted. Instead, its former course is preserved in field boundaries and a well is depicted in the north-western corner of the field opposite the mill. This appears to be the closest water source to the mill and outbuildings. There is no indication as to mill's function nor of the power source but it seems unlikely, given its locality, that water was the main source.

3.2.3 Most field boundaries appear unchanged from those depicted on the earlier tithe map.

2nd edition Pembrokeshire Ordnance Survey map of 1907, 1 "2500

3.2.4 The 2nd edition 1:2500 Pembrokeshire Ordnance Survey map of 1907 shows significant changes in the years following the 1st edition map (Figure 6). The buildings comprising the earlier 'Crundale Mill' labelled as such on the 1st edition map, have all but gone save for a small building in the south-western corner of the former farmyard. A new building with an

adjoining pen is shown parallel to this small building on the other side of a field boundary.

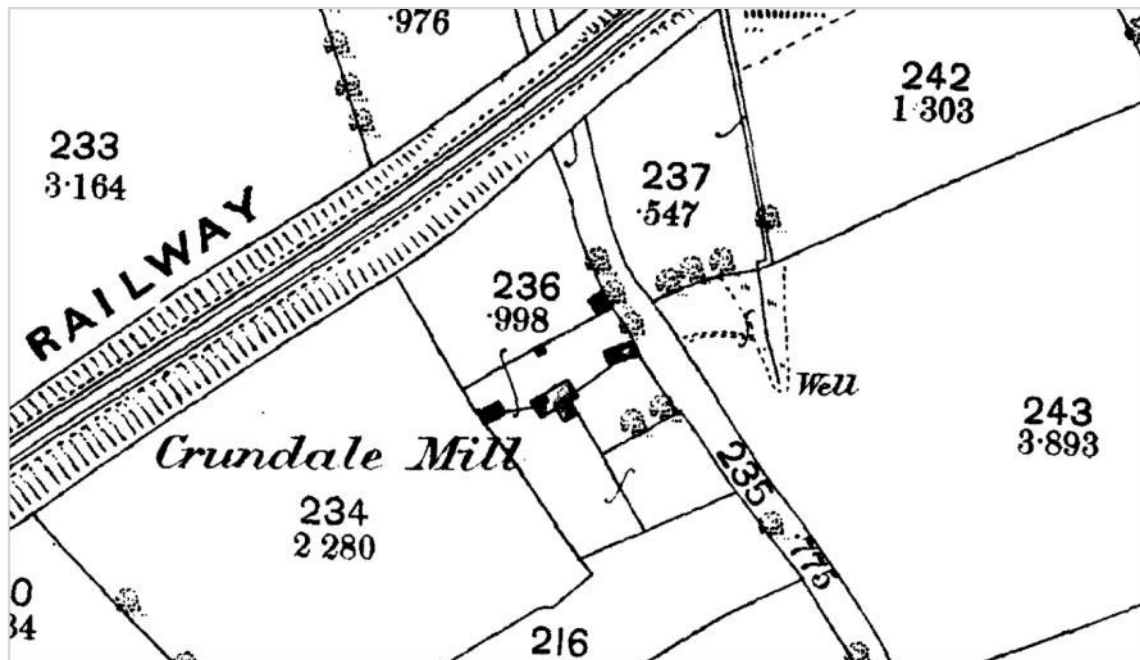


Figure 5: An extract of the 1899 1st edition, 1" 2500 Ordnance survey map showing the numerous buildings associated with the 19th-century Crundale Mill.

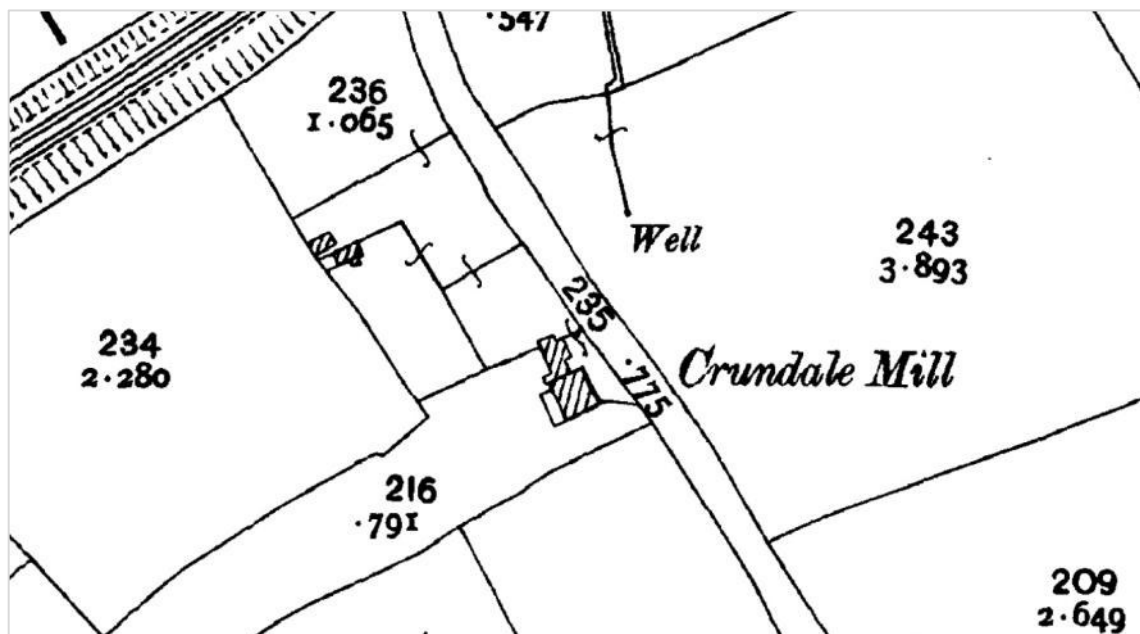


Figure 6: An extract of the 1907 2nd edition, 1" 2500 Ordnance Survey map showing the 20th-century layout of Crundale Mill which comprises two buildings.

3.2.5 The current building, now known as Crundale Mill, has now been constructed and is labelled 'Crundale Mill' on the map. The buildings are situated within the eastern end of the former burgage field. A narrow, irregular shaped building is shown adjoining the northern gable end of the main dwelling.

4 HISTORIC BUILDING RECORDING

4.1 Methodology

- 4.1.1 The historic building recording scheme has been undertaken to a Level 2 standard as defined in the English Heritage '*Understanding Historic Buildings: A Guide to Good Recording Practice*' (2006). This level of recording is described thus:

Level 2 is a ***descriptive record***, made in circumstances similar to those of Level 1 (basic photographic survey) but when more information is needed. It may be made of a building which is judged not to require any fuller record, or it may serve to gather data for a wider project. Both the exterior and the interior will be viewed, described and photographed. The record will present conclusions regarding the building's development and use, but will not discuss in detail the evidence on which these conclusions are based. A plan and sometimes other drawings may be made but the drawn record will normally not be comprehensive and may be tailored to the scope of a wider project.

- 4.1.2 Based on the Level 2 record as defined in the English Heritage guidelines (2006) the following have been undertaken:

Drawn Record

- Annotated sketch plan and elevation drawings noting rough dimensions.

Photographic Record

- A general view of the building (in its wider setting or landscape).
- The building's external and internal appearance giving an overall impression of its size and shape.
- Photographs of salient features of the building.

Written Record

- The building's precise location, as a National Grid reference and in address form.
- A note of any statutory designation (listing, scheduling or conservation area). Non-statutory designations (historic parks and gardens registers, local lists etc).
- The date of the record, the name of the recorder and the location of the project archive.
- A summary of the building's type and/or purpose, historically and at present, its materials and possible date(s). The names of architects, builders, patrons and owners have been given if known.

- 4.1.3 The building recording was undertaken by Menna Bell on the 19th January 2017.

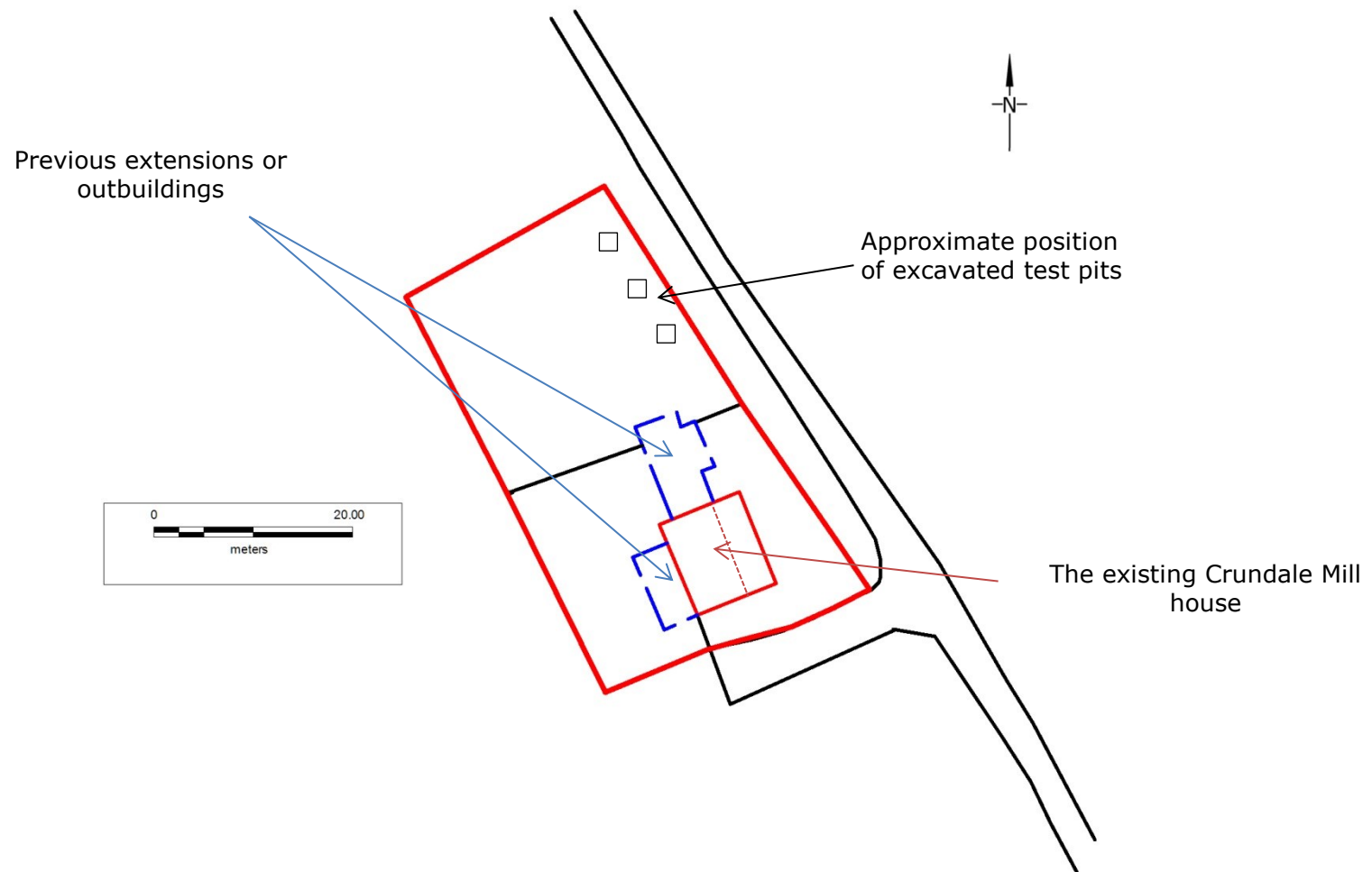


Figure 7: Plan of the existing footprint of Crundale Mill house showing the approximate position of the test pits excavated in field to the north.

4.2 General Building Description

- 4.2.1 Crundale Mill is a stone built, lime mortared, single phase, two celled, late nineteenth/early twentieth-century domestic dwelling. It is orientated northwest-southeast and has a south-west facing aspect (Figure 7). The building comprises two cells orientated longitudinally. The western cell is the main component of the house and is two storied whilst the eastern cell (at the rear of the house) is narrower and single storied. The building was photographed during the site visit in 2013, prior to the commencement of the restoration works. At that time the roof was largely intact despite its covering of dense vegetation (Photo 2). The roof has since been dismantled along with the red brick chimney stacks and the vegetation cleared. The majority of the walls survive to their full height (Photo 3).
- 4.2.2 The general building fabric was a lime mortared, roughly dressed and randomly coursed mudstone with alternating upright and flat-lying quoins and red brick voussoirs above the windows and doors. The lime mortar contained coarse aggregates, the most numerous being fragments of coal although occasional pieces of glazed ceramic were also noted.



Photo 2: The rear of Crundale Mill prior to the start of restoration work in 2013
(DAT Photo DAT2014-5.193)

- 4.2.3 The building was roughly square in plan and measured approximately 9.6m wide and 9.8m long. The front elevation stood at approximately 5.5m to the eaves and the gables were approximately 9.3m in height. The rear elevation had been partly rebuilt and stood at approximately 2.8m to the eaves. The building retained its original fireplaces which survived at ground and first floor levels at both gables ends. A stone built bread oven with a corbeled flue survived in the south-western corner of the rear cell of the building (Photo 4).



Photo 3: The rear of Crundale Mill during the building recording in 2017
(DAT Photo 110325-0044)



Photo 4: The stone built oven situated at the rear of the building. 2m scale
(DAT Photo 110325_0010).

4.3 External elevations

- 4.3.1 The front, south-west facing elevation comprised a central ground floor doorway flanked by mirroring single ground and first floor windows. The façade was not entirely symmetrical for the openings were slightly offset with the margin between the northern gable end and windows being the greatest (Photo 5). The wall fabric here was in good condition with only isolated instances of vegetation invasion. The red brick voussoirs of the door way and ground floor windows were intact and what appears to be the original, worn slate threshold remained in the doorway. The ground floor windows sills had been replaced with concrete sills. Elsewhere, the sills of the first floor windows were absent and concrete lintels had been installed.



Photo 5: The front external, south-west facing elevation of Crundale Mill
(DAT Photo 110325_0001)

- 4.3.2 The north facing gable end survived to full height, was in reasonably good condition and largely free from ivy. The rear wall elevation had all but collapsed and was in the process of being rebuilt (Photo 6). From the surviving masonry it was possible to infer that there was no join between the east and western cells of the building indicating that they are contemporaneous in construction. The lower half of the gable end had been repointed almost in a "slobbered" technique, using cement. A portion of a cement ridge line around half way up the gable indicated the former presence of a structure/building adjoining this wall, which may be the building shown on the 2nd edition Ordnance Survey map of 1907 (Figure 6). The extent of the repointing corresponded to the height of this ridge line. The cement ridge line suggests that the adjoining building was single storied.



Photo 6: The external elevation of the north facing gable end wall
(DAT Photo 110325_0003)

- 4.3.3 The east facing external elevation had been rebuilt to the window lintel level in a manner which was sympathetic with the original building fabric (Photo 7). The course work was random but appeared to be pointed with cement and a single, vertical course of breezeblocks replaced the internal face of the wall. This elevation now included a number of openings comprising a near central single door flanked by a single window at the southern end of the building and two single windows at the northern end. The southern single window opening is an original opening although this had been partially infilled during the restoration works (Photo 8). It is not known whether the two windows at the northern end of the wall are where original openings existed.
- 4.3.4 The south facing external elevation was intact but it was largely obscured by scaffolding and construction materials (Photo 9). The upper half of the elevation was rendered in thick cement, at the bottom of which was a cast ridgeline of a now absent corrugated lean-to roof. The wall below this ridge line was un-rendered but had been mostly repointed. It was not possible to closely inspect the wall to identify the mortar. This wall looked to be in good condition save for ivy growing up the centre and south-eastern corner of the wall.



Photo 7: The east facing (and partially rebuilt) external elevation of Crundale Mill (DAT Photo 110325_0005)



Photo 8: The infilled and partially rebuilt single window at the south-eastern end of the east facing elevation of Crundale Mill (DAT Photo 110325_0006).



Photo 9: The south facing external gable end of Crundale Mill
(DAT Photo 110325_0043).

4.4 Internal Elevations

- 4.4.1 The internal elevations of the building retained many of their original features and fixtures within the building, although the floors and staircase had been removed. There were scaffolding platforms, construction materials and general building debris in both cells of the building as restoration work continued on the internal elevations. This did cause some obstruction to the photography but it was still possible to record the salient attributes of the building.
- 4.4.2 The east facing internal elevation (i.e. the front of the house) revealed that the window openings were splayed and that the original lintels had been replaced by steel ones (Photo 10). First floor beam slots were visible above the window lintels and the walls were un-rendered bare stonework save for a small patch of render and painted plaster at the northern end of the first floor. It is likely that the internal walls were rendered or lime washed.
- 4.4.3 The northern gable end retained its original ground and first floor fireplaces. Large areas of internal rendering and painted plaster work on both the ground and first floor levels survived (Photo 11). At the northern end the ground floor fireplace consisted of a cast iron range set within a flat faced, square sided stone chimney breast which extended up to the first floor level. The eastern side of the top of the chimney breast appeared to be corbeled and the flue was lined with firebricks (Photo 12). The mantelpiece was made from carved wood which was nailed to the chimney breast.



Photo 10: The east facing internal elevation of Crundale Mill
(DAT Photo 110325_0030)



Photo 11: The internal face of the northern gable end with its *in situ* fireplaces
(DAT Photo 110325_0035)

- 4.4.4 The first floor fireplace was situated in line with the western edge of the ground floor chimney breast and comprised a single, narrow iron grill set within a fire bricked lined flue (offset from the ground floor flue). There appeared to be a thin iron lintel upon which sat brick voussoirs (Photo 13).



Photo 12: The iron range, firebrick lined flue and corbeled chimney breast of the ground floor fireplace in the northern gable end (DAT Photo 110325_0018)



Photo 13: The single, brick lined first floor fireplace in the northern gable end (DAT Photo 110325_0023)

- 4.4.5 The west facing elevation of the central partition wall between the two cells of the building was featureless save for beam slots and a central door which gave access to the rear of the building (Photo 14). The door appeared to retain its original wooden lintel and worn shale stone threshold. A portion of the wooden door frame also survived. There were no visible traces of rendering or plaster on this wall and it was in very good condition.
- 4.4.6 The north facing internal elevation of the southern gable end also retained its ground and first floor fireplaces (Photo 15). Little evidence of any internal render at ground floor level survived but the wall at first floor level appeared cement rendered.



Photo 14: The west facing internal elevation of the partition wall in Crundale Mill and its central door and first floor beam slots (DAT Photo 110325_0027)

- 4.4.7 The southern ground floor fireplace comprised a modest, brick lined flue with red brick voussoirs and an inserted row of red bricks forming a lintel (Photos 15 & 16). The first floor fireplace was slightly bigger and offset from centre with a red brick lined flue (Photos 15 & 17). Unlike the other fireplaces, this seemed to have been a bit haphazardly constructed (or a late modification) for the bricks were crudely pointed with cement. It was possible to identify red brick voussoirs beneath peeling rendering on which patches of red plaster survived. A simple wooden mantelpiece and surround had been placed over the render.



Photo 15: The internal elevation of the southern gable end with its two, *in situ* fireplaces (DAT Photo 110325_0024)



Photo 16: The ground floor fireplace in the southern gable end
(DAT Photo 110325_0025)

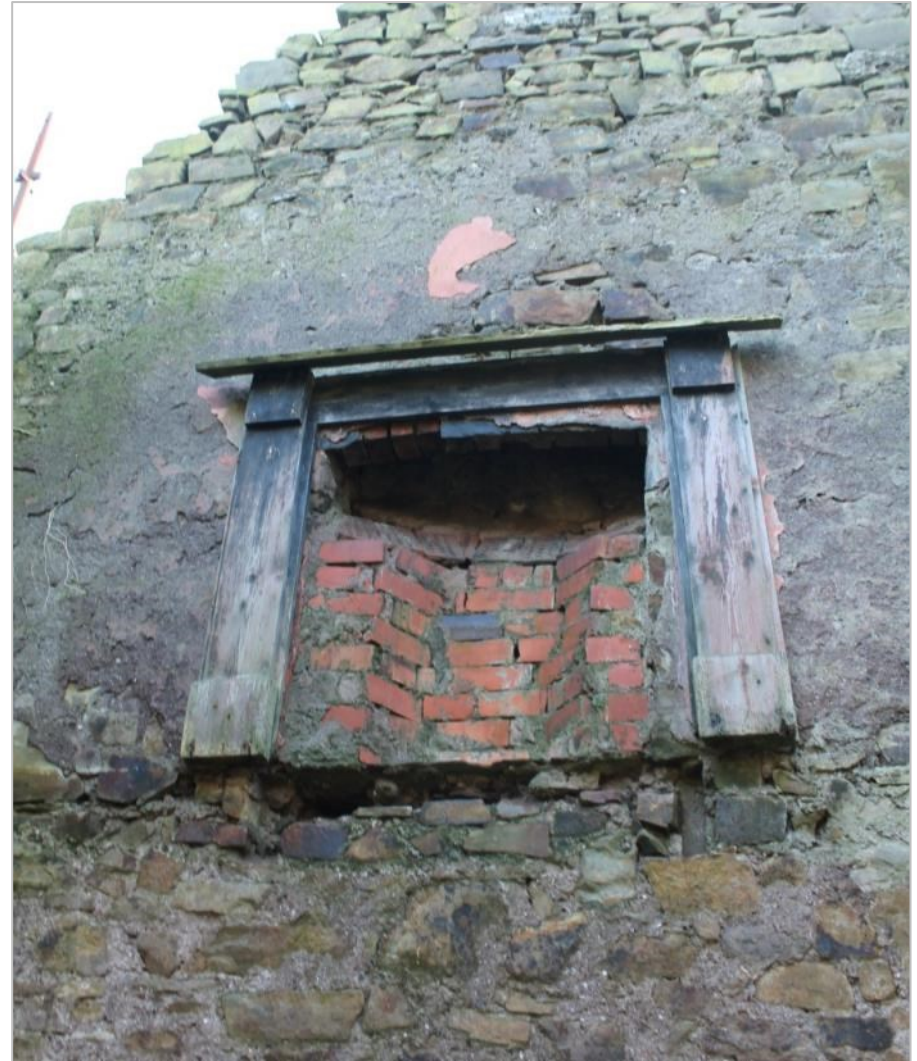


Photo 17: The first floor fireplace in the southern gable end
(DAT Photo 110325_0026)

- 4.4.8 The first floor beam slots visible in the east facing internal elevation of the partition wall indicated the ceiling level at the rear of the building (Photo 18). There were remnants of lime render and white painted plaster on the lower half of the wall, and a large patch of possible cement render near the northern end at first floor level. The central doorway also retained its wooden lintel.



Photo 18: The east facing internal elevation of the partition wall
(DAT Photo 110325_0014).

- 4.4.9 As previously described, the northern wall and eastern walls in this eastern cell of the building were in the process of being rebuilt with breeze blocks faced with the stone rubble (Photo 18).
- 4.4.10 The north facing internal elevation remained intact and an oven had been built into its western corner (Photo 19). The oven was stone built, lime mortared, with a timber lintel, was rectangular in plan and had a corbelled flue built into the wall. Its red brick chimney stack photographed during the site visit in 2013 (Photo 1) had long since been dismantled. The eastern side of the oven was stepped to accommodate an internal niche and scars on the lime washed internal walls of the oven indicated the absence of a fire hood in the south-western corner of the oven. The precise function of this oven is unknown but it is contemporaneous with the building. If the range in the northern gable had served as the main oven, it is possible that this oven had a more singular use; perhaps for bread making.



Photo 19: The oven in the south-western corner at the rear.
(DAT Photo 110325_0010)

5 WATCHING BRIEF

5.1 Methodology

- 5.1.1 This watching brief was undertaken in accordance with the Chartered Institute of Archaeologists' (CIfA) *Standard and Guidance for an Archaeological Watching Brief* (2014).
- 5.1.2 A written scheme of investigation was prepared by DAT Archaeological Services detailing the proposed archaeological works, which was approved by DAT-Development Managers in their capacity as advisors to the local planning authority.
- 5.1.3 Recording of all archaeological features or deposits conformed to best current professional practice and was carried out in accordance with the Recording Manual² used by DAT Archaeological Services. A written, drawn and photographic record was maintained throughout this watching brief, a summary of which is presented in Appendix 2. All contexts encountered during this watching brief were recorded and assigned a unique context number. These numbers are enclosed in brackets in the following text.
- 5.1.4 Excavation of the foundation trenches was undertaken by a tracked, mini excavator equipped with a 0.6m wide toothed bucket. All archaeological deposits revealed during the groundworks were examined and recorded to an appropriate level.

5.2 Timetabling of Fieldwork

- 5.2.1 This watching brief took on the 30th January 2017 during damp and cold weather conditions.

5.3 Post-Fieldwork Reporting and Archiving

- 5.3.1 All data recovered during the fieldwork will be collated into a site archive structured in accordance with specifications in *Archaeological Archives: a guide to best practice in creation, compilation, transfer and curation* (Brown 2011), and the procedures recommended by the National Monuments Record, Aberystwyth.
- 5.3.2 The results of the fieldwork have been assessed in local, regional and wider contexts. The report includes a desk-based research element to ensure that the site is placed within its wider archaeological context.

² DAT Archaeological Services have adopted the Recording Manual developed by English Heritage Centre for Archaeology. A copy will be available on-site for inspection if required.

6 RESULTS AND DISCUSSION

- 6.1 This watching brief monitored the mechanical topsoil strip and excavation of the foundation trenches for a new extension situated at the northern gable end of Crundale Mill (Photo 20). The mechanical excavation of three small test pits in the adjoining field was also monitored.



Photo 20: The stripped footprint of the proposed extension at the northern gable end of Crundale Mill (DAT Photo 110325_0048)

- 6.2 The footprint of the proposed new extension is more or less situated on the footprint of the demolished extension/building shown on the 2nd edition OS map (Figures 7 & 8) attached to the northern gable end. The topsoil strip removed humic soil; building rubble and debris (101) to reveal an orange-brown gravelly subsoil (102). A strip of loose angular stones along the western edge of the area were removed during the stripping and were most likely the last remnants of a wall trench (103) for the former building.

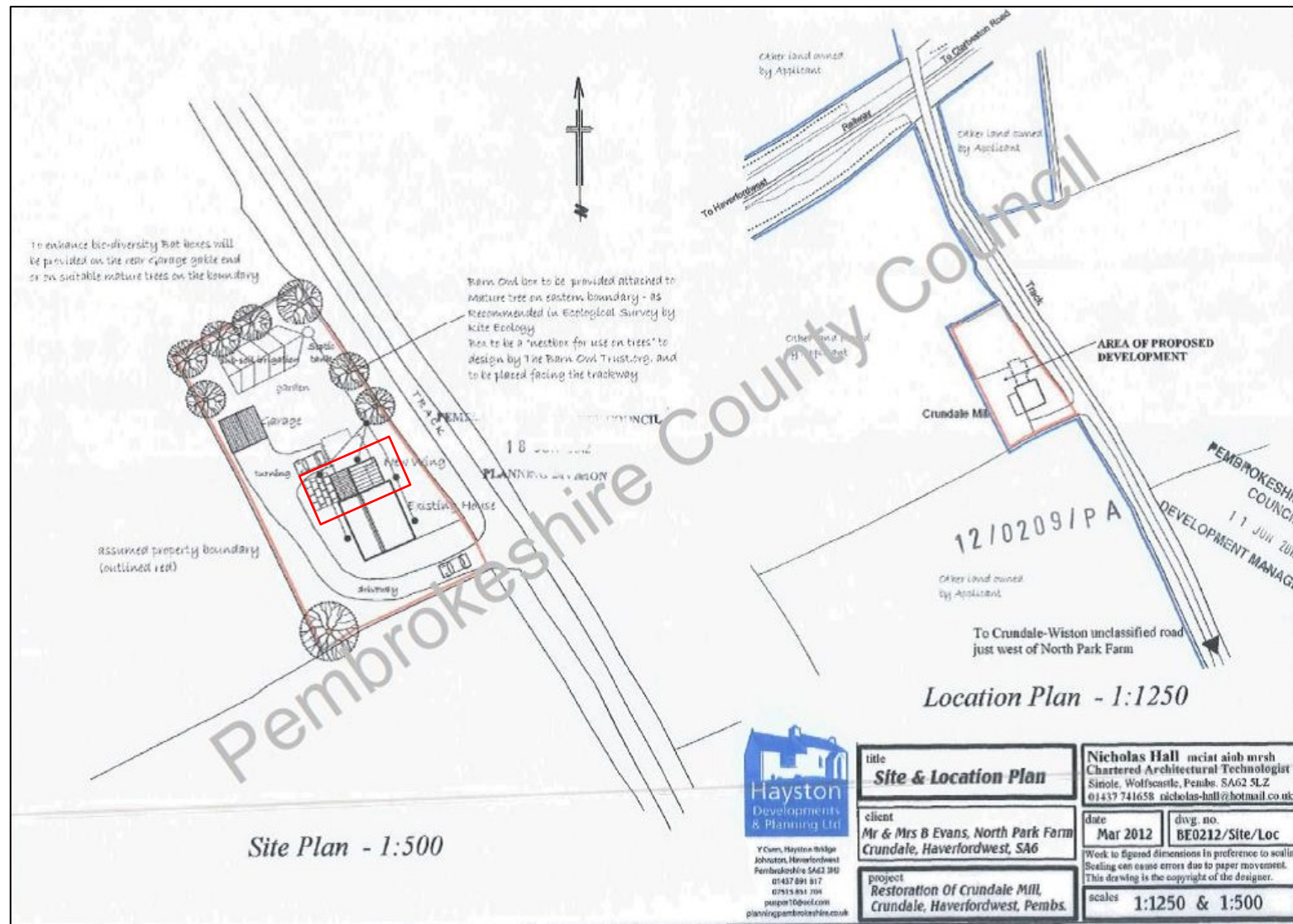


Figure 8: The proposed development plans for Crundale Mill showing the location of the new extension (outlined in red) at the northern end of the building (courtesy of Hayston Developments & Planning Ltd).

- 6.2 Excavation for the foundations of the proposed extension comprised a "U"-shaped trench to the north of the northern gable end. The completed trench measured approximately 4.5m wide and 8m long. The trench was approximately 0.6m wide and between 0.4m and 0.5m deep. Additional shallow drainage trenches did not exceed 0.2m in depth (Photos 21 & 22).



Photo 21: The eastern extent of the foundation and drainage trenches at the northern end of Crundale Mill (DAT Photo 110325_0064)

- 6.3 Orange-brown gravelly subsoil (102) varying between 0.2m and 0.3m in thickness, overlay bright yellow, shattered mudstone bedrock (104) (Photo 22). No features or archaeological deposits were observed in this area. There was scant evidence of the former building or structure seen on historic OS maps and the humic topsoil indicated that this area had been cleared in the recent past. Furthermore, there was a very large spoil heap in front of the house which could comprise demolition material from the former building.
- 6.4 Three test pits were dug in the small field adjacent to the north of the house (Figure 7) to assess the depth of topsoil in advance of an installation of a sewage pipe, soakaway and septic tank in this area. The test pits were located along the north-eastern field boundary, around 1.5m in from the hedge and measured between 1.3m and 1.6m long and 0.6m and 1.1m wide (Photo 24). The depth of each pit varied between 0.6m and 0.85m in depth. Within the test pits a sequence of soils was revealed that comprised from the top rich loamy topsoil up to 0.25m thick (105) above orange-yellow subsoil (102). Shattered mudstone bedrock (104) was revealed around a depth of 0.6m (Photo 25). No deposits or features of archaeological significance were observed in the test pits.



Photo 22: The western extent of the foundation and drainage trenches at the northern end of Crundale Mill (DAT Photo 110325_0065)



Photo 23: The large spoil heap in front of the house (DAT Photo 110325_0055)



Photo 24: The three test pits in the field north of the house (DAT Photo 110325_0069)



Photo 25: A sample section of the sequence of soils revealed in the test pits in the field adjacent to the house (DAT Photo 110325_0066)

7 CONCLUSIONS

- 7.1 A Level 2 descriptive building recording was successfully undertaken at Crundale Mill in advance of its full restoration. The roof of the building had been removed prior to the building recording in an effort to stabilize the building
- 7.2 The building recording confirmed that Crundale Mill is not a mill but is a single phased late nineteenth/early twentieth-century domestic house. Despite its dereliction, the building retained many of its original features. A fine cast iron range survived in the northern gable end and indeed the building retained all of its ground floor and first floor fireplaces. A stone built oven, likely to be a bread oven also survived to the rear of the house.
- 7.3 Historic mapping depicted an adjoining building or extension at the northern gable end of the house. This is no longer extant but a cement ridge line on the external face of this gable end was evidence of its former position. A cement ridge line on the southern gable end indicated that there was once another possible lean-to extension at this end of the house.
- 7.4 Surviving patches of painted lime plaster on the internal walls of the house provided rare insights into the domiciliary life of the building before its abandonment.
- 7.5 The archaeological watching brief monitored the excavation of foundation trenches for a new extension at the northern gable of the house. The footprint of the proposed extension overlay that of the demolished building/extension shown on the 2nd edition Ordnance Survey map. The excavation of the foundation trenches in this area revealed that the area had already been subjected to groundworks in the past and scant evidence was found of the former building aside from a narrow strip of loose, angular stones which may have been a surviving remnant of what was once a wall. No other deposits or features of archaeological significance were observed during these excavations.
- 7.6 This watching brief also monitored the excavation of three test pits in the adjoining field, north-west of the house. The purpose of these test pits was to assess the depths of topsoil in the field in advance of the installation of a sewage pipe, soakaway and septic tank. No features or deposits of archaeological significance were observed.
- 7.7 Whilst the results of this watching brief are negative, it does not negate the possibility of significant archaeology surviving within the vicinity. Indeed, the historic mapping indicates that surviving remains of the earlier "Crundale Mill" and its associated features may still be present north of the present Crundale Mill house, closer towards the Carlett Brook which flows northeast-southwest some 200m to the north.

8. ACKNOWLEDGEMENTS

- 8.1 Fieldwork and reporting was undertaken by Menna Bell. The author would like to thank Richard Tree and his groundsmen for their assistance.

9. SOURCES

Published

British Geological Survey: <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>
(Accessed February 2017)

Unpublished

Ings, M 2014 *Medieval & early post-medieval mills*. A threat related assessment 2012-14, DAT unpublished report 2014/7

Cartographic

Wiston tithe map c.1844

Ordnance Survey; Pembrokeshire 1st edition 1:2500 1889

Ordnance Survey; Pembrokeshire 2nd edition 1:2500 1907

Database

Dyfed Archaeological Trust Historic Environment Record, housed with Dyfed Archaeological Trust in The Corner House, Llandeilo, Carmarthenshire, SA19 6AE

RCAHMW Coflein Database: -<http://www.coflein.gov.uk/>

Cof Cymru - National Historic Assets of Wales

<http://cadw.gov.wales/historicenvironment/recordsv1/cof-cymru/?lang=en>

APPENDIX I

**CRUNDALE MILL, CRUNDALE, PEMBROKESHIRE:
PLANNING APPLICATION NO: NO: 15/0948/PA
WRITTEN SCHEME OF INVESTIGATION FOR
ARCHAEOLOGICAL WATCHING BRIEF AND BUILDING RECORDING**

INTRODUCTION

This written scheme of investigation (WSI) has been prepared by DAT Archaeological Services in response to a request from Mr Jack Tree of Tree And Sons Ltd to provide an archaeological scheme of works for a watching brief and building recording at the site of Crundale Mill, Crundale, Pembrokeshire (NGR SM 98112 17827). The proposals are for the renovation of the building to a dwelling.

The requirement for the archaeological works has been placed on the development as a condition on planning permission (15/0948/PA) following advice from the archaeological advisor's to the planning authority (Planning Services of the Dyfed Archaeological Trust). The condition states: *"No development shall take place until the applicant, or their agents or successors in title, has secured the implementation of a programme of archaeological work in accordance with a written scheme of investigation which has been submitted by the applicant and approved in writing by the local planning authority"*.

The condition has been placed on the development proposals as the site is recorded on the Historic Environment Record as a post-medieval mill (PRN 17768). The site was visited as part of a medieval and post-medieval mills project funded by Cadw in 2012 which demonstrated the site was not actually a mill, but a rural dwelling (small house). The date of the construction of the building is not known, but three phases of construction were identified during the site visit. The building is still of significance, a rare survivor of a rural building relatively untouched by modern renovations, although was in a dilapidated state at the time of the site visit in 2012.

The archaeological advice letter that was issued by the Planning Services section of Dyfed Archaeological Trust to Pembrokeshire County Council in response to the application stated that the written scheme of investigation (WSI or scheme of archaeological works) should include *a programme of building recording prior to the commencement of the development and thereafter on an intermittent basis if new information comes to light*. It emphasised that recording should definitely be undertaken following the removal of ivy from the walls. It also requested that an archaeological watching brief should be carried out when the foundations for the extension are dug (dependent on the results of the building recording).

The recording of the building prior to the commencement of the development was not possible. It is understood that the roof of the structure had collapsed or was in a very precarious state after last winter and was dismantled for safety by the site owner. The failed roof structure had also been pressing against the outer walls of the building and causing them to become displaced. The internal floors of the building and brick chimneys were also removed at this time, again for safety. Tree and Sons have now been commissioned to undertake the restoration works and been working at the site for a short time, the main work undertaken has been the dismantling of the eastern wall of the building which had failed and putting in new concrete lintels over the doorways and windows on the main western façade (again for safety reasons). Limited rebuilding of the walls between the upper and lower floor windows has also been undertaken.

Following a site visit on 11/11/2015 it was evident that although some works had been undertaken to the structure and scaffolding was present on its western façade, the majority of the shell of the building still remains clearly visible. All

vegetation had been removed from the exterior of the walls. All floors, internal wall divisions and the majority of the plasterwork had been removed from within the building, but fireplaces remain, including the remains of a bread oven in the southeastern part of the structure. A good record of the building and information on its development will still be possible.



Photo 1: Western façade of the building showing front door and flanking windows at ground and first floor level



Photo 2: Eastern façade of the building, where some dismantling and rebuilding of the wall has been undertaken



Photo 3: View north within main part of building showing ground and first floor fireplaces



Photo 4: View south within main part of building showing ground and first floor fireplaces



Photo 5: Remains of larger fireplace built into eastern part of building (southwestern corner) with remains of bread oven

This written scheme of investigation outlines the methodology through which DAT Archaeological Services would undertake a scheme of building recording and an archaeological watching brief during ground works at the site, which have the potential to expose, damage or destroy archaeological remains. This document has been prepared for the client and is specifically prepared for DAT Archaeological Services to undertake the required archaeological works. The WSI cannot be used by any third party.

The written scheme of investigation is in accordance with the *Standard and Guidance for and Archaeological Watching Brief* (Chartered Institute for Archaeologists (CIfA), 2014) and *Standard and guidance for the archaeological investigation and recording of standing buildings and structures* (CIfA 2014).

DAT Archaeological Services has considerable experience of this type of project and always operates to best professional practice. DAT Archaeological Services is the contractual arm of Dyfed Archaeological Trust that has its own Health and Safety Policy, and all works are covered by appropriate Employer's Liability and Public Liability Insurances. Copies of all are available on request.

Dyfed Archaeological Trust is a CIfA Registered Organisation.

All staff are CSCS registered.

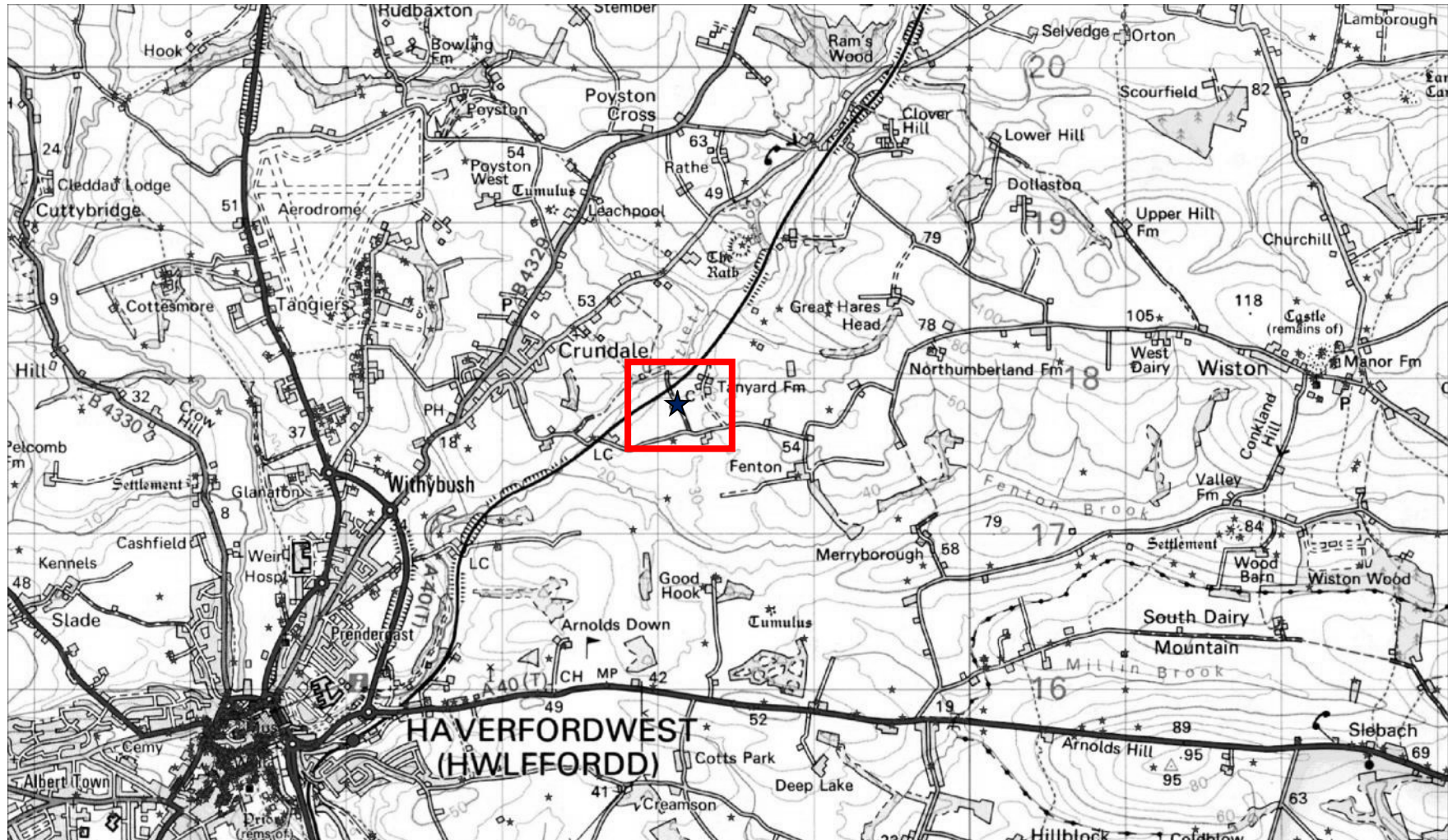


Figure 1: Plan showing the location of Crundale Mill (Blue star in red box)

Reproduced from the Ordnance Survey 1:50,000 scale Landranger Map with the permission of The Controller of Her Majesty's Stationery Office, © Crown Copyright Dyfed Archaeological Trust, The Shire Hall, Carmarthen Street, Llandeilo, Carmarthenshire SA19 6AF. Licence No. 100020930

1. WATCHING BRIEF

- 1.1 The definition of archaeological watching brief, taken from the Chartered Institute for Archaeologists Standards and Guidance: for Archaeological Watching Briefs (CIfA S&G: AWB) is 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.
- 1.2 The purpose of a watching brief, as laid down in the CIfA S&G AWB is:
- 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.*
- 1.3 This document provides a scheme of works for: **A scheme of historic building recording and archaeological attendance during ground works associated with the construction of a new extension to the northern end of Crundale Mill, Crundale, Pembrokeshire which are likely to expose, damage or destroy archaeological remains. Appropriate investigation and recording of any such remains will be undertaken if revealed. A report and archive of the results of the works will be prepared.**

2. PROJECT OBJECTIVES

- 2.1 Provision of a written scheme of investigation to outline the methodology by which DAT Archaeological Services will undertake the historic building recording and archaeological watching brief;
- 2.2 To carry out a scheme of historic building recording at the site;
- 2.3 To monitor ground works in order to identify the presence/absence of any archaeological deposits;
- 2.4 To establish the character, extent and date range for any archaeological deposits to be affected by the proposed ground works;
- 2.5 To appropriately investigate and record any archaeological deposits to be affected by the ground works; and
- 2.6 To produce an archive and report of any results.

3. HISTORIC BUILDING RECORDING

- 3.1 The historic building recording scheme would be undertaken to a Level 2 standard as defined in the English Heritage 'Understanding Historic Buildings: A Guide to Good Recording Practice' (2006). This level of recording is described thus:
- Level 2 is a **descriptive record**, made in circumstances similar to those of Level 1 (basic photographic survey) but when more information is needed. It may be made of a building which is judged not to require any fuller record, or it may serve to gather data for a wider project. Both the exterior and the interior will be viewed, described and photographed. The record will present conclusions regarding the building's development and use, but will not discuss in detail the

evidence on which these conclusions are based. A plan and sometimes other drawings may be made but the drawn record will normally not be comprehensive and may be tailored to the scope of a wider project.

- 3.2 To supplement the on-site survey a review of information held at the DAT HER and online sources will be undertaken. The on-site survey will then complete the relevant tasks outlined below, where possible, to ensure that the record is completed to the Level 2 guidelines, building on the known information. Only photos taken during this survey will be included within the site archive and report, but copies of plans and details recorded previously may be used, if permission is given.
- 3.3 Based on the Level 2 record as defined in the English Heritage guidelines (2006) the following will be undertaken:

Drawn Record

- Sketched plan, section, elevation or detail drawings (if a more thorough drawn record is not made). Sketches may be roughly dimensioned.
- A site plan, typically at 1:500 or 1:1250, relating the building to other structures and to related topographical and landscape features.

Photographic Record

- A general view or views of the building (in its wider setting or landscape).
- The building's external appearance. Typically a series of oblique views will show all external elevations of the building, and give an overall impression of its size and shape.
- The overall appearance of the principal rooms and circulation areas. The approach will be similar to that outlined in 2 above.

Written Record

- The building's precise location, as a National Grid reference and in address form.
- A note of any statutory designation (listing, scheduling or conservation area). Non-statutory designations (historic parks and gardens registers, local lists etc) may be added.
- The date of the record, the name(s) of the recorder(s) and, if an archive has been created, its location.
- A summary of the building's type or purpose, historically and at present, its materials and possible date(s). The names of architects, builders, patrons and owners should be given if known.

4. FIELDWORK

- 4.1 The watching brief would entail an archaeologist being present during all ground works where there is a potential for archaeological remains to be exposed, damaged or destroyed. This will take place during initial ground reduction within the area of the northern extension and for drainage and a septic tank. Further observation of the excavation of foundation may also be necessary in the event that significant archaeological deposits are revealed during the initial groundworks.
- 4.2 It is essential coordination between the site contractor's and archaeologist is established at the outset to avoid any potential disturbance to archaeology without an archaeologist being present, or unnecessary visits to the site when works are being carried out that do not require the presence of an archaeologist.

- 4.3 Adequate time must be made available to the visiting archaeologist to ensure that appropriate recording can be undertaken of any archaeological features or deposits exposed during ground works.
- 4.4 Recording of all archaeological features or deposits will conform to best current professional practice and be carried out in accordance with the Recording Manual³ used by DAT Archaeological Services. Significant archaeological features or deposits will be drawn at a suitable scale (no less than 1:20) and photographed in an appropriate format.
- 4.5 All archaeologically significant finds will be retained and, where possible, related to the contexts from which they derived. Finds will be temporarily stored by DAT Archaeological Services in stable conditions. All finds, except those deemed to be Treasure, will remain the property of the landowner.
- 4.6 Under the 1996 Treasure Act, "treasure" can be summarised as:
- Any object other than a coin containing at least 10% gold or silver and at least 300 years old;
 - Any prehistoric assemblage of base metal;
 - Coins found together which contain 10% gold or silver (but no single coins) and groups of at least 10 coins of other metals, provided they are at least 300 years old;
 - Any object found associated with treasure except unworked natural objects; and
 - Any object which would
- 4.7 In the event that unforeseen archaeological discoveries are made during the development, or that archaeological remains of high significance are exposed, DAT Archaeological Services shall have the power to halt any ground works and shall inform the site agent/project manager and the curatorial officer, and prepare a written statement with plan detailing the archaeological evidence. Following assessment of the archaeological remains by the curatorial officer, DAT Archaeological Services shall, if required, implement on behalf of the Client a contingency scheme for salvage excavation of affected archaeological features. In these instances it would be necessary to employ extra resources to record such features to an appropriate standard.
- 4.8 In the very unlikely event that human remains are encountered, the District Coroner's Office and the Police will be notified immediately. All human remains will, where possible, be left *in situ*. If preservation *in situ* is not possible all statutory permissions will be obtained in writing before removal begins.

5. POST-FIELDWORK REPORTING AND ARCHIVING

- 5.1 All data recovered during the fieldwork will be collated into a site archive structured in accordance with the specifications in *Archaeological Archives: a guide to best practice in creation, compilation, transfer and curation* (Brown 2007), and the procedures recommended by the National Monuments Record, Aberystwyth.
- 5.2 The results of the fieldwork will be assessed in local, regional and wider contexts. The report will include a desk-based research element to ensure that the site is placed within its wider archaeological context. A report that is fully representative of the results of the fieldwork will be prepared and four copies will be sent to the client for dissemination to all relevant parties.

³ DAT Archaeological Services have adopted the Recording Manual developed by English Heritage Centre for Archaeology. A copy will be available on-site for inspection if required.

- 5.3 A summary of the project results, excluding any confidential information, may be prepared for wider dissemination (e.g. Archaeology in Wales and special interest and period-specific journals).
- 5.4 The project archive, including all artefacts and ecofacts (excepting those which may be deemed to be Treasure) will be deposited with an appropriate body following agreement with the landowner.
- 5.5 A copy of the final report will be deposited with the regional HER within six months of the completion of the project.

6. STAFF

- 6.1 This project will be managed by James Meek, Head of DAT Archaeological Services.
- 6.2 The watching brief and building recording will be undertaken by a member of the DAT Archaeological Services' team.

7. MONITORING

- 7.1 The fieldwork may need to be monitored by the archaeological advisors to the planning authority and the Head of DAT Archaeological Services, who should be provided access to the site at any time during the watching brief works.

8. HEALTH AND SAFETY

- 8.1 All DAT Archaeological Services staff are CSCS⁴ registered.
- 8.2 DAT Archaeological Services will carry out a health and safety risk assessment to ensure that all potential risks are minimised.
- 8.3 All relevant health and safety regulations must be followed.
- 8.4 All site inductions, H&S procedures and site rules of the site contractor will be made known to DAT Archaeological Services staff prior to them commencing work on-site.
- 8.5 Safety helmets, safety boots and high visibility vests are to be used by all site personnel as necessary. The site contractors will make all archaeological staff aware of any other PPE⁵ that may be required and provide them. Archaeological staff must not enter any area where there is a considered to be a health and safety risk that has not or is not being appropriately mitigated against.
- 8.6 DAT Archaeological Services staff must ensure that their presence on site is communicated to all relevant site staff, especially machine operators.

⁴ *Construction Skills Certification Scheme (Health and Safety Tested)*

⁵ *Personal Protection Equipment*

APPENDIX II

Project Archive

Project Number: FS15_068

ERN: 110325

5 x Watching Brief Form

144 X Digital photographs; Film Number 110325; 72 x JPEGs, 72 x TIFFs

1x Photo catalogue

Context Register

Context	Trench	Description
101	Foundations	Humic soil and rubble debris
102	Foundations	Orangey brown, clayey mudstone gravel subsoil
103	Foundations	Stirp of loose angular stones
104	Foundations	Shattered mudstone "rab"/natural bedrock
105	Test pits	Rich, loamy topsoil

CRUNDALE MILL, CRUNDALE, PEMBROKESHIRE ARCHAEOLOGICAL WATCHING BRIEF AND BUILDING RECORDING

DYFED ARCHAEOLOGICAL TRUST

**RHIF YR ADRODDIAD / REPORT NO. 2017/12
RHIF Y DIGWYLLIAD / EVENT RECORD NOS 108836 & 110325**

Gorffennaf 2017
July 2017

Paratowyd yr adroddiad hwn gan / This report has been prepared by:

Menna Bell

Swydd / Position: Archaeologist DAT Archaeological Services

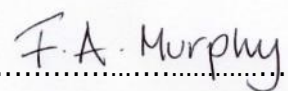
Llofnod / Signature  Date: 26/07/2017

Mae'r adroddiad hwn wedi ei gael yn gywir a derbyn sêl bendith
This report has been checked and approved by

Fran Murphy

ar ran Ymddiriedolaeth Archaeolegol Dyfed Cyf.
on behalf of Dyfed Archaeological Trust Ltd.

Swydd / Position: Project Manager DAT Archaeological Services

Llofnod / Signature  Date: 17/11/2017

*Yn unol â'n nôd i roddi gwasanaeth o ansawdd uchel, croesawn unrhyw sylwadau sydd
gennych ar gynnwys neu strwythur yr adroddiad hwn*

*As part of our desire to provide a quality service we would welcome any comments you
may have on the content or presentation of this report*



