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New Mills, Launceston, Cornwall Historic building record



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Historic building record

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The Project Manager was Nigel Thomas.

The views and recommendations expressed in this report are those of Historic Environment Projects and are presented in good faith on the basis of professional judgement and on information currently available.

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Cover illustration

View of New Mills, November 2012

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Abbreviations

CRO

	•
EH	English Heritage
LIED	Communally and the Tales of Cailly Historia E

Cornwall County Record Office

HER Cornwall and the Isles of Scilly Historic Environment Record

HE Historic Environment, Cornwall Council

LSR Launceston Steam Railway NGR National Grid Reference

OS Ordnance Survey

PRN Primary Record Number in Cornwall HER

RIC Royal Institution of Cornwall

1 Summary

Plans to convert a former corn mill at New Mills, Launceston to residential use prompted a study of the historical development of this site. The place-name of New Mills is first documented in the 15th century and a mill was mapped here on the parish Tithe Map in the 1840s. Later mapping indicates that the mill has an altered plan; the physical structure also has evidence of a major rebuild including windows and doors with brick arches and jambs. Timberwork from an earlier (but probably post-medieval mill building has been reused as lintels above the present doorways and windows. The surviving waterwheel was manufactured locally and has a date of 1905, the probable date of the mill's redevelopment. A pigsty built in similar style immediately opposite the mill is probably of the same period. The group of buildings (including the mill, its adjoining shippons and loft/barn, plus the pigsty), appear to represent an Edwardian phase of redevelopment of the New Mills farmstead. Much of this development is likely to have been a response to the arrival of the North Cornwall Railway, whose route passed immediately north of the mill and the development of the transport link will have dramatically changed this valley.

In the later 20th century the gearing to the millstones was removed and only one set of stones now remains *in situ*. At this time the countershaft drive from the waterwheel was converted to power a dynamo and a vacuum pump for a milking machine. These were used within the adjacent shippon, which was adapted as a milking parlour. In recent years the mill has housed a small farming museum within the New Mills Farm Park attraction.

New Mills, Launceston: Historic building record

2 Introduction

2.1 Project background

A former corn mill (Grade II listed since 1989) is extant in the hamlet at New Mills, west of Launceston. Although largely redundant for many years, the mill building has formed a central part of New Mills Farm Park, and the surviving machinery has been displayed as part of a small farming museum.

Planning and listed building consents were applied for conversion of the building to residential use (refs PA11/01103 and PA11/01108). Consents were granted by Cornwall Council in April 2011 and were subject to conditions. Condition 9 states:

'No development shall take place within the site until the applicant has secured and implemented a programme of archaeological work in accordance with a written scheme of investigation to be submitted by the applicant and approved in writing by the Local Planning Authority in consultation with the County Archaeologist.

Reason: To ensure that the existing character of the Listed Building is retained and in accordance with Policy ECN12 of the North Cornwall District Local Plan 1999.'

In April 2012 Trewin Design Partnership, approached Historic Environment Projects on behalf of the owners, with a view to satisfying planning condition 9. No planning brief was available but correspondence with the local Historic Environment Planning Advice Officer and Conservation Officer indicated that at a minimum, a Level 2 (descriptive and photographic) survey would be required (see English Heritage 2006). Following further correspondence with the owners of the mill in October 2012 the present study was agreed and initiated. This report summarises the results.

As a first stage of work, a Written Scheme of Investigation (WSI) was prepared, and approval was sought from the local planners before commencement of the site investigation. The WSI is reproduced in this report as Appendix 1.

2.2 Aims

The principal aim of the study was to gain a better understanding of the historic development of the mill. The principal objective was to obtain an archive quality historic building record of the site prior to alterations.

2.3 Methods

The intended working methods and project monitoring arrangements are set out in the WSI. The study comprised a review of historic sources, a site visit to record the mill, followed by archiving with results presented in a report (this document).

2.3.1 Desk-based assessment

During the desk-based assessment, historical databases and archives were consulted in order to obtain information about the history of the site and the structures and features that were likely to survive. The main sources consulted were:

- Heritage Gateway online historic environment database (including listed building records)
- Early maps (see Section 12.1)
- Modern maps
- Census returns
- Trade directories

A full list of sources consulted appears in the References (Section 9).

2.3.2 Fieldwork

A site visit was undertaken on 14th February 2012 to record the mill by photography and description. 35mm monochrome photography was used to provide an archive record, as this medium has a proven quality for longevity of storage. Colour photographs were also taken with a digital SLR camera (with a resolution of 8 million pixels).

Descriptive notes and annotations were added to copies of existing architectural drawings. A few additional measurements were also made on site to record machinery and other details.

2.3.3 Post-fieldwork

Following the site visit the records were analysed and prepared for long-term storage. Monochrome photographs were catalogued according to HER standards.

Digital photographs were stored in the Historic Environment folders on the Council's server network. The images were processed where required using Adobe Photoshop software and a selection appears in this report.

Drawings were processed and labelled using AutoCAD software.

This report was compiled to summarise the results of the project.

3 Location and setting

New Mills lies in the valley of the River Kensey north west of Launceston, within St Stephen-by-Launceston parish (Fig 1). The mill itself is situated at NGR SX 29897 85064, on a south facing valley side at approximately 90m above sea level. The river itself flows from west to east to the south of the mill site, and a leat supplying water to the mill follows the contour upstream. The tailrace from the mill flows south from the building for a short distance before the water rejoins the river.

The bedrock geology in the Kensey valley comprises mudstone, siltstone and sandstone of undifferentiated Upper Devonian rocks (BGS 1:625000 mapping).

4 Designations

4.1 National

New Mills became a Grade II listed building in 1989 and its description reads:

'Mill and adjoining barn. Probably early C19. Stone rubble with brick dressings and granite quoins. Rag slate roof with hipped end on left and gable end on right.

Lower range attached on right with half hipped right hand end.

Plan: Mill of rectangular plan, built into bank on rear. Overshot water wheel on left hand end originally driving two pairs of millstones. Hurst frame full height of meal floor. Stone floor and loft floor. Adjoining outbuilding on right of overall rectangular plan with shippon on ground floor and loft above.

Exterior: 3 storey mill and 2 storey outbuilding adjoining on right. The mill has a roughly symmetrical facade with C19 plank double doors in centre flanked by C20 window on left and a two light casement on right. Two 2-light casements on first floor and gabled full dormers lighting loft floor. Lower range adjoining on right has central shippon door flanked by two sashes. Loft door above entrance flanked by two C19 one-light casements. Metal water wheel on left hand side of mill dated 1905. T. COOME + SON, LAUNCESTON. Complete launder and leat.

Interior: Timber hurst frame along rear of mill, extending full height of meal floor.

Some of the machinery survives with remains of two pairs of mill-stones. Stone floor filled with hay bales at time of inspection. Sack hoist appears to have been removed. Adjoining outbuilding has slate uprights dividing stalls on ground floor.'

4.2 Regional/county

The Kensey valley including New Mills is part of an Area of Great Landscape Value.

4.3 Local

No local designations appear to apply to this site.

5 Site history

The place-name of New Mills in St Stephen-by-Launceston is first documented in 1474 (Gover 1948). The settlement is not shown on either John Norden's map (c1580) or Joel Gascoyne's survey (1698). 'Newmill' is shown on Thomas Martyn's Map of Cornwall of 1748 and depicted with a house symbol, indicating a single dwelling (Martyn used circles to denote hamlets or groups of houses). Early spellings of the place-name vary, with Newmill, New Mill and New Mills all appearing.

Records of the Werrington Estate held at Cornwall Record Office include an assignment of a lease dated 13 July 1711 between Stephen Brown, the miller and his son John. The lease also records that 'New Mills and appurtenances', had been leased by Maynard 1668-9 (CRO ref WW/489).

The OS One Inch map of c1809 shows 'New Mill', as well as a building within a plot on the south side of the River Kensey, presumably the thatched cottage now called Alder Park (Fig 2).

The Tithe Map for St Stephen-by-Launceston (surveyed in 1839) shows a hamlet at New Mills (Fig 3). At the time the accompanying Apportionment recorded the mill merely as a 'House and Garden'. Manganese floors were recorded on the flat ground immediately west of the wheel-pit. At this time the landowner was John King Lethbridge and the occupiers were recorded as Richard Maunder, Solomon Paynter, John Kent and Joseph Carpenter.

Census returns for 1841 indicate that New Mills was occupied by the Pethick family:

```
'New Mill,1,William Pethick,20,,Miller,In county,
,,Selome Pethick,,25,,In county,
,,Eliza Pethick,,4,,In county,
,,William Pethick,2,,,In county,
,,William Eggins,25,,Male Servant,In county,
,,Richard Cory,15,,Male Servant,In county,
```

Other people living at New Mills included Benjamin Blith, aged 40, whose occupation was recorded as a Manganese Miner.

By 1851 the Pethick family comprised eight people, and also had a house servant, two servant millers and a loading boy.

The Pethicks last appeared at New Mills in 1861, as by 1871 another family had taken over:

```
`65,New Mills,1,John Carter,Head,M,59,,Miller,Sutcombe Devon,,
,,,Harriet Carter,Wife,M,,59,,Bradworthy Devon,,
,,,Samuel Carter,Son,U,21,,Millers Son,Sutcombe Devon,,
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```
,,,,Siles Carter,Son,U,18,,Millers Son,Parkham Devon,,
,,,Matilda Carter,Dau,U,,16,Dairymaid,Parkham Devon,,
,,,Helena A Carter,Dau,,,13,Housemaid,Parkham Devon,,
,,,Edward Toll,Servnt,,12,,"Horseman, Millers Servnt",Pyworthy Devon,,
```

In 1868 an abstract of title of Alex[ander] Hen[ry] Campbell mentions water grist mills at New Mills together with Manganese floors 1794-1853 (CRO ref X507/11).

In 1878 John Carter was also recorded as the miller at New Mills in Harrods Directory of Cornwall.

By the late 1870s when the OS first mapped the area at 25 inch scale a corn mill was recorded at New Mills. This survey shows a building with a shallow L-shaped footprint, shorter than the present plan (Fig 4).

The Carter family were still at New Mills in 1881:

```
`18,Newmills,1,John Carter,Head,W,68,,Miller & Farmer,Sutcombe Devon,,
,,,Samuel Carter,Son,M,33,,Miller,Sutcombe Devon,,
,,,Selina Carter,Dau,M,,27,Housekeeper,Advent Cornwall,,
,,,Helena A. Carter,Dau,S,,22,Housekeeper,Parkham Devon,,
,,,Phillip Robbins,Servnt,S,14,,Servant (Farm) (Indoor),St Thomas Cornwall,,
,,,John Philp,Servnt,,12,,Servant (Farm) (In Door),St Thomas Cornwall,,
,,,Burtie Carter,Grnson,,10m,,,St Stephens Cornwall,,
```

John Carter is recorded as the miller in Kelly's Directory of 1883. The Directory also mentions in the general description of St Stephens parish that 'the soil is clay and loam; subsoil shelfy (sic) slate. The chief crops are wheat, barley and oats.' It suggests the local mills were kept busy.

By 1889 there had been a change of occupier at the mill as Kelly's Directory recorded that the miller was John Allan. Allan's family and servants appear in the 1891 Census returns:

```
' 68,New Mills,1,John Allin,Head,M,47,,Farmer & Miller, Employer, Holsworthy Devon,,
,,,,Sarah Allin,Wife,M,,45,,,Tetcott Devon,,
,,,John Allin,Son,S,23,,Miller's Son,,Lawhitton Cornwall,,
,,,,Thomas Allin,Son,S,19,,Miller's Son & Grocer,Employed,Lawhitton Cornwall,,
,,,,Samuel Allin,Son,S,17,,Miller's Son,,Lawhitton Cornwall,,
,,,Emma Allin,Daulaw,M,,23,,,St. Stephens Cornwall,,
,,,Edith Jane Allin,Grddau,S,,2,,,St. Stephens Cornwall,,
,,,Kate Davey,Servnt,S,,25,Domestic Servant,Employed,Lifton Devon,,
,,,Charles Smale,Servnt,S,26,,Farm Servant,,Werrington Devon,,
```

John Allan's entry in Kelly's Directory continues until the 1906 edition.

By c1907 when the OS revisited the area to record the Second Edition large scale survey a major change had occurred as a railway had been constructed on the valley side immediately upslope from the mill (Fig 5). This was the North Cornwall Railway, which had been opened as far as Tresmeer in 1892, and was completed to Padstow in 1899. The road to the west of the mill had also changed with the introduction of the railway bridge and its associated embankments. The mill had also changed footprint from the L-shape of c1880 to the longer rectangular plan that exists today. By this time

a pigsty had also been constructed on the opposite side of the yard in front of the mill.

Interestingly the Kelly's Directories for 1897 and 1902 have the name of Coombe (the name embossed on the waterwheel) as a wheelwright in Newport, Launceston rather than a millwright. A small iron foundry was also operated by the Box family in Newport, so it seems the redevelopment of the mill machinery at New Mills may have been a joint enterprise.

Kelly's Directory of 1910 indicates that John Shute was the miller at New Mills. It seems likely that the re-fitting of the mill in 1905 is associated with the beginning of his association with the site. John Shute continued to be the miller there until at least 1938. Although many older water mills were closed in the middle years of the $20^{\rm th}$ century it appears New Mills continued to be used until after the Second World War as the waterwheel and machinery escaped the wartime demand for scrap metal.

The North Cornwall Railway became part of the Southern Railway in the Grouping of 1923, and as part of British Railways (Southern Region) was closed to traffic between 1966 and 1967 (HER entry). The trackbed from Launceston was reopened as a narrow gauge railway in 1983, and this was extended to New Mills in 1995 (LSR website).

6 Building description

6.1 Plan and plan development

The mill with its adjoining shippon and loosebox form a long rectangular plan, with the mill at the western end. The building range is built into the slope of the lower valley side, so the ground level at the rear is at the first floor height. An old lane, partly cut into the rock face, runs behind the mill (Figs 9, 46 and 48). This lane also provided access along the leat.

The mill itself is of three storeys including its loft and is the higher building within the range (Fig 7). The shippon, situated in the middle of the range, is separately accessed on the ground floor. This originally had three doorways facing the yard but the outer doors, presumably to feeding passages, were later blocked and converted to windows. The loft/barn above the shippon is connected to the first floor of the mill.

A single-storey loosebox is at the eastern end of the range (Fig 8). This has a gable end with a pair of small windows facing the nearby dwelling, although its doorway opens onto the yard.

6.2 Materials

The masonry of the entire range is of slate-stone and quartz-bearing rock, presumably quarried in the locality. Quoins also include occasional pieces of volcanic agglomerate. The stone masonry is coursed or semi-coursed and bedded in lime mortar. Cement-based mortar has also been used for pointing, and the lower part of the west elevation, below the waterwheel, has been completely rendered with cement mortar, as an attempt to waterproof the wall (Fig 10). Different pointing styles are visible in the masonry and the most common style seen is a form of raised pointing, to give an impression of more regular stonework (see Fig 14).

With the exception of the rear doorway of the loft/barn above the shippon (see Fig 12), all doorways and windows have red brick shallow arches and jambs. Most of the brickwork has been over-painted with grey paint. Windows have slate external and internal sills. Many of the openings also have reused timber as lintels, the wood having redundant mortises for earlier floor timbers or partition sockets (see Fig 22).

The doors and windows, together with the raised pointing style, are largely contemporary with the final rebuild of the mill in the early 20th century. Windows are small pane casement designs, with shallow pointed arches and 6 panes per casement (Figs 13 and 14). The mill has double casement windows in the upper floor while the

loft/barn above the shippon has single casements, as does the loosebox. All doors are now painted with heavy tar-based paint. The door into the mill has a traditional double door, the east side also being a split (stable-door) type (Fig 22). It retains all its old lock and latch fittings. The shippon door has vertical slots in the upper part and may have originally had a similar sliding shutter behind ('hit and miss' ventilator).

The roof of the mill is hipped at the west (waterwheel) end (Fig 10) and has softwood A-frame trusses with high collars. The roof covering is rag slate, with red clay ridge tiles. Three small gable dormer windows light the mill loft floor: two in the front elevation and one at the rear. These dormers have slate surrounds to the wooden window frames. A pane of glass substitutes for a slate in the hipped end, to admit additional light.

Above the shippon and loft/barn the roof is half hipped at the east end and the structure and covering is similar to the mill except this part has tie beams as well as collars. The gabled roof of the loosebox has sized slates at the rear but rag slates to the front elevation. This building has brick quoins and the rear quoin bricks have rounded corners.

6.3 Mill

6.3.1 Leat, waterwheel and tailrace

The mill is approached by a leat from the west side, carried along the contour to the head immediately above the mill (Fig 9). Here the water level was controlled by sluices and fed into a launder over the overshot waterwheel. Just upstream from the mill is an overflow channel, which could be used to remove excess water from the leat or, if required, divert the water to enable maintenance of the waterwheel, wheel-pit and tailrace.

The overshot iron waterwheel, made by T Coombe and Son of Launceston, is 4.2m (13.77 feet) diameter and 0.8m (2.62 feet) wide. The shrouds of the wheel bear the name of the maker and also a date of 1905 (Fig 17). The wheel is fed from a short concrete launder, presumably a replacement for an earlier wooden example. Although still operational, the wheel has abundant patching to the buckets. The wheel-pit now appears slightly silted and feeds into a shallow tailrace that allows water to return to the river. A brick-arched bridge with low granite parapets carries the mill and farm access track over the tailrace.

6.3.2 Ground floor

(see Fig 49)

The ground floor of the mill contains the bulk of the remaining mill machinery. At the west end of the building is a large pit-wheel sharing the same axle as the waterwheel outside. The pit-wheel is meshed with a smaller cog on a horizontal countershaft that runs along the rear northwestern part of the mill. This is all that remains of the original mill machinery, as the drive to the millstones, sack hoist and any other ancillary machinery has been removed. A schematic drawing of the mill drive is shown in Fig 51. The countershaft would have originally had a bevelled cog at its east end, meshed to a similar cog (the 'wallower') on a vertical axle. This vertical axle would then have a large spur wheel higher up. The millstones, located on the floor above, would have been driven from underneath by 'stone nuts' or small cogs meshed to the spur wheel. A sack hoist (situated in the loft) is likely to have been driven by belts from the countershaft or perhaps from a crown-wheel attached to the same axle as the wallower and spur wheel.

The gearing and mill machinery was supported by a sturdy timber framework (called a Hurst frame or bridgework) with horizontal timbers running almost the length of the mill measuring up to 340mm ($13\frac{1}{2}$ ") square. A line of three timber piers helps to support the floor at the front of the mill. Incorporation of these piers suggests that

other ancillary machinery was once sited on the floor above, most likely dressing/grading machines for the milled grain.

In the later twentieth century the waterwheel was adapted to power a dynamo and a vacuum pump for a milking machine. These were used in the adjacent shippon, which by that time had become a milking parlour for a small herd of cows kept on the farm. The Crompton dynamo and pump are still extant and are driven from the end of the countershaft by a series of sprockets and chains with stepped up gearing to obtain the necessary increase in axle speed.

Other features visible within the ground floor are a discontinuity in the masonry at the southwest corner, showing that the front wall masonry (from the 1905 rebuild) is an addition. It therefore appears that at least part of the west wall (beside the waterwheel) is a survival from the pre-1905 layout.

Another feature that is likely to be part of the pre-1905 mill is a discontinuity at the northeast corner, where the masonry steps out, perhaps following the original rock face behind the building.

A narrow winder stair, with some treads more recently replaced) leads up to the stones or milling floor at the northeast corner.

Close to the centre of the mill are traces of the sack hoist trap-hatch, visible in the floor above.

In the southeast corner are two stumps of timber in the floor and remains of corresponding horizontal timbers in the front wall. These are clearly part of an inserted feature (as masonry and the floor has been disturbed), perhaps for a low bench or a mounting for an ancillary machine (Fig 26).

6.3.3 First floor

(for plan see Fig 49)

The first floor is well lit by the large pair of windows in the south wall, and another in the rear wall, as this was the most important processing floor within the mill. The predominant feature is a set of surviving millstones, still *in situ* (Figs 29 and 30). These would have originally had a wooden cover and a hopper feed to the centre of the stones, with a chute for the grain supported above (cf Fig 31). A hole for the grain channelled down from the loft above can still be seen in the floorboards (Fig 34). The millstone has a manufacturer's casting in the centre, embossed 'W R DELL & SON MARK LANE LONDON'. Four castings at the perimeter are embossed 'CLARKE & DUNHAM MILLSTONE BALANCE PATENTEES'.

The timber supports for the millstones are visible from underneath and another set of stones was once situated slightly to the east. There is no visible trace on the first floor as later boarding now covers the floor. A surviving trace of the second set of stones is a (now blocked off) hole where the grain was fed through from the loft above (Fig 34).

The trap-hatch for the sack hoist, into the loft above, can also be seen (Figs 27 and 28). Like the hatch in the floor below, this has also been blocked and covered over with boarding.

A small square window at the northwest corner performed an important function when the mill was operational as this was where the water flow reaching the waterwheel was controlled. A vertical timber inside the room and a small hole through the wall beside the window are traces of a lever which once operated a sluice (Fig 29).

Towards the centre of the west wall is a small blocked opening (or recess) close to ceiling height. This is likely to have supported an axle associated with line-shafting elsewhere in the room. There are traces of two line-shafts, one above the line of the millstones towards the rear of the room and another at the front. Iron brackets that

once supported axles can still be seen, one of which is associated with an axle hole through to the neighbouring loft (above the shippon) (Fig 35).

Towards the centre of the east wall is an original wooden winder stairway that emerges in the loft (Fig 24). A wide doorway also connects the mill with the loft above the shippon.

6.3.4 Loft

(See Figs 37, 39-40; for plan see Fig 50)

The mill's loft now contains few features as the sack hoist machinery, as well as its trap hatch in the centre of the floor, has long disappeared. Figure 38 shows sack hoist machinery in place at St Columb and gives some idea of what would have once been in place at New Mills. The tall and hipped roof, with its three dormer windows that light the space, dominates the room.

Short horizontal timbers built into the walls are likely to be supports for a boarded lining, to prevent contamination of the grain. It is likely that as well as sack storage, grain was also stored in open bays, ready to be released by chutes to the millstones on the floor beneath.

Apparently after the corn-mill was disused, the mill loft was reused as a poultry house (Richard Ball, pers comm).

6.4 Shippon

(For plan see Fig 49)

The shippon (originally for housing cattle) was adapted as a milking parlour in the later 20^{th} century and has very few visible features that pre-date this reuse. Originally three doorways accessed the space, most likely the central one for animals and the outer two doorways led into feeding passages. Only the central doorway remains as the others have been converted to windows. This leads into a concrete floored room, with stalls on each side. The walls mostly rendered with cement-based mortar and are painted up to 2 metres high with black paint. There are three bays on each side of the room divided by steel rails; each bay has two concrete troughs and drinkers, making 12 stalls.

Slate dividers for the stalls are mentioned in the listed building description but this seems to be an error as the present arrangement of stalls pre-dates the listing. It is possible that the present concrete floor may conceal traces of an earlier cobbled floor level and earlier stalling arrangements.

6.4.1 Loft

Above the shippon is a former loft/barn, which is accessed either from the first floor of the mill or by a rear doorway. Masonry around the rear doorway is atypical of the rest of the mill complex, as this is the only opening that has stone masonry jambs and a wooden external lintel (rather than brick jambs and shallow brick arch, that are seen elsewhere). It appears that this wall, and a part of the mill masonry at its northeast corner, is a survival from the pre-1905 building.

The front wall of the loft has a central loading doorway with a window to each side (Fig 40). Reused timber is visible in the lintel of the doorway (Fig 39). The west and east walls each have small square sockets built into the masonry, which appear to be putlog (scaffolding) holes.

Machinery was once used in this space (as evidenced by an axle from a line-shaft which entered the room near the northwest corner). As this mill was associated with a farm then this loft is likely to have been a conventional barn, the space being used for mechanical threshing and winnowing when required. Alternatively, ancillary machinery for the milling process may have been sited here.

6.5 Loosebox

The single storey loosebox at the east end is the only part of the complex which has brick quoins, and is clearly part of the 1905 rebuild of the mill (Figs 5 and 49). Both windows have reused timber as interior lintels. Its interior is relatively featureless; it has a concrete floor and concrete block-work divisions. The concrete flooring is at a higher level than the door threshold and may conceal earlier surfaces.

7 Chronology/dating evidence

A combination of map and structural evidence clearly points to a fundamental redevelopment of New Mills between c1880 and c1907 (see Figs 4 and 5); this is borne out by the 1905 date on the waterwheel itself (Fig 16). Parts of the building that appear to survive from the earlier form include part of the rear wall of the loft above the shippon and most likely the base of the rear wall of the mill. It is also likely that a considerable amount of the west wall, adjoining the wheel-pit, is part of the earlier arrangement. The remainder of the building including its masonry, doors, windows, floors and roof all appear to have been renewed.

Although the 1839 Tithe Apportionment only records a 'house and garden' and not corn mill in the earlier 19th century this may be an error, as the accompanying map clearly shows the building and the watercourses for the mill (Fig 3); it appears that these fundamental elements have not changed for many centuries. This evidence is supported by the later 19th century Census Returns and entries in trade directories. The Tithe Map reference to adjoining manganese floors and the 1841 Census Returns entry of a manganese miner living at New Mills is of interest. No physical evidence has been discovered to throw any further light on this aspect of its history.

8 Significance

New Mills is a good example of a rural watermill, where there is evidence of redevelopment of an older building to suit new requirements and capacity. The relationship of the mill and the associated farm is strong, particularly the development of the mill as a commercial building serving outside needs beyond the farmstead. From the 1891 Census John Allan's occupation was given as 'Farmer and Miller'. When the site was redeveloped in 1905 it appears that the operation of the mill was very much intertwined with the adjoining range of farm buildings

Corn mills were once commonplace within the county but the number that survive with sufficient machinery and contents to readily understand the milling process are now extremely rare. Experience of recording other mills within parish or wider studies (such as Herring and Thomas 1993 and Thomas and Buck 1994) indicates there are now perhaps less than ten within Cornwall that retain their leats, waterwheels, gearing, millstones and ancillary contents still intact. Other mills have lost significant elements as redundant waterwheels were removed during wartime scrap metal drives, and other mill buildings have since been converted to residential or other use.

New Mills has fortunately retained its waterwheel and primary mechanism, as well as a working watercourse to drive them, but the geared drive to the original millstones, sack hoist and ancillary machinery such as grading and dressing machines have all long gone. The later 20th century conversion of the waterwheel and countershaft to power an electricity generating plant is of interest in itself.

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9.3 Websites

http://www.heritagegateway.org.uk/gateway/ English Heritage's online database of Sites and Monuments Records, and Listed Buildings

http://www.launcestonsr.co.uk/history.html Launceston Steam Railway history

http://www.newmillsfarmpark.com/ Farm Park website

10 Project archive

The HE project number is 146212

The project's documentary, photographic and drawn archive is housed at the offices of Historic Environment, Cornwall Council, Kennall Building, Old County Hall, Station Road, Truro, TR1 3AY. The contents of this archive are as listed below:

- 1. A project file containing site records and notes, project correspondence and administration.
- 2. Electronic drawings stored in the directory R:\Historic Environment (CAD)\CAD Archive\Sites L\Launceston New Mills HBR
- 3. Black and white photographs archived under the following index numbers: GBP 2265-67
- 4. Digital photographs stored in the directory R:\Historic Environment (Images)\SITES.I-L\Launceston New Mills 2012
- 5. English Heritage/ADS OASIS online reference: cornwall2-138499

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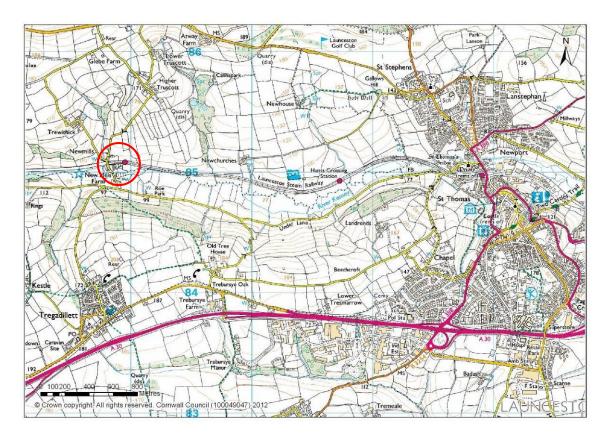


Fig 1 Location map

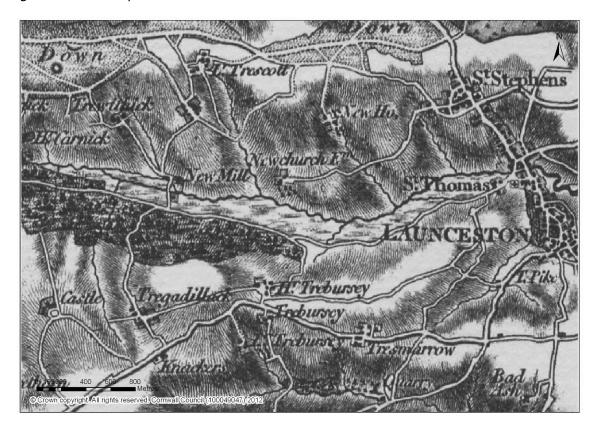


Fig 2 Extract from the c1809 OS One Inch Map

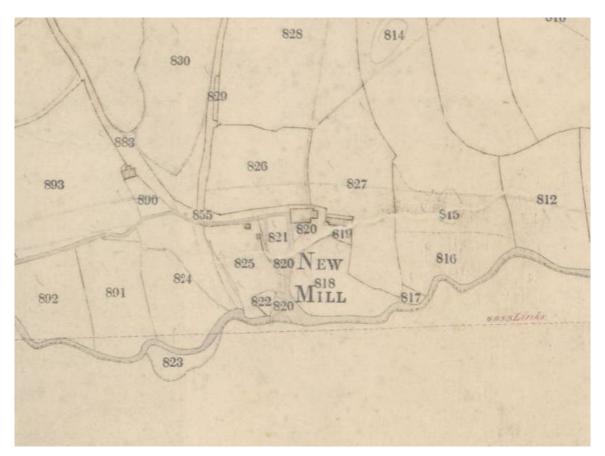


Fig 3 Tithe Map, 1839

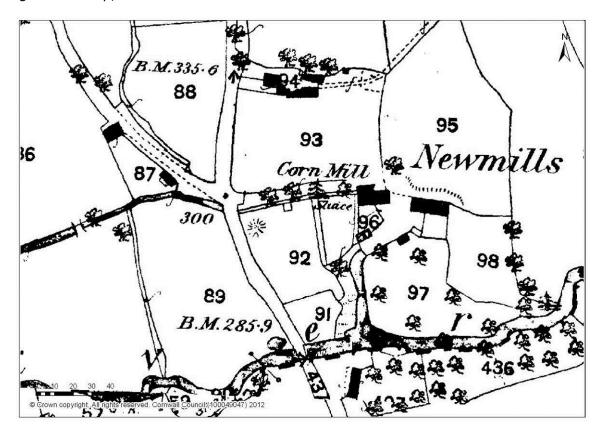


Fig 4 First Edition of the Ordnance Survey 25 Inch Map, c1880

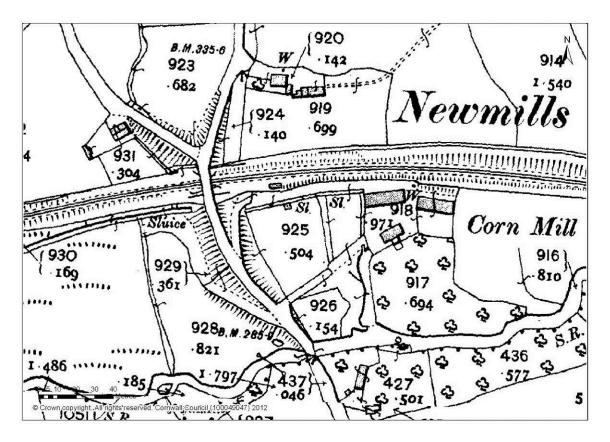


Fig 5 Second Edition of the Ordnance Survey 25 Inch Map, c1907

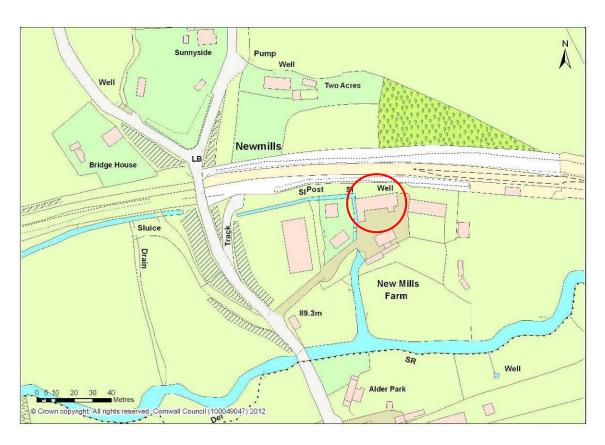


Fig 6 Ordnance Survey digital mapping showing the mill and its environs (2011)



Fig 7 View of New Mills from the south west



Fig 8 Shippon with loft and loosebox attached to New Mills



Fig 9 View from the northwest, showing the leat (to right) approaching the mill



Fig 10 The west elevation of the mill with the launder and waterwheel



Fig 11 Front (south) elevation of the main shippon and loft/barn



Fig 12 Rear doorway into the loft/barn above the shippon

Note the older style stone jambs and timber lintel, and a broken discarded millstone to right



Fig 13 Upper floor window of mill, probably original to the 1905 reconstruction



Fig 14 Loft window above shippon



Fig 15 Waterwheel, wheel-pit and tailrace



Fig 16 Waterwheel shroud, embossed 'T COOMBE & SON MILLWRIGHTS 1905'



Fig 17 Waterwheel shroud, embossed 'T COOMBE & SON LAUNCESTON'



Fig 18 View of wheel hubs and spokes, with pit-wheel inside



Fig 19 A displaced top casting of an axle bearing



Fig 20 Displaced bottom casting of an axle bearing

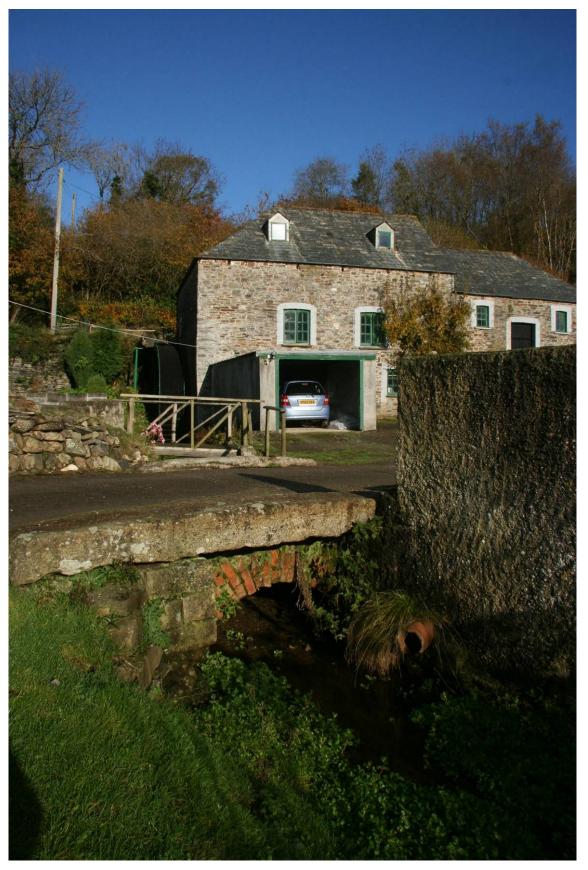


Fig 21 A brick arched bridge carries the mill access track over the tailrace channel



Fig 22 The main entrance of the mill, with a split door in the foreground showing latch and lock detail

Note also the reused timber lintel above the doorway



Fig 23 The ground floor of the mill, looking towards the pit-wheel

A countershaft supplying drive to an electrical generator is behind the screen to the right



Fig 24 Ground floor of the mill, showing winder stairs to the stones floor (on the right)



Fig 25 The end of the countershaft (centre), now driving a dynamo via chains and sprockets

A vacuum pump for a milking machine is also connected to this drive



Fig 26 Traces of an inserted foundation for a bench or similar feature, attached to the floor and wall in the south east corner of the mill



Fig 27 Sack hoist hatch between the ground and first floors Note the shallow cut-outs for the hinges of the trapdoors



Fig 28 Sack hoist hatch between the first floor and loft level

Note the wear on the floor joists caused by the ropes when the hoist was in use



Fig 29 The single surviving set of millstones on the first floor, now without wooden covers (compare with a more complete example in Fig 31)

The small window to the rear was for observing and controlling the water level in the leat outside. The vertical timber supported a control for a sluice



Fig 30 View of the first floor with original winder stairs to the loft at the rear A second pair of millstones was once sited in the position of the square mat



Fig 31 Millstones and machinery (complete with wooden covers and hopper feeds) at Poughill mill, Stratton



Fig 32 Casting at the centre of the New Mills millstone



Fig 33 Casting in the edge of the millstone



Fig 34 Hole in the loft floor where grain was once channelled into a hopper above the millstone



Fig 35 Axle support bracket (and hole through the wall) for line shafting to subsidiary machinery



Fig 36 Another axle support bracket on the south side of the first floor This part of the mill probably once contained cleaning/grading machines



Fig 37 The mill loft, lit by three dormer windows

Grain once arrived here via a sack hoist situated above the middle of the room. The remainder of the space was probably given over to grain storage, the walls most likely originally lined with timber to prevent contamination

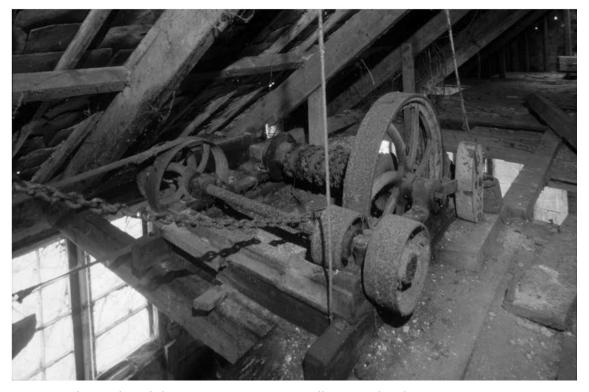


Fig 38 A disused sack hoist in situ at Town Mills, St Columb



Fig 39 The loft/barn above the shippon

Note the timber lintel above the doorway leading into the first floor of the mill. This has clearly been reused from an earlier stage of the mill's development, showing mortises from former joists



Fig 40 Another view of the loft/barn above the shippon

The large space with a wide loading door to the front (and another door at the rear) suggests this space may have also been used for threshing and winnowing



Fig 41 Ground floor of the main shippon



Fig 42 Ground floor of the main shippon, showing the 20th century steel bays and feed troughs when the building was used as a milking parlour



Fig 43 Subsidiary (single-storey) loosebox/shippon



Fig 44 Subsidiary loosebox/shippon, showing reused timber lintels above the windows



Fig 45 Context: an older dwelling beyond the mill and an unusual design of pigsty that appears to be contemporary with the redevelopment of the mill c1905



Fig 46 Context: a view looking west along the route of a former lane on the upper side of the mill

(the mill leat is to the left of the electricity pole)

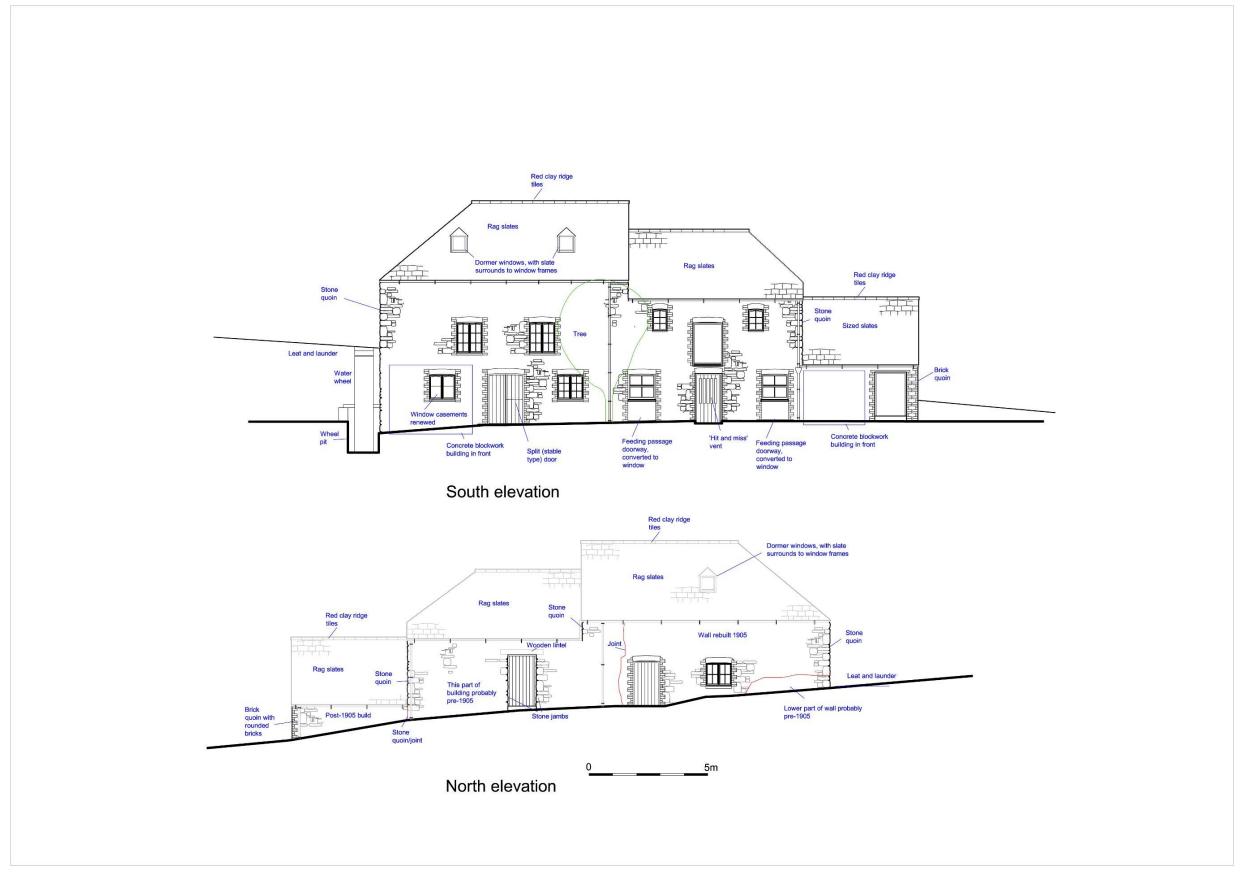


Fig 47 Elevations of the mill
(Drawings provided by Trewin Design Partnership, annotation and additional information by Historic Environment Projects)

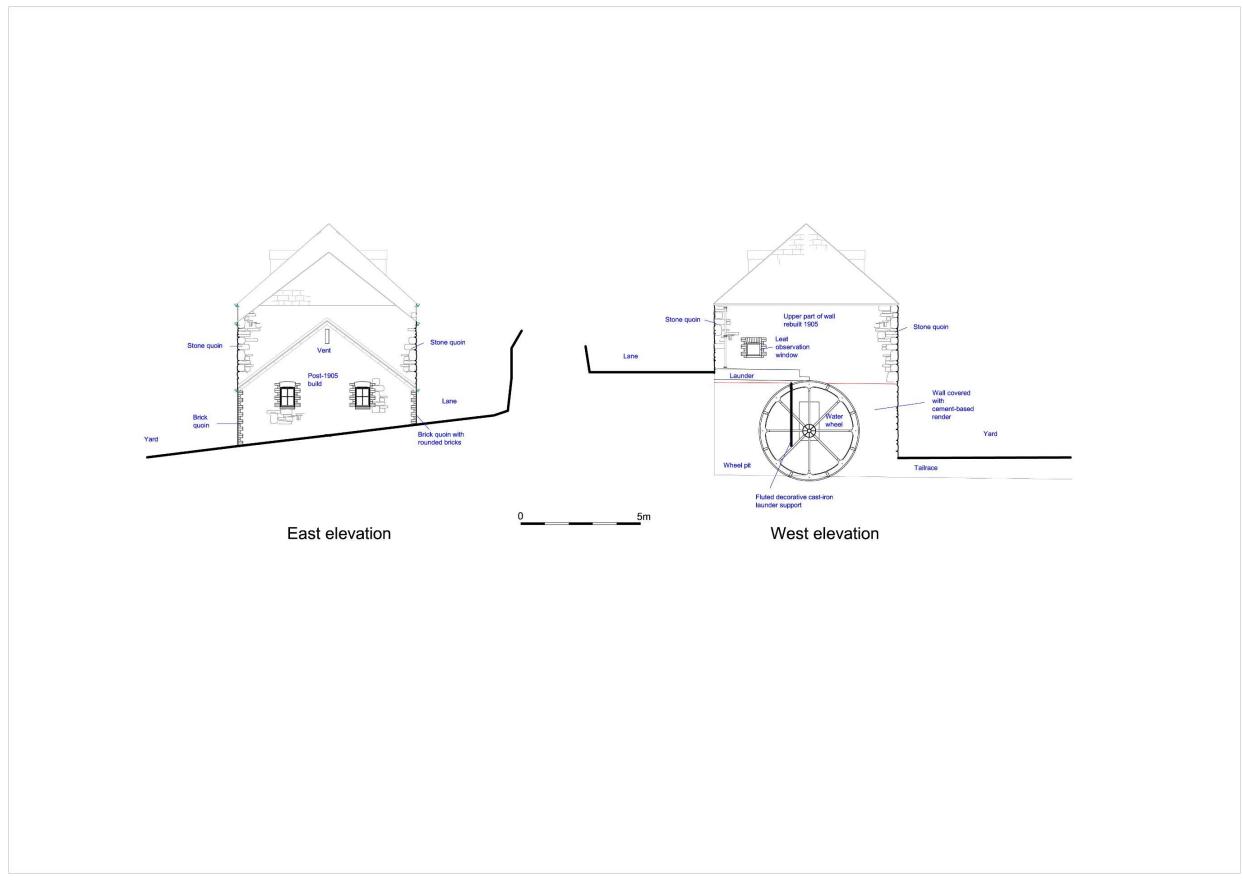


Fig 48 Elevations of the mill
(Drawings provided by Trewin Design Partnership, annotation and additional information by Historic Environment Projects)

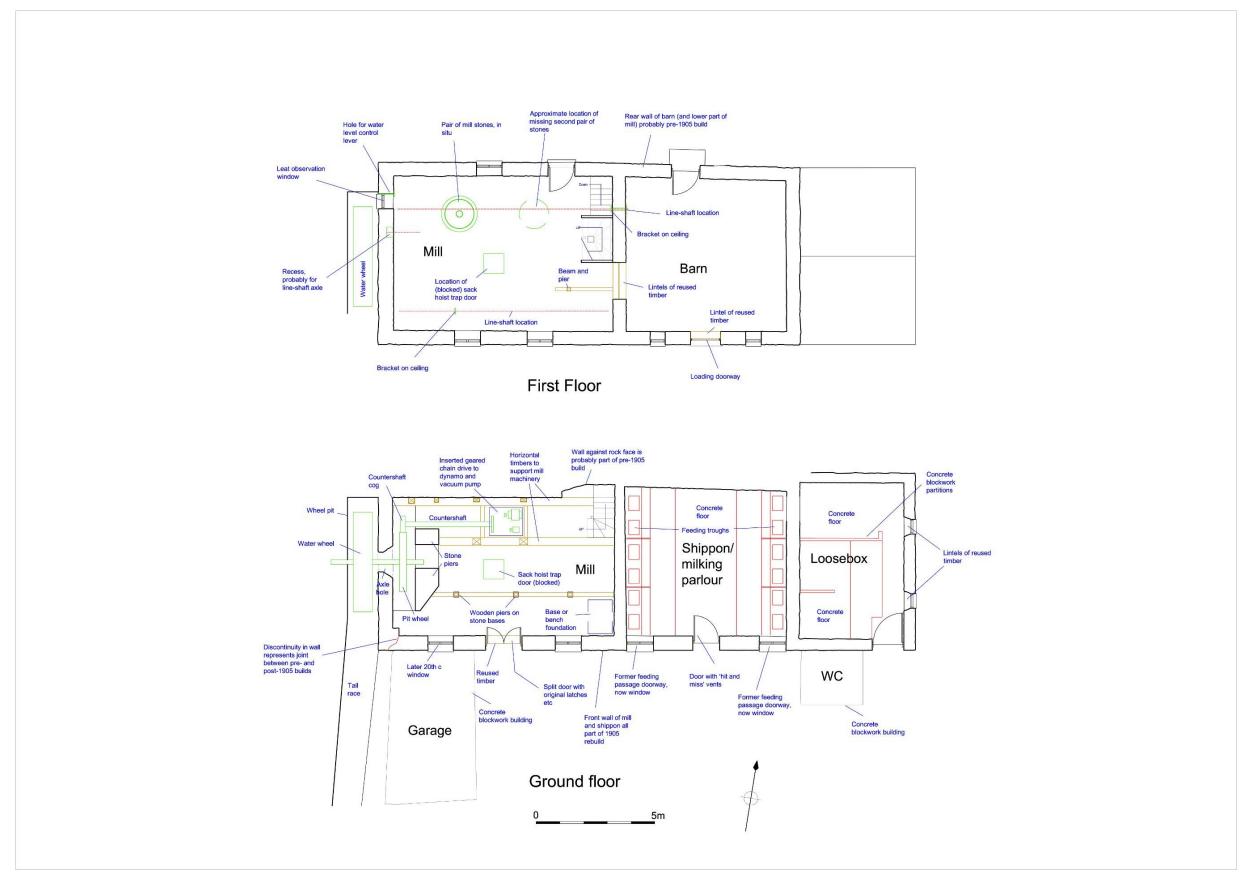


Fig 49 Plans of the mill
(Drawings provided by Trewin Design Partnership, annotation and additional information by Historic Environment Projects)

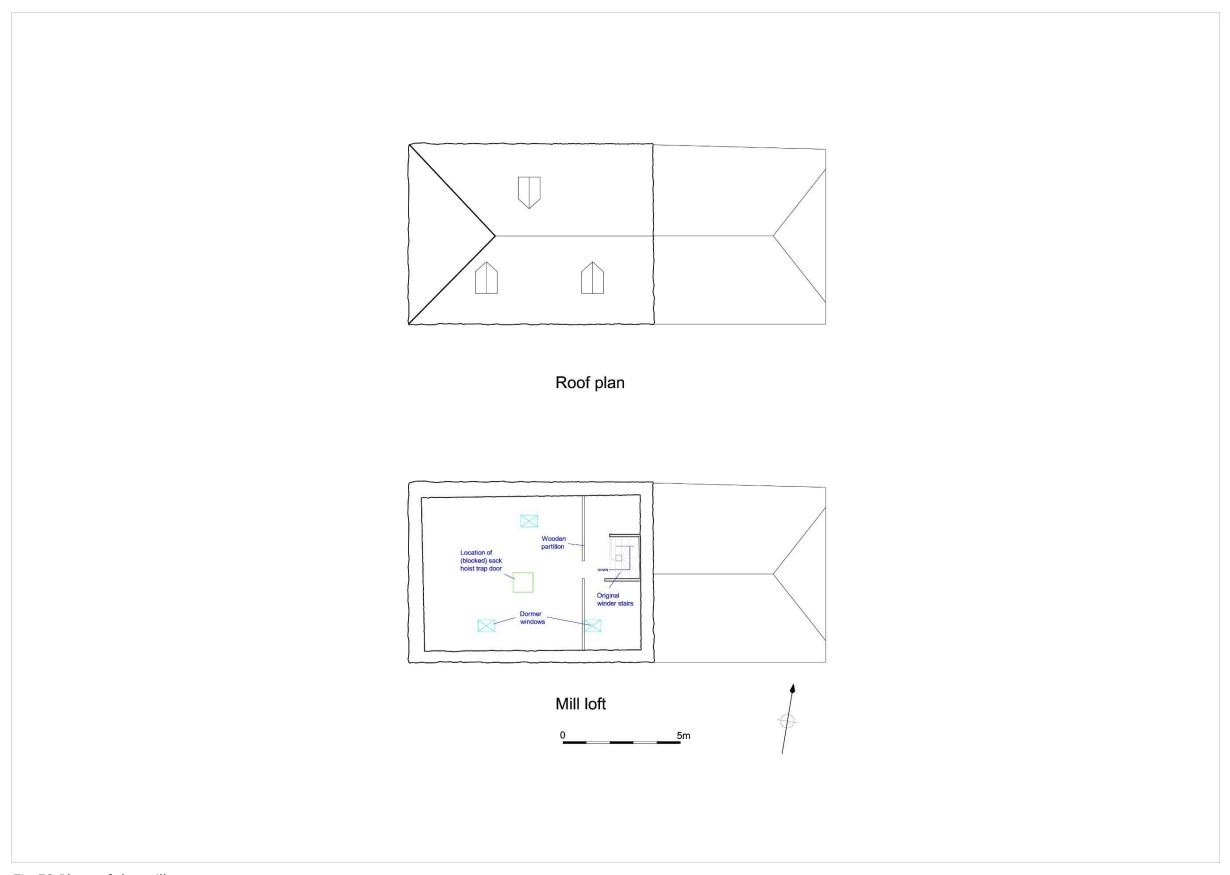


Fig 50 Plans of the mill
(Drawings provided by Trewin Design Partnership, annotation and additional information by Historic Environment Projects)

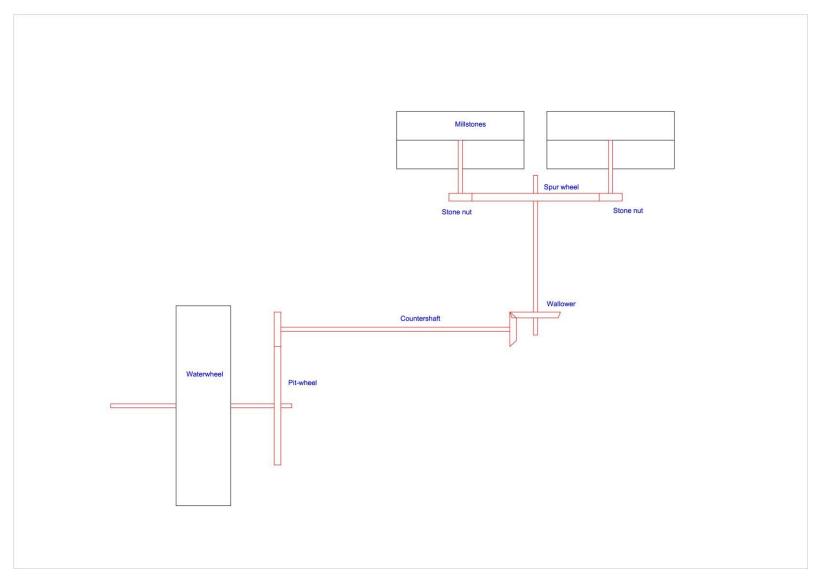


Fig 51 Schematic reconstruction of the geared drive to the millstones

Appendix 1 Written Scheme of Investigation

Historic Environment Projects, Cornwall Council



New Mills, Launceston: Written Scheme of Investigation for historic building recording

Client:	Mr and Mrs Richard Ball
Client contact:	
Client tel:	
Client email:	

Project background

A former corn mill is extant in the hamlet at New Mills, west of Launceston (at NGR SX 29897 85064). It was listed at Grade II in 1989 and the listing description mentions that the building is likely to be of early 19th century date.

As the building is redundant planning and listed building consents were applied for conversion of the building to residential use (refs PA11/01103 and PA11/01108). These consents were granted by Cornwall Council, in April 2011. the consents were subject to conditions, and Condition 9 states:

No development shall take place within the site until the applicant has secured and implemented a programme of archaeological work in accordance with a written scheme of investigation to be submitted by the applicant and approved in writing by the Local Planning Authority in consultation with the County Archaeologist.

Reason: To ensure that the existing character of the Listed Building is retained and in accordance with Policy ECN12 of the North Cornwall District Local Plan 1999.

In April 2012 Historic Environment Projects were approached by Trewin Design partnership, on behalf of the owners, with a view to satisfying planning condition 9. No planning brief was available but correspondence with the local Historic Environment Planning Advice Officer and Conservation Officer indicated that at a minimum, a Level 2 (descriptive and photographic) survey would be required (see English Heritage 2006). As the mill retains some elements of original machinery, these parts may require a more detailed record.

Following further correspondence with the owners of the mill in October 2012 the present project was agreed. This Written Scheme of Investigation sets out the background, approach and working methods, as well as the arrangements for monitoring.

Site history

The place-name of New Mills is first recorded in 1474. The mill building itself is recorded on the Tithe Map for St Stephen-by-Launceston parish (1839) and also on the First and Second Edition large scale OS maps (c1880 and c1907).

Project extent

The site includes the mill and remainder of the property that is subject to the planning consent. The immediate context of the structure will also be briefly examined, in order to provide historical and landscape context.

Aims and objectives

The principal aim of the study is to gain a better understanding of the historic development of the mill. The objectives are to obtain an archive quality historic building record of the site prior to alterations.

Working methods

All recording work will be undertaken according to the Institute for Archaeologists Standards and Guidance for Archaeological Investigation and Recording. Staff will follow the IfA Code of Conduct and Code of Approved Practice for the Regulation of Contractual Arrangements in Archaeology. The Institute for Archaeologists is the professional body for archaeologists working in the UK.

Desk-based assessment

A desk-based assessment will be carried out to inform the fieldwork stage. This will comprise:

- Published sources, where readily available
- Historic maps, including
 - Joel Gascoyne's map of Cornwall (1699)
 - Thomas Martyn's map of Cornwall (1748),
 - OS 1 inch survey (c1810)
 - parish Tithe maps (c1840),
 - 1st and 2nd Editions of the OS 25 inch maps (c1880 and c1907)
- Modern maps
- Census returns
- Trade directories

Fieldwork: description

Analysis of the fabric will be undertaken on site (recorded as notes) to allow a description to be written up at the archive stage. Measured information and detail, as appropriate, will be added to copies of existing contractors drawings (to be supplied to HE by the client). Separate drawings may be created, as appropriate, to record elements of machinery.

Fieldwork: photographic recording

To include:

- Black and white photographs using a 35mm camera on fine grain archive quality film.
- 2. Colour photographs taken with a digital camera (with a resolution of 8 million pixels or higher).

The photo record will comprise:

- general views
- · examples of structural and architectural detail
- · details of machinery where required.

Methodology for the archive standard photography is set out as follows:

- · Photographs of details will be taken with lenses of appropriate focal length
- A tripod will be used to take advantage of natural light and slower exposures
- Difficulties of back-lighting will be dealt with where necessary by balancing the lighting by the use of flash
- A metric scale will be included in all views, except where health and safety considerations make this impractical

Creation of site archive

To include:

- · Archiving of black and white photographs to HER standards
- Digital colour photographs (stored according to HER guidelines and copies of images made available to the client)
- · A detailed site/building description
- · Preparation of finished drawings
- · Completion of the English Heritage/ADS OASIS online archive index

Archive report

A written report will include:

- Summary
- Project background
- · Aims and objectives
- Methodology
- Location and setting
- Designations
- Site history
- Archaeological results/building description
- Chronology/dating evidence
- Significance
- Conclusions
- References
- Project archive index
- Supporting illustrations: location map, historic maps, plans, elevations/sections, photographs

A paper copy and a digital (PDF) copy of the report, illustrations and any other files will be held in the Cornwall HER. Paper copies of the report will be distributed to the client, to local archives and national archaeological record centres.

Archive deposition

An index to the site archive will be created and the archive contents prepared for long term storage, in accordance with HE standards.

The archiving will comprise the following:

- All correspondence relating to the project, the WSI, a single paper copy of the report together with an electronic copy on CD, stored in an archive standard (acid-free) documentation box
- 2. A2 drawn archive storage (plastic wallets for the annotated record drawings)
- 3. Archive standard negative holders and archive print holders, to be stored in the HES system until transferred to the Royal Cornwall Museum.
- 4. The project archive will be deposited initially at ReStore PLC, Liskeard and in due course (when space permits) at Cornwall Record Office.

Timetable

The study is anticipated to be commenced during November 2012. The archive report will be completed within 3 weeks of the end of the fieldwork. The deposition of the archive will be completed within 2 months of the completion of the archive report.

Monitoring and Signing Off Condition

Monitoring of the project will be carried out by Phil Copleston, Historic Environment Planning Advice Officer. Where the Historic Environment Planning Advice Officer is satisfied with the archive report and the deposition of the archive written discharge of the planning condition will be expected from the local planning authority (LPA).

Monitoring points during the study will include:

- Approval of the WSI
- Completion of fieldwork
- · Completion of archive report
- · Deposition of the archive

Historic Environment Projects

Historic Environment Projects is the contracting arm of Historic Environment, Cornwall Council (HE). HE employs some 20 project staff with a broad range of expertise, undertaking around 100 projects each year.

HE is committed to conserving and enhancing the distinctiveness of the historic environment and heritage of Cornwall and the Isles of Scilly by providing clients with a number of services including:

- Conservation works to sites and monuments
- Conservation surveys and management plans
- Historic landscape characterisation
- Town surveys for conservation and regeneration
- Historic building surveys and analysis
- Maritime and coastal zone assessments
- · Air photo mapping
- · Excavations and watching briefs
- · Assessments and evaluations
- Post-excavation analysis and publication
- · Outreach: exhibitions, publication, presentations

Standards



HE is a Registered Organisation with the Institute for Archaeologists and follows their Standards and Code of Conduct.

As part of Cornwall Council, the HES has certification in BS9001 (Quality Management), BS14001 (Environmental Management), OHSAS18001 (Health, Safety and Welfare), Investors in People and Charter Mark.

Terms and conditions

Contract

HE Projects is part of Historic Environment, Cornwall Council. If accepted, the contract for this work will be between the client and Cornwall Council.

The views and recommendations expressed will be those of the HE projects team and will be presented in good faith on the basis of professional judgement and on information currently available.

Project staff

The project will be managed by a nominated Senior Archaeologist who will:

- Discuss and agree the detailed objectives and programme of each stage of the project with the client, including arrangements for health and safety.
- Monitor progress and results for each stage.
- Edit the project report.

· Liaise with the client regarding the budget and related issues.

The project is expected to include:

Nigel Thomas BA MIfA

Senior Archaeologist who has worked with HE and its predecessors since 1987. Responsible for management of projects relating to historic building recording and surveys of historic landscapes. Past work has included recording and structural analysis at Launceston and Restormel Castles, medieval chapels at Rame, Bodmin and Hall (Bodinnick), as well as landscape surveys at Lanhydrock park and Godolphin gardens. Project manager for historic building analyses at Tintagel Old Post Office, Cotehele House, St Michael's Mount summit complex and Trerice for the National Trust. Has recorded numerous industrial structures including Harveys Foundry, Loggans Mill (Hayle), Town Mills at St Columb Major, and china-clay area features including the waterwheel at Virginia CC Works, Greensplat engine house and Carrancarrow chapel. Project team leader for the Lostwithiel Town Characterisation Study. Member of the IfA's Buildings Group and Graphic Archaeology Group.

Copyright

Copyright of all material gathered as a result of the project will be reserved to the Historic Environment, Cornwall Council. Existing copyrights of external sources will be acknowledged where required.

Use of the material will be granted to the client.

Freedom of Information Act

As Cornwall Council is a public authority it is subject to the terms of the Freedom of Information Act 2000, which came into effect from 1st January 2005.

HE will ensure that all information arising from the project shall be held in strict confidence to the extent permitted under the Act. However, the Act permits information to be released under a public right of access (a "Request"). If such a Request is received HE may need to disclose any information it holds, unless it is excluded from disclosure under the Act.

Health and safety statement

HE follows the Council's *Statement of Safety Policy*. For more specific policy and guidelines HE uses the manual *Health and Safety in Field Archaeology* (2002) endorsed by the Standing Conference of Archaeological Unit Managers.

Prior to carrying out on-site work HE will carry out a Risk Assessment.

Insurance

As part of Cornwall Council, HE is covered by Public and Employers Liability Insurance, with a policy value of £50m. The Council also has Professional Negligence insurance with a policy value of £5m.

Nigel Thomas

Senior Archaeologist

6th November 2012

Historic Environment Projects

Cornwall Council