

SILVERTON PAPER MILL, BROAD CLYST, DEVON

**Historic Building Assessment &
Recording**



FORUM
Heritage
Services

Silverton Paper Mill, Broad Clyst, Devon

*Historic Building Assessment
& Recording*

for

The National Trust

Bob Edwards

2017

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Heritage
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SUMMARY

Silverton Paper Mill was a large industrial complex located in the valley of the River Culm, approximately 7km north-west of the urban edge of Exeter (NGR SS 977, 010). The mill buildings straddle the river which is the parish boundary between Silverton to the north and Broad Clyst to the south, the majority of the site being in the latter parish.

The mill complex was owned by the National Trust and leased as a commercial paper mill. Paper-making ceased in 1999 after which the site was used for the storage of paper products until 2013 when the commercial use of the site ended and the buildings became redundant. The National Trust commissioned Forum Heritage Services (FHS) to undertake an assessment of the significance of the buildings to inform decisions regarding the potential demolition of all or part of the site. This assessment was undertaken by Bob Edwards BSc PG Dip IHBC MCIfA. The decision was made to demolish the majority of the buildings on the site.

Subsequently FHS undertook photographic recording of the mill complex. This report presents an historical background to the site and a description of the buildings together with the Assessment of Significance (Appendix I) and plans showing the location of the photographs taken (Appendix II). A set of the record photographs is held on DVD attached to the report. Copies of this report have been deposited with Devon Records Office, Devon Historic Environment Record and The National Trust and a digital copy with OASIS (Online Access to the Index of archaeological investigationS).

Post demolition, archaeological recording of the ground works associated with the removal of the concrete slab and restoration of the river channels was undertaken by AC Archaeology, their results are presented in a separate report.

SILVERTON PAPER MILL, BROAD CLYST, DEVON

Historic Building Recording

1.0 INTRODUCTION

- 1.1 Silverton Paper Mill is a large industrial complex located in the valley of the River Culm, a tributary of the River Exe approximately 7km north-west of the urban edge of Exeter (NGR SS 977, 010). The mill buildings straddle the river which is the parish boundary between Silverton to the north and Broad Clyst to the south, the majority of the site being in the latter parish.
- 1.2 The paper mill is owned by the National Trust and forms part of the Killerton Estate. The park of Killerton House occupies an area of higher ground within a broad sweep of the river immediately west of the mill. Paper production at the mill ceased in 1999 and the company who leases the property is due to vacate the premises. Some works were required to repair elements of the mill complex which fall within the terms of the lease and the possibility of demolishing parts of the mill were being explored as an alternative.
- 1.3 Forum Heritage Services (FHS) was commissioned by the National Trust to undertake an assessment of the significance of the mill complex, excluding the residential/office elements of the site, to inform the decision-making process in relation to repair or demolition options. Bob Edwards BSc PG Dip IHBC MIFA, Director of FHS undertook the assessment of significance and prepared the report after a site visit made on 17 December 2012. This assessment is presented as Appendix I
- 1.4 A further visit was made on the 12th February 2013 to undertake digital photographic recording of the mill buildings, the archive photographs from this recording will be deposited with the Devon Records Office, the Devon County Council Archaeologist and the National Trust. In addition to this recording, a National Trust volunteer undertook photographic recording of the interiors of the buildings and a copy of this record will also be deposited with the Devon Records Office. Plans showing the location of the photographs taken of the site are presented in Appendix II.
- 1.5 Permission was granted for the demolition of the mill buildings in 2014. This consent included a condition for archaeological recording of the buildings and observation of the ground works. Forum Heritage Service was commissioned to undertake this work. The first element of this work was the identification of elements of the buildings that should be retained during demolition to allow a closer inspection of their fabric than was possible in the low light levels possible in the standing buildings, particularly the angled range and north range within Buildings 14 and 15. Where possible the identified areas were left standing but due to the extensive alterations that the various elements had been subjected to, the retained elements were structurally unsound and presented a significant health and safety risk. These elements were examined from a safe distance and were found to not contain any additional architectural or archaeological information not previously recorded.

1.6 Due to unforeseen personal circumstances, Bob Edwards was unable to undertake the archaeological watching brief on the ground works. This aspect of the work was subsequently undertaken by AC Archaeology, the results to be presented in a separate report.

2.0 BACKGROUND

2.1 The paper mill has been subject to historic and structural analysis to produce a Historic Building Survey (Watts and Watts 2000 – Appendix III) and further historical research to make an assessment of the archive relating to the mill has been prepared by Su Jarwood. The various elements of the paper mill were identified by name and number and their structure briefly described in the Watts' report on the site. Their identification numbers are used in this report (see also Figure 7). No further historical research was undertaken as part of the assessment of significance but it was necessary to review the historic map evidence to better understand the development of the complex.

2.2 In summary, the mill, variously known as Bridge of Killerton Mills, Bridge Mills or Silverton Mills appears in documentary records from 1783 when the mill was a flour mill. The notice of auction clearly indicates that there had been a mill on this site for some time. The mill had been given over to paper making in the late 18th century when it was in the ownership of the Matthews family which continued to own the mill for around 100 years.

2.3 The earliest map available is an undated 18th century map which shows a building standing across the mill leat which runs approximately parallel to the river and two buildings either side of the leat further east (Figure 1). This map also shows an L-plan building or range of buildings close to the sharp turn in the road at the present day entrance to the mill. It should be noted that the extract of this map provided cuts off most of the garden and site of Bridge House.

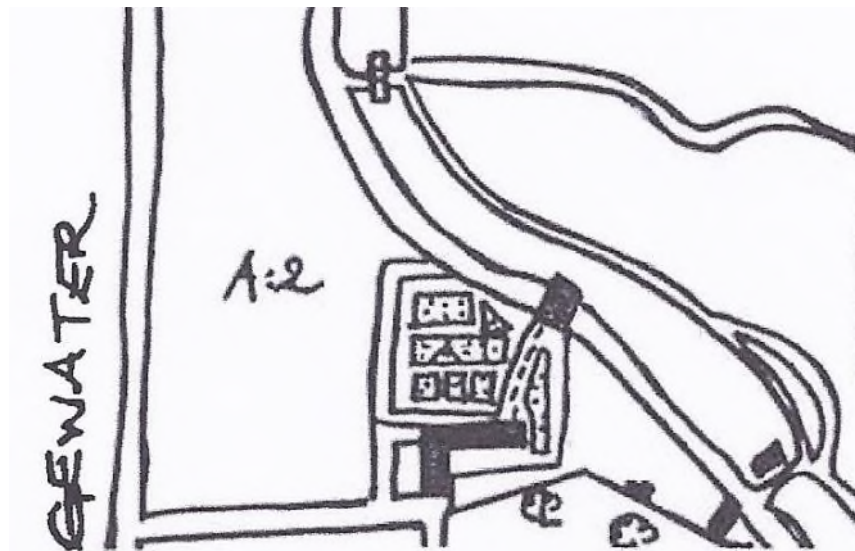


Figure 1
Undated 18th century map

2.4

The Broadclyst Tithe map of 1842 show an L-range near the entrance and a series of buildings built along the strip of land between the mill leat and the river with a group of buildings on the south side of the leat between the channel and the boundary of the garden of Bridge House (Figure 2). Two of the buildings alongside the leat may correspond to buildings shown on the 18th century map but there is no building straddling the leat. Figure 2 is a compilation of both the Broadclyst map and Silverton Tithe map – the latter shows that there were no buildings to the north of the river. A hand drawn version of a map which is titled as being the Tithe map was incorporated in Killerton Estate Vernacular Buildings Survey. This version shows the presence of a long angled range that extended across the river Culm and suggests a greater level of building than the original Tithe map and seems to show that much of the length of the leat through the mill was culverted. Although the plot numbering on this map corresponds to the Tithe map, the numbering was also used on a map of 1879. It is considered that the hand drawn version may be a later version of the Tithe map.



Figure 2 A montage of the Silverton (north) and Broadclyst (south) Tithe maps provided by the Devon County Council Historic Environment Record © Devon Records Office. These maps show that in the mid-19th century the mill buildings were principally located along both sides of the mill leat with no structures across or to the north of the river.

2.5

In the second half of the 19th century the mill underwent considerable growth as evidenced by an estate map of 1879 (Figure 3) a plan associated with the sale of the property in 1885 (Figure 4) and the 1st Edition Ordnance Survey 25" map of 1889 (Figure 5). The estate map shows the angled range and a further long building to its west which extended across the river channel (here called the north range). The largely detached structures that stood within the island between the river and the leat had either been replaced or consolidated to form a block with the angled range and the new north range across the river. This map also shows a long range and a square building on the north side of the river but as these lay within Silverton parish they would not have been shown on the Broadclyst Tithe map. None of the hand drawn versions make reference to the Tithe map of Silverton although the version that is possibly later does show boundaries and tracks on the north side of the river. The 1st Edition 25" map shows little change from the 1885 plan apart from some alteration to the south-east part of the complex where there were some minor alterations made.

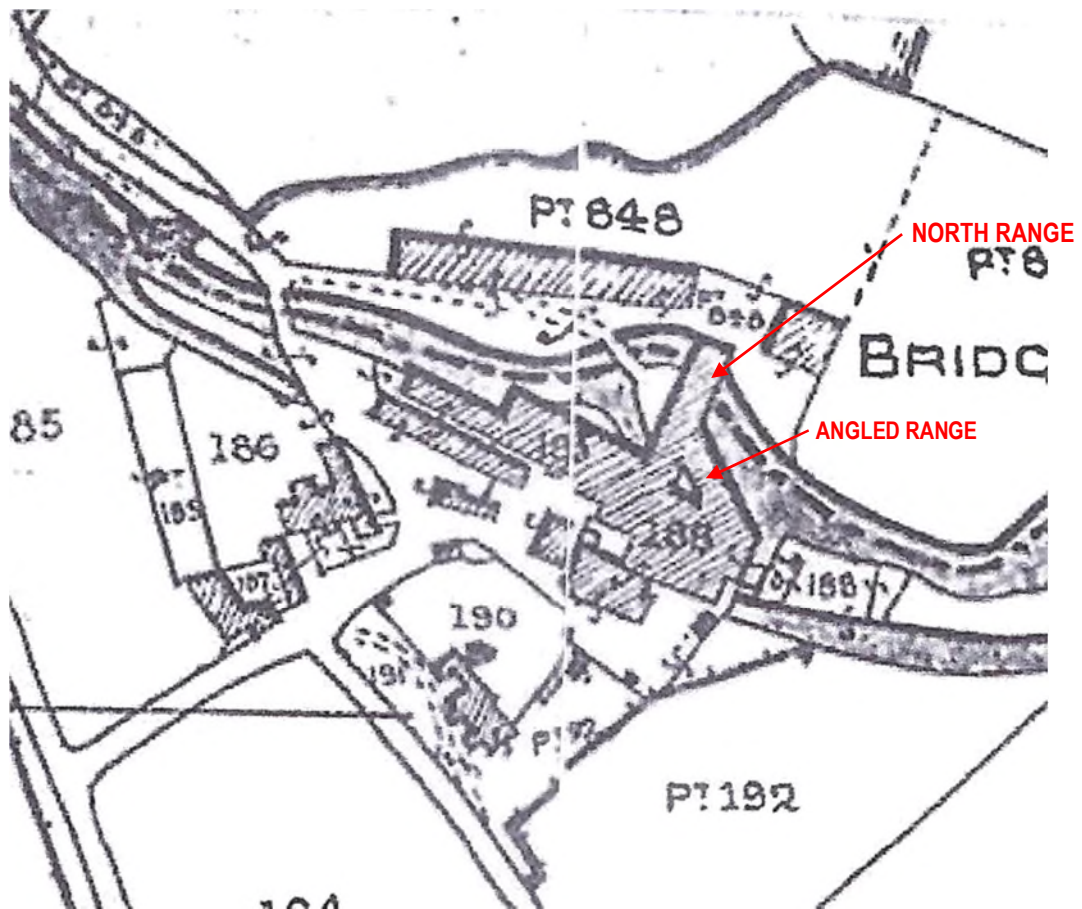


Figure 3
Killerton Estate map 1879



Figure 4
Plan of Silverton Mill associated with a sale catalogue, 1885

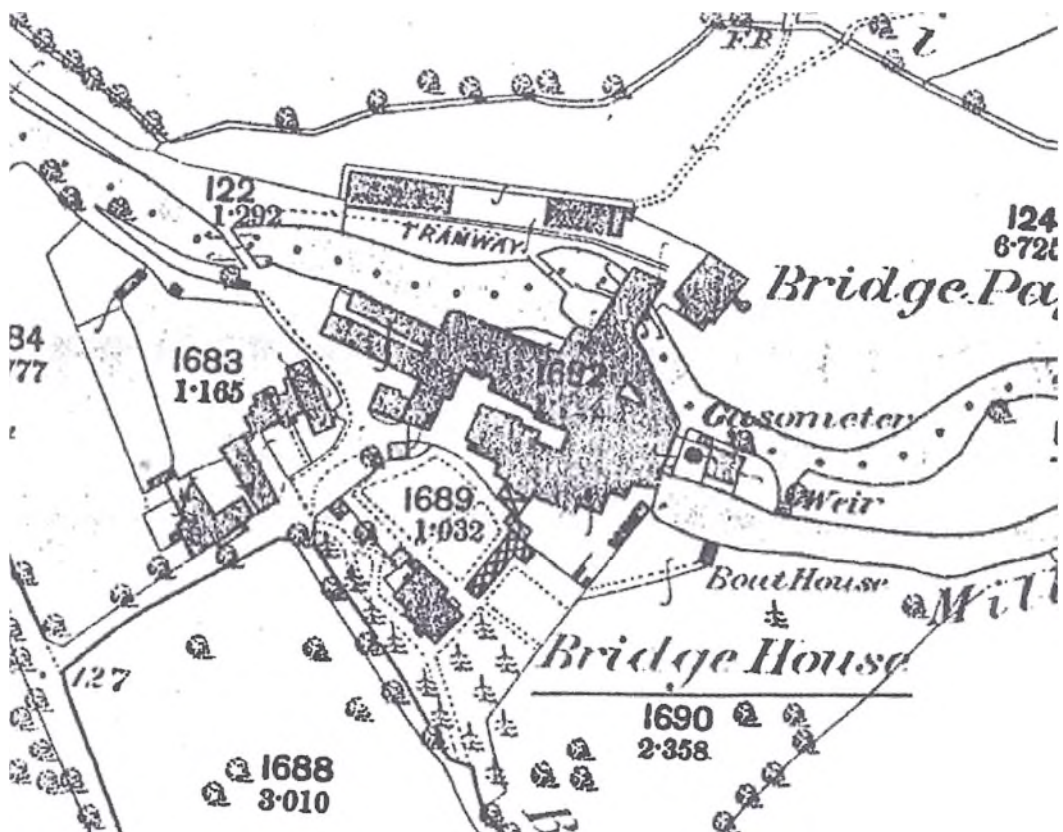


Figure 5
Ordnance Survey 1st Edition 25" map 1889

2.6

The next map in the sequence is the 1905 OS 25" map (Figure 6). This shows that there had been further development, linking the detached buildings north of the river and major additions to the west including the construction of the clock tower building which was added in 1897 to commemorate the Diamond Jubilee of Queen Victoria. Parts of these additions were constructed over the river. The buildings along the south side of the complex adjacent to the boundary of Bridge House were also reconfigured in the period 1889 – 1904. The various additions to the north and west left an area at the core of the complex which was uncovered.

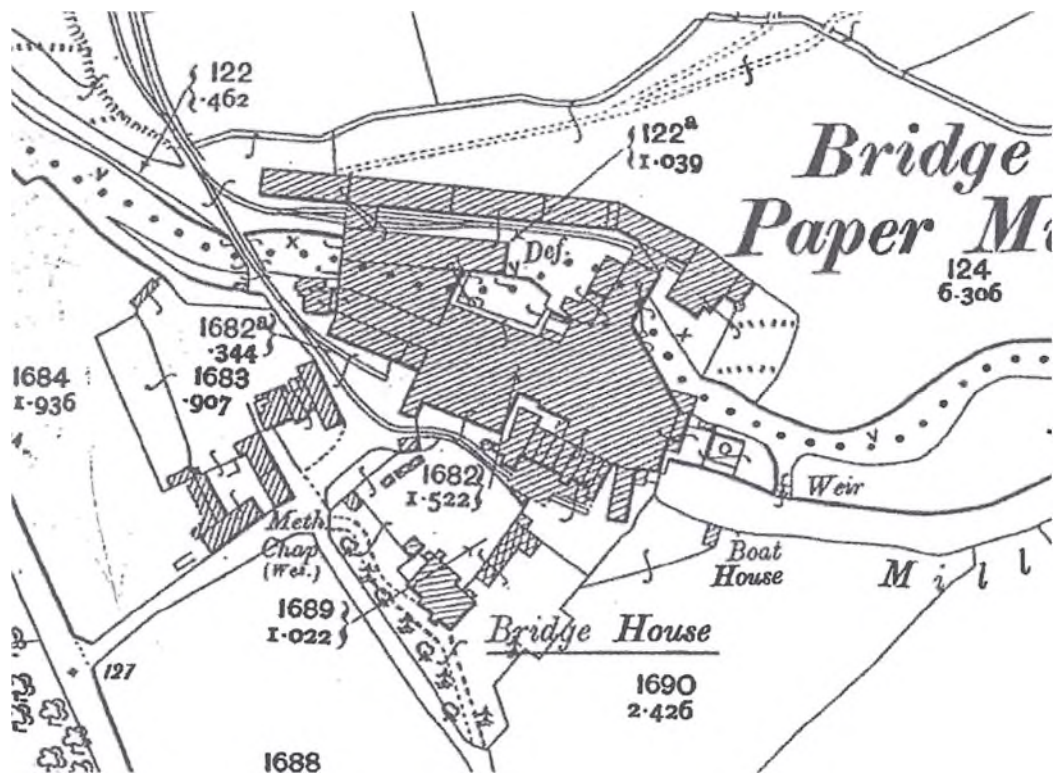


Figure 6

Ordnance Survey 2nd Edition 25" map surveyed 1905, published 1905

2.7

Further changes and additions were made in the early 20th century including another phase of rebuilding in the area of the Power House on the southern edge of the complex and the construction of the detached Electricians' Workshop (Bdg 28) to the east of the garden of Bridge House. Alterations also appear to have been made to the northern elevation of Bdg. 3, extending at least part of it northwards and adding some new structures to the north of the area identified as Bdg. 7, an addition was constructed to the north-east of the angled range across the river and also extensions to the two parallel ranges at the north-west part of the site whilst the formerly open space between the two ranges was covered over. During WWII a large shed added to the north of the complex was used for the storage of torpedoes. Unfortunately, there are no further editions of 25" mapping for the period 1905 – 1970.

2.8

Parts of the mill complex were damaged by fires in 1934 and 1940, the latter caused damaged estimated at several thousand pounds and two of the four machines were put of operation which would suggest that the fire occurred in the western part of the site, possibly within Bdgs, 6 or 23. These would have almost certainly had an impact on built fabric.

3.0 THE BUILDINGS

3.1 The Watts' assessment of the buildings utilised a plan of the site with the various elements numbered. To maintain consistency, the numbering system used in that report will be utilised in this report and is shown on Figure 7. Not all buildings on this plan were included within the pre-demolition recording.

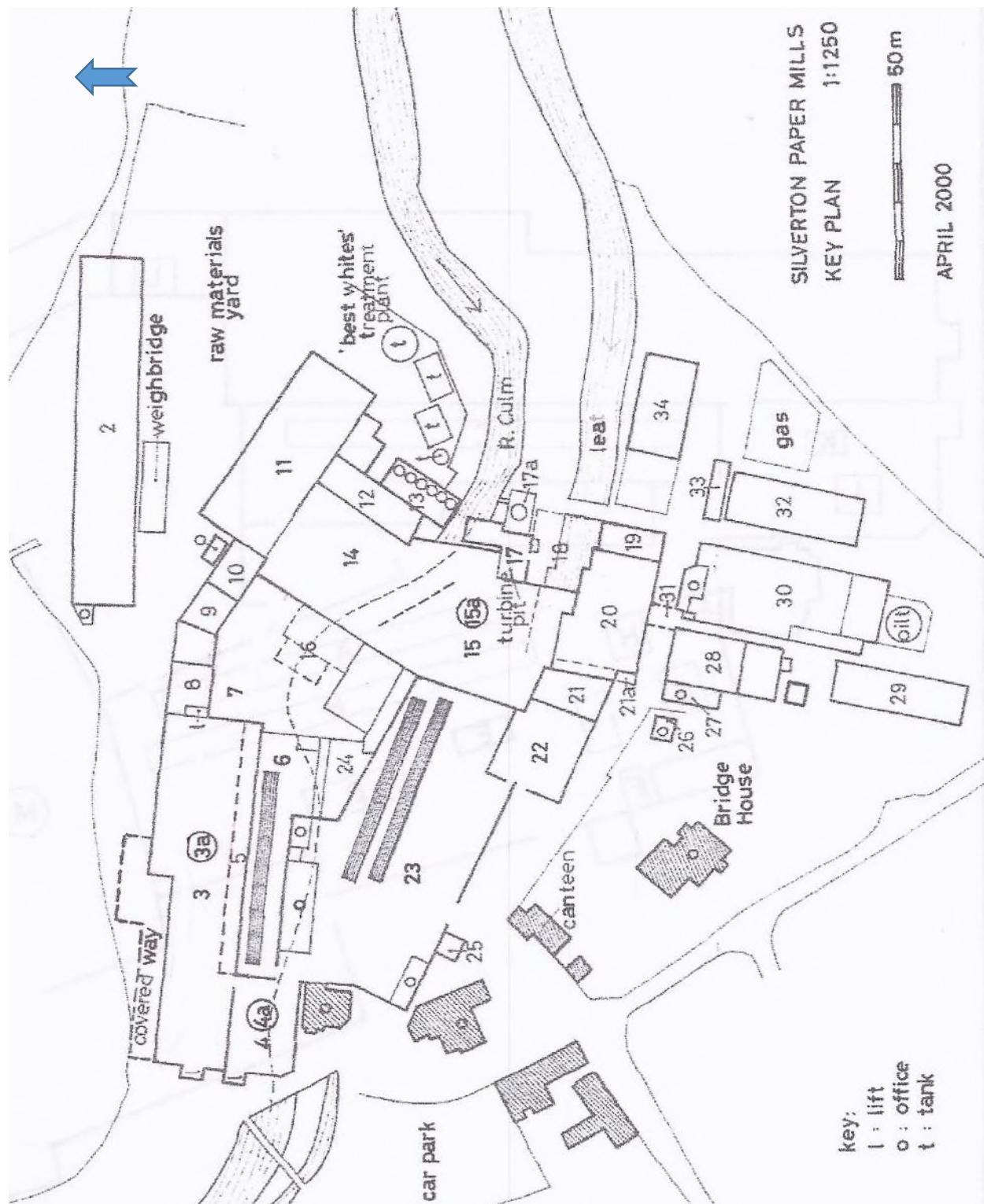


Figure 7 Site plan showing building numbers used in the Watts' report and this report.

3.2 Building 2 'Admiralty Shed'

This steel-framed building set upon a brick base, except at the west end where the side walls are brick to full height, was used for the storage of torpedoes during WWII and may date from that period. It is a single space open to the roof. Latterly the building was used as the Finished Paper Warehouse.



Building 2 West elevation. (8274).



Building 2 South elevation (8276)

3.3 Building 3 Finished Goods Warehouse & Salle

The ground floor level of this building was used as the warehouse for finished goods. The salle – an area where the finished paper was inspected, sorted and packaged, was at the upper level.

Map evidence shows that a long, narrow building was constructed in this area between 1842 and 1879 – it was marked as Esparto Shed on the 1885 plan. By 1889 the central section seems to have been removed leaving two detached buildings. The gap had been infilled by 1904 and the range added to at both the west and east ends, the latter addition being angled to the south-east and linking to a formerly detached building at the north-east edge of the site. The north wall is in two different sections; the section beneath the covered way, laid in English bond, is set further to the south than the section to the east of the covered way and is a later rebuilding in Flemish Garden Wall bond with several large openings which have been subsequently infilled. It is questionable whether the western part pre-dates 1904 as it does not seem to align with the line of the wall shown on later maps. The Watts's report suggests that the south wall may also be later rebuilding, as noted in the description of 5 (p11) but this does stand in approximately the correct position to be part of the mid- to late structure. This structure and the adjoining Tunnel Passage (5) were raised in height, removing all evidence for the original roof in 20th century to create the salle above.



Buildings 3 (left) and 4 (right), west elevation with the covered way along the north side of Building 3. (8288)



Building 3 North elevation, east part looking south-east. (8215)



Building 3 North elevation – probable earlier (but probably post 1904) section of the north wall beneath Covered way, facing south-east. (8285)



Building 3 Ground floor, south wall facing south-east. (9575)



Building 3 Ground floor, north wall facing north-east. (9577)



Building 3 Upper floor facing west-south-west to the south wall of the building. (9574)

3.4 Building 4 Paper Cutting and Storage with Salle above.

This element to the west of Bdg.6 is largely constructed in English bond brickwork. The upper level was used as an extension of the salle in Bdg.3, the north side of the building being open to the salle. The building was added after 1904.

3.5 Building 5 Tunnel Passage

This area is not a building but a former open alleyway between Bdg.3 to the N and Bdg. 6 to the S, created between 1889 and 1904 when the northern range which includes Bdgs. 3, 8, 9 and 19 were added. Historic maps show tramlines running down this alley to the N end of the former Sorting Room. These are no longer visible. The area was covered over in 20th century to form the salle above this area and Bdg.3.



Rail tracks to the west of Buildings 3 and 4 leading towards the Tunnel Passage between Bdg.3 and Bdg.6. (8290)

3.6 Building 6 Paper-making Room that housed Paper Making Machine No 3, now removed.

This long building element was added between 1889 – 1904, partly over the river and partly on the north bank. Its north wall faces into the Tunnel Passage (Bdg. 5). The building was constructed in a variety of brick bonds within a steel frame; English bond to the north wall and upper part of the south wall with Flemish Garden Wall to the lower part and stretcher bond to the east.



View along the Tunnel Passage to the west. The north wall of Bdg.6 is to the left and the south wall of Bdg.3 to the right. (9586)

3.7 Building 7 Starch Kitchen

The Watts's report says that this area was occupied by a building on the 1889 and 1904 maps but the 1904 map shows that this area had only been enclosed by buildings on all sides by that date but remained largely open. The range to the north aligns with Finished Goods Warehouse (3) to the west that may have formed part of the Esparto Sheds shown on the 1879 and 1885 maps as well as the later OS maps but the buildings due north (Bdgs. 8, 9 and 10) are later additions being built against the north elevation of the range shown on the 1904 map with the area of the rooms of the pre-1904 range now incorporated into this area. To the west Bdg.6 had been added by 1904 whilst to the east was the north range that built between 1842 and 1879 – part of Bdg.16. This area covers the main branch of the river, a small section of which is visible within the 'North Range'. This area was covered over during the mid-19th century.

3.8 Building 8 Dissolving Unit

This, together with the buildings to the east (Bdgs. 9 and 10) appear to have been added to the north of the narrow range that performed the northern edge of the mill in 1904. Therefore, the north wall is of post 1904 date with the south wall being part of the late 19th century addition. Interestingly, the south wall consists of two skins of brickwork, both laid in English bond. The south wall has been subject to considerable change



Building 8 North elevation. (8720)



Interior of Building 8, south wall. The double skin of brickwork can be seen above the large opening at higher level. (9582)

3.9 Building 9 Tank Room

As with Building 8, this space was created in the 20th century utilising the former north wall of the narrow range shown on the 1904 map as its south wall.

3.10 Building 10 Grass Boiler House

Together with Buildings 8 and 9 to the west, this element was probably added in the 1920s when it was built against the north wall of the narrower range along the north edge of the site built between 1889 and 1904. There is a blocked arched opening in the north wall and nine courses of brick above the opening there is a course of header bricks laid on edge.



The north elevation above Buildings 9 and 10 with the modern green metal clad steel-framed Building 11 just visible to the left of the picture. (8284)



Building 10 North wall of the Grass Boiler Room showing blocked arched window.

3.11 Building 11 Store – former Pulp Shed

1920s, substantially rebuilt.

3.12 Building 12 De-inking plant

Post 1904 but heavily altered with areas of blockwork visible in the east elevation.



Building 12. East elevation. (8235)



Building 12 Interior looking south-west. (8122)

3.13 Building 13 Sand filters

Post 1904

3.14 Building 14 Conveying Area

A building stood in this area by 1885 when it was detached from any other buildings. By 1904 it had been linked to the narrower range of buildings along the north edge of the site. The building shown on the historic maps was smaller than the present area defined as Building 14 which had been extended across the river to butt against the north-east elevation of the angle range. At ground floor level the space has been divided by modern blockwork walls. No access to the northern part of the building at ground level.



Building 14 South part facing towards the north-east elevation of the earlier angle range. (8111)



South part of the area of Building 14 with modern blockwork wall dividing the space. (8116)

3.15 Building 15 Stock Preparation and Pulpers

This area incorporates the areas of several different buildings that were shown on maps from 1879 including the angled range built alongside the south bank of the river. A wall, probably largely rebuilt but containing some stonework at its north-west end, is a remnant of this structure whilst the south-west and the south-east walls of the range have been removed. This area also extends south into the area of structures that were associated with the Engine House as shown on the 1885 map.

At upper floor level the area is largely a single space with some inserted office structures.



Building 15 East elevation between the Power House (Bdg.20) to the south and the Pump House (Bdg. 17) to the north (out of shot). The Leat/Headrace (18) is the covered area to the left of the picture.



Building 15 North-east wall of the former angled range, originally built between 1842 and 1879 although the present wall may be a later rebuilding. Facing north. (9427)



Building 15 North-east wall of the former angled range built between 1842 and 1879 showing an element of stone rubble masonry at the north-west end. Facing north. (9436)



Building 15 General view of the interior at ground floor level, facing south-east with remains of pulping vats. (9418)



Building 15 General view at upper floor level facing north-west. (8234)

3.16 Building 16 Extension of Stock Preparation Area

At ground level this area largely represents the North Range that was built over the river by 1879 with its wide, flat arches bridging the river channel. There is a small area of rubble stonework surviving at the S end of the E wall which may represent a fragment of the original structure and so suggesting later, extensive rebuilding.

It is not known whether this building was of one or two storeys but the creation of the present first floor has completely removed the upper part/roof of this early range leaving the walls as fragments. It is at first-floor level that this area may be considered an extension of the Stock Preparation Area.



Building 16 The south end of the east wall is showing an area of rubble stonework, the beginning of the low arch spanning the river and a blocked window. Facing west. (9548)



Building 16 South-east elevation, facing north showing the wide, low arch spanning the river. (9565)



Building 16 South-east wall, inner face (north-west) showing blocked window openings. Facing south-east. (9478)



Building 16 North-east gable end, facing south-west. (9467)



Building 16 South end of the north range showing a section of stone rubble walling in the south-east wall. The corridor to the right of the picture is a gap between Bdgs. 16 and 15. (9486)



Building 16 South elevation facing into gap between Bdg. 16 to the north and Bdg. 23 to the south showing one of several blocked windows. Facing north. (9491)

3.17 Building 17 Pump House

This structure contains some rubble masonry in its walls which are presumably part of the structure and possibly built in 1889 which incorporated a vertical-shaft water turbine. The brickwork suggests that the building was subsequently extensively remodelled.



East elevation of the Pump House (Bdg.17) showing the lower section of stone rubble walling with brickwork to the south and above. (9532)



Interior of the Pump House, south part facing north-west – the turbine pit is located beneath the jettied structure, top right. (9514)



Figure Drive shaft bearing in the west wall of the northern part of the Pump House (8499).

3.18 Building 18 Leat-Head Race area

A covered area open to the E with the Pump House (17) to the north, Bdg. 15 to the west and the north walls of Bdgs. 19 and 20 to the S is south probably covered over in its present form in early 20th century



The east elevation of the building over the Leat/Headrace. (8084)

3.19 Building 19 Compressor Room

A single steel-framed and brick structure that was built after 1904 and was probably part of the 1920s development of the mill. The infill brickwork is mainly laid in Flemish Garden Wall bond with an area of Flemish bond to the east elevation. Steel framed windows.



Building 19 The Compressor Room is located in the lower left had part of the east elevation of this large building which includes the Power House Bdg. 20. (8080)



Building 19 Compressor Room, south elevation. (9535)

3.20 Building 20 Power House

This building presented a pair of gables to the south forming the west and central parts of the building with a later section of infill between this building and the Compressor Room Bdg. 19 to the east which has a metal tank on its roof. The brickwork of both elements is laid in English bond. The element defined by the pair of gables to the south was added after 1904 and probably forming part of the 1920s development of the mill, with the eastern section being a later infill.



Building 20 Power House, south elevation, west part, facing north-east. (9543)



Building 20, south elevation, east part showing the later infill section with a tank on the flat roof. (9534)



Building 20 Power House, interior east part facing north (9540)



Building 20, Power house, interior, west part facing north (9542)

3.21 Building 21 Compressor Room

The south elevation of this building and the adjacent building to the west (Building 22) shows different phases including a former gable end to this element which has been raised in height (see also 22). The north wall of this building also has a former gable wall embedded in the now higher wall but whether these represent the two gables of the same building is uncertain – a measured plan would help in the interpretation. The first floor is probably a later insertion or alteration and some blockwork 'offices' have been constructed at first floor level – these are of no significance.

The 1904 map shows a building in this area which may relate to the lower gables that are visible in the brickwork with the raising of the building height possibly forming part of the 1920s works to the mill.



Building 21 Compressor Room, south elevation facing north-east. The gable of an earlier, lower building can be seen which is similar to another gable within the wall of the Reactor Room to the west, illustrated below. (8340)

3.22 Building 22 Reactor House

The south wall shows similar multi-phase construction including evidence for a gable within the heightened wall similar to the gable within the south wall of Building 21. The earlier gable elements are constructed in English bond brickwork, as is the raised wall above although a large section in between these two gables is constructed in Flemish Garden Wall bond. At upper level there is a vertical straight joint in the brickwork and there are a number of blocked and later inserted openings. And possibly one of the original openings is a pedestrian door at ground level which has blue brick dressings to the sides and forming the segmental arch over.

In the west wall adjacent to the north-west corner there is a remnant of a brick archway, now blocked, which extended beyond the line of the present north wall.



Building 22 Reactor House, south elevation, west part, facing north-west. (8337)



Building 22 Reactor House, south elevation, east part facing north-east. This shows a much altered brick elevation with a vertical joint in the brickwork to the left of the downpipe. (8339)



Building 22 Interior of the Reactor House taken from the upper level within Bdg.21, facing south-west. (8353)



Building 22 North-west corner of the Reactor House showing the arch cut by the north wall of Bdg. 22. (9545)



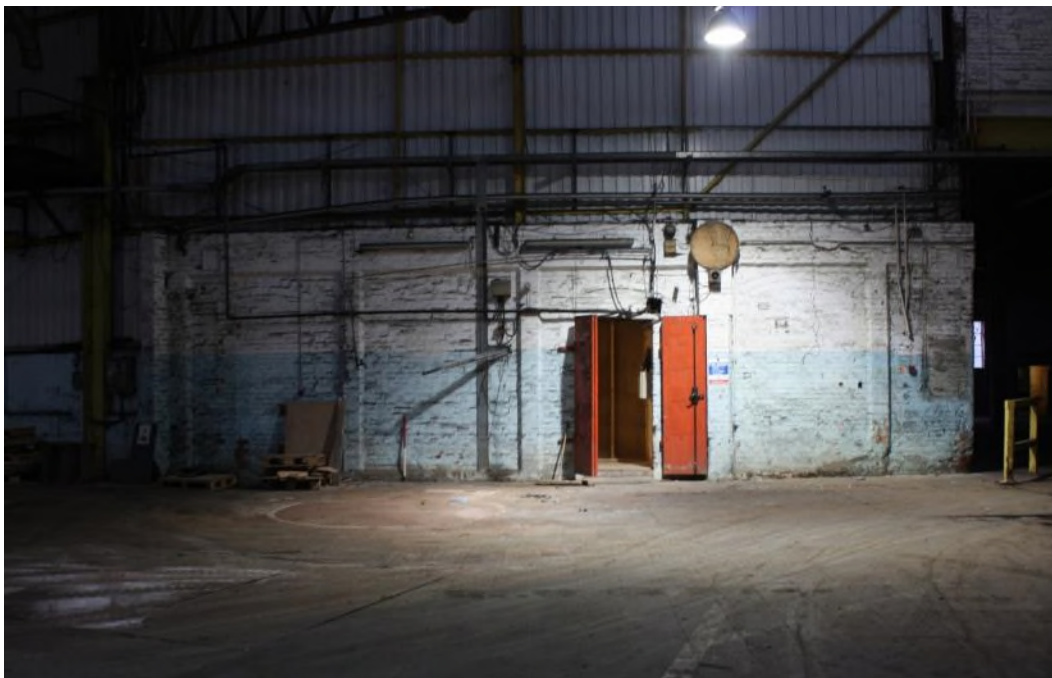
Building 22, west wall showing the partial arch taken from within Bdg. 23, facing south-east. (9550)

3.23 Building 23 Main Paper Making area

This is a large open area that incorporates the areas of several buildings of probable 19th century date, elements of which survive within the north, east and west walls. This part of the complex has been considerably extended to the south-west in the mid-to late 20th century, the extension involving the removal of the back corner of the adjacent cottage.



Building 23 Interior. General view looking south-east. (8303)



Building 23 Brick wall to lower level of the west wall, north part immediately east of the Office building. (9593)



Building 23 Interior, north-west corner looking north into Bdg. 6. The brickwork of an arch-headed window can be seen to the right of the inserted opening. At the higher level the wall is constructed in blockwork.



Building 23 Interior, north wall, central section facing north-west showing circular openings in the upper part of the wall. (8336)

3.24 Building 24 Passages and Rooms including Office

This area was an open, uncovered space to the north of Building 23 and south of the east end of Building 6 as shown on the 1904 map.

3.25 Building 25 First Aid Room

Demolished before first visit to the site

3.26 Building 26 Site Plant Engineer's Office

Late 20th century
Not recorded.

3.27 Building 27 Engineer's Office

Late 20th century
Not recorded.

3.28 Building 28 Electricians' Workshop

Brick gabled elevation to the north facing the Power House, the brickwork laid in stretcher bond. To round openings either side of a central pilaster high end the gable. Internally, the building retains a travelling hoist but the generator and possible steam engine that were housed here had been removed at time of the survey.



Building 28, north elevation facing south-east. (8360)



Building 28 Interior facing south. (8371)



Building 28 Interior facing north showing the crane running on rails against the side walls. (8368)



Building 28 Travelling hoist.



Building 28 Travelling hoist manufacturer's name in iron beam.

3.29 Building 29 Reel shed

Pre 1967, probably mid-20th century
Not recorded.

3.30 Building 30 Engineering Workshop and Instrument Department

Pre 1967 steel-framed building. Probably mid-20th century
Retains travelling hoist.



Building 30 West elevation facing north-east. (8375)



Building 30 Interior facing south. (8376)

- 3.31 Building 31
Offices in bridging structure between Power House (20) and Bdgs 28 and 30.
1904 – 1967, post 1920s
- 3.32 Building 32 Garage
Pre 1967
Not recorded
- 3.33 Building 33 Stores
Pre 1967
Not recorded
- 3.34 Building 34
Civil workshop/Carpenters' Workshop
Post 1967
Not recorded

Building 35 Clock Tower and Offices

Red brick building with a clock tower surmounted by a cupola. Built in 1897 to commemorate the Diamond Jubilee of Queen Victoria.



Building 35 Offices and clock tower, facing north-east. (8294)

4.0 CONCLUSION

- 4.1 The examination and recording of the buildings of Silverton Mill indicated that there were no elements of the mill that could be dated from before 1850 surviving on site. Three elements contain stonework that are probably related to before 1879; the 'angled range' (within Bdg. 15), the 'north range' (within Bdg. 16) and the Pump House (Bdg. 17). However, even in these structures the stonework appears to be no more than remnants that have been substantially rebuilt in the later 19th century. All these earlier elements have been truncated, removing roofs and any upper structures to allow the construction of the upper floor area which, in the area of Buildings 15 and 16, overlays the earlier structures but bears little relation to their layout. There was a major phase of building undertaken in the 1920s to the south-east part of the site in particular but even here, later changes have impacted on the original form of the buildings.
- 4.2 Overall, the fragmentary standing structures had very limited architectural or archaeological interest.

APPENDIX I
Assessment of Significance of
Silverton Paper Mill
2013

SILVERTON PAPER MILL, DEVON

Assessment of Significance

1.0 INTRODUCTION

- 1.1 Silverton Paper Mill is a large industrial complex located in the valley of the River Culm, a tributary of the River Exe approximately 7km north-west of the urban edge of Exeter (NGR SS 977, 010). The mill buildings straddle the river which is the parish boundary between Silverton to the north and Broad Clyst to the south, the majority of the site being in the latter parish.
- 1.2 The paper mill is owned by the National Trust and forms part of the Killerton Estate. The park of Killerton House occupies an area of higher ground within a broad sweep of the river immediately west of the mill. Paper production at the mill ceased in 1999 and the company who leases the property is due to vacate the premises. Some works are required to repair elements of the mill complex which fall within the terms of the lease and the possibility of demolishing parts of the mill are being explored as an alternative.
- 1.3 Forum Heritage Services (FHS) have been commissioned by the National Trust to undertake an assessment of the significance of the mill complex to inform the decision-making process in relation to repair or demolition options. Bob Edwards BSc PG Dip IHBC MCIfA, Director of FHS undertook the assessment of significance and prepared this report after a site visit made on 17 December 2012. A further visit was made on the 12th February 2013 to undertake some photographic recording of the mill. This report does not include the residential/office elements of the site.
- 1.4 It is understood that the buildings have been visited by a structural engineer to assess their condition. The conclusions of this survey have not been made available to the present author at this stage as both reports will be in preparation.

2.0 THE BUILDINGS

- 2.1 A visual inspection and analysis of the buildings that make up Silverton Mills shows that whilst numerous phases of development can be identified, the various elements representing these phases are highly fragmentary. It is difficult to find any element of development at the site that has not been subject to some loss or change. Perhaps the most intact part of the group within the industrial complex is the clock tower building (35) and the Electricians' Workshop (28).
- 2.2 Analysis of the historic maps suggests that the earliest built elements are likely to be found in the south-east part of the site in the area between the leat and the river. There is a brick wall, the remains of a building that stands isolated within the south part of Bdg. 15 to the north of Bdgs. 20 and 21 but it is not possible to give a positive date for this fragment or say anything about its function. It is doubtful whether this represents part of a mid-19th century building. Other than

this possible early fragment, none of the structures shown on the Tithe map on the island between the leat and the river can be identified on site. On the south side of the leat there was one large building that extended between the water course and the boundary of the garden of Bridge House. Embedded within the north and south walls of Bdg. 21 there are brick gables but it is difficult to be certain whether these represent an element of the building shown on the Tithe map or even if they are two ends of the same building.

- 2.3 The next phase of development included the angled range built along a spur of land extending north-west from the 'island between leat and river that appears to have had a channel between the two on its west side. This angled range was added between 1842 and 1879 and was probably originally constructed, at least in part, in stone. Buildings incorporating stonework are only found in the area of this angled range and in the adjacent Pump House (Bdg. 17) but the use of stone is only partial suggesting a considerable level of reconstruction in brick. Part of the north-east wall of the angled range is still a standing wall with stone at its northern end but otherwise is built in brick. It would appear that the south-eastern end of this wall has been removed. The south-west wall of the angled range has been removed although a short section of wall attached to a later wall would appear to be set at the correct alignment to represent a fragment of this wall. The west jamb of the doorway at the north-west end of the angled range is also at a different angle to the end wall and may be close to being at a right angle to the north-east wall of this range – possibly a remnant of the end wall of this 1842-1879 building.
- 2.4 By 1879 the north range, a mainly brick-built range extending northwards over the river channel and connected to the angled range had been built. In 1885 this was identified as the Sorting Room. This structure appears to at least partly survive as Bdg 16 – the brick arches spanning the river are visible in the two side walls, the south-eastern wall incorporating a small area of rubble stonework. Both side walls to the north-west and south-east have blocked window openings. An addition had been made to the north-west side of this range, shown on the 1904 OS map, and the north wall of this structure appears to survive on the north bank of the river in the area where the river is open.
- 2.5 Also built by 1879 was a large part of the northern element of the finished goods warehouse which on the plans of 1879 and 1885 was a long detached range, identified in 1885 as the Esparto Sheds although the 1889 OS map shows two smaller detached blocks rather than a long range and a tramway ran along its south side. In 1904 the range was complete and had been extended to the west and south-east infilling the gap between this range and the square plan building shown on the 1879 map in the area of Bdg. 11. Without a detailed plan of the site it is difficult to assess the survival of this part of the range. There is a section of wall in the area between Bdgs. 7 and 8 where there are two phases of brick walls built back-to-back but neither of these appear to align with the north wall of the western part of Bdg. 3. The south wall of Bdg. 3 was originally external and blocked openings are visible in the brickwork. Watts and Watts question whether this wall has been rebuilt.

- 2.6 The complex was also extended westwards along the area between the leat and the river and resulted in the covering over of much of the leat. This range which included a long narrow detached building parallel to the main part of the range lies within the northern part of Bdg. 23, now a large, open area. By 1885 small additions had been made to the south of this range and the range was linked to the main building by 1889.
- 2.7 By 1905 Bdg. 6, lying parallel to the long range forming part of Bdg. 3 had been added leaving a narrow alley, the Tunnel Passage (Bdg. 5), between the two ranges along which a tramway extending to the east as far as the north end of Bdg. 16 ran. Bdg. 6 was accompanied by a structure to the south which infilled the area between this range and the earlier buildings extending westwards shown on the 1879 map. This infill appears to have been incorporated into the northern part of Bdg. 23. Comparison between the two editions of OS maps suggest that there had been some reorganisation or rebuilding of the south-east part of the complex from where the mill was powered. Further changes were made to this area in the 1920s including the construction of the present Power House (20) and the Electricians's Workshop (28). The early 20th century also saw additions being made to the northern edge of the complex, Bdg 3 being widened in the eastern part and additional structures added to the east creating Bdgs. 8, 9 and 10.
- 2.8 Whilst historic maps show how the plan of the complex developed, they do not illustrate how changes were made to the upper parts of the buildings. It is not known whether buildings such as the angled range or the north range were single storey or two storey buildings. Today they both lie beneath an upper storey which does little to respect their footprint and areas between, some of which were open spaces, have also been floored over so that at first floor level the form of the buildings below are not evident. Changes in building height have also been made to Bdg 3 which has been raised, the floor of the salle being extended over the former open space of the Tunnel Passage (5). In the south-east part of the site, earlier buildings have been raised in height as can be seen in the variations in brickwork on the south elevation of Bdgs 21 and 22.

3.0 ASSESSMENT OF SIGNIFICANCE

3.1 The assessment of significance has been informed by an understanding of heritage values attributed to the site based on the criteria set out in the English Heritage guidance document *Conservation Principles Policies and Guidance for the Sustainable management of the historic environment* (2008). Figure A1 sets out the various aspects of heritage value; Evidential, Historic, Aesthetic and Communal. These headings prompt an assessment and measurement of value.

3.2 Whilst the assessment under the above headings considers the whole site, it is necessary to make management decisions about individual elements of the complex. Table I sets out an assessment of the significance for each of the numbered elements of the complex and makes a recommendation for future management using the following:

- A Of no historical significance. Removal or demolition would have no negative impact on the site's historical significance
- B Of limited historical value. Retention would be desirable but equally the feature/building could be accurately recorded before removal. Or the building/feature could be retained ex-situ?
- C Of significant historical value. Should be retained

3.3 *Evidential value*

Evidential value derives from the potential of a place to yield evidence about past human activity. Evidential value derives from the physical remains or genetic lines that have been inherited from the past. The ability to understand and interpret the evidence tends to be diminished in proportion to the extent of its removal or replacement.

3.3.1 The removal of much of the plant and machinery from the buildings have severely reduced the evidential value of the complex – buildings that were constructed to house machinery lose much of their meaning when the equipment is removed.

3.3.2 The mills complex incorporates fragments of buildings of varying dates but it would appear that there is little fabric that can be positively identified as dating from before 1842 (i.e. buildings that are shown on the Tithe map and which would possibly relate to the earliest phases of the use of the mill site for paper-making).

3.3.3 Elements of the complex dating from 1842 – 1885 can still be identified within the structure, in particular the angled range within Bdg. 15, the Pump House (Bdg. 17) and the north range which served as the Sorting Room in 1885 (Bdg. 16). However, these elements are fragments that can be recognized in plan but their original form has been heavily altered with the construction of a first floor level which has obliterated the upper parts of these buildings. Similarly, other late 19th century elements of the complex have been subject to various levels of rebuilding, removal and considerable alteration to their upper level with the creation or reorganization of a first floor level. It appears that the structures associated with the power generation of the late 19th century mill have all been removed or, if elements survive, they are highly fragmentary and so have minimal evidential value.

- 3.3.4 The early 20th century phases of development, in particular, in the area of the power house are more complete but without the plant have low evidential value, reflecting only the investment in new buildings that was made in the period c.1920.

Evidential Value: Moderate

3.4 *Historical value*

Historical value derives from the ways in which past people, events and aspects of life can be connected through a place to the present. It tends to be illustrative or associative. The idea of illustrating aspects of history or prehistory – the perception of a place as a link between past and present people – is different from purely evidential value. Illustrative value has the power to aid interpretation of the past through making connections with, and providing insights into, past communities and their activities through shared experience of a place.

- 3.4.1 Silvertown Mills has historic value as an historic mill site, originally a grist mill for flour which was transformed into a relatively large industrial complex in the late 18th century and continued to be a major source of employment in this rural area into the late 20th century. However, the apparent complete absence of any fabric that dates from the earliest phases of the mill functioning as a paper mill, together with the limited survival of any fabric that dates from the mid 19th century phases means that there is minimal archaeological evidence within the fabric for the paper-making process on this site. Although there are more physical remains of buildings dating from later 19th century, these too are fragmentary and do not provide a solid basis for understanding the industrial processes undertaken here at that time. No machinery survives from these phases of the mill's development. The management of the River Culm, which has been a fundamental aspect of the processes undertaken here, whether to supply power or its water being utilized in the industrial process, is a significant and visible aspect of the site.
- 3.4.2 The mill can be considered to have some value as a reminder of the once flourishing paper-making industry that was particularly associated with Devon where there were 41 paper-making mills in the early 19th century but which has now largely been lost from this country through pressure from cheaper imported goods.
- 3.4.3 There are no known significant historical associations with people who have been influential in the technological development of the paper-making process. There are some listed paper mills in England that both retain 19th century or earlier fabric and which have historical associations, for example, the Portal's mills at Laverstoke in Hampshire; the Portals developed the use of watermarking paper and made paper for the production of bank notes for the Bank of England.
- 3.4.4 The construction of a shed for the storage of torpedoes during WWII is of historic interest, representing the military's approach to concealing munitions away from obvious military centres.

Historic Value: Moderate

3.5

Aesthetic value

Aesthetic value derives from the ways in which people draw sensory and intellectual stimulation from a place. Aesthetic values can be the result of the conscious design of a place, including artistic endeavour. Equally, they can be the seemingly fortuitous outcome of the way in which a place has evolved and been used over time. Many places combine these two aspects – for example, where the qualities of an already attractive landscape have been reinforced by artifice – while others may inspire awe or fear. Aesthetic values tend to be specific to a time and cultural context, but appreciation of them is not culturally exclusive.

3.5.1

The present mill complex has limited aesthetic value. Much of the most visible elements of the buildings are clad in profiled sheet metal which gives the site a predominantly modern industrial/warehouse character.

3.5.2

The ability of the site to provide intellectual stimulation in terms of buildings archaeology is limited as the most interesting elements of the site are within areas where there are serious access issues on the basis of health and safety.

Aesthetic Value: Low

3.6

Communal value

Communal value derives from the meanings of a place for the people who relate to it, or for whom it figures in their collective experience or memory. Communal values are closely bound up with historical (particularly associative) and aesthetic values, but tend to have additional and specific aspects.

Commemorative and symbolic values reflect the meanings of a place for those who draw part of their identity from it, or have emotional links to it. Social value is associated with places that people perceive as a source of identity, distinctiveness, social interaction and coherence. Some may be comparatively modest, acquiring communal significance through the passage of time as a result of a collective memory of stories linked to them.

The social values of places are not always clearly recognised by those who share them, and may only be articulated when the future of a place is threatened. They may relate to an activity that is associated with the place, rather than with its physical fabric. Compared with other heritage values, social values tend to be less dependent on the survival of historic fabric. They may survive the replacement of the original physical structure.

3.6.1

Communal value is problematic to assess without engaging with the communities that have a relationship with Silverton Mills. These communities include local residents, for whom the mills may be both a part of the social history of their area and a familiar feature of their landscape and daily experience, as well as the employees and former employees for whom the mills provided a structure and background for their working lives, social interactions and friendships.

- 3.6.2 One element of the complex has commemorative value; the clock tower building which was constructed to commemorate the Diamond Jubilee of Queen Victoria although this association is not overtly expressed.

Communal Value: Not adequately assessed but likely to be Moderate.

3.7 *Designations*

- 3.7.1 None of the buildings or structures within the Silverton Mills complex are designated as heritage assets i.e. there are no listed buildings or Scheduled Monuments on the site and the area is not designated as a Conservation Area.

- 3.7.2 To make an assessment of the comparative significance of the buildings, a search of the National Heritage List for England identified 39 listed building entries where 'paper mill' was a term in the list description and related to a structure surviving on the site. Two entries related to buildings on one site and several entries related to mill houses with elements of a paper mill attached or flour or cotton mills which had also had a paper mill function in its history within the existing buildings. A feature of nearly all the paper mills that are listed is that they are predominantly of 18th or early to mid-19th century fabric with a few examples that have 17th century fabric. A few examples retain water wheels and one a stationary steam engine. Two examples can also be considered to have specific historical associations that add to the special interest of the listed building, for example, Laverstoke Mill, Hampshire, which was owned by the Portal family who developed watermarks and produced bank note paper for the Bank of England. Five examples of listed paper mill structures have been selected for comparison purposes, their descriptions are set out at the end of this Appendix.

- 3.7.3 The listed paper mill site that may be seen as the closest comparison to Silverton Mill is the **Countess Weir Mill, Exeter** (1) which was partly roofless at the time of its listing. The list description acknowledges:

Although the building is in poor condition it is a significant survival from the C19 mill and of interest in a national context. It is of historic interest as evidence of an industry that was once important to the economy of Devon, which had 41 paper mills in 1820, and to the industrial archaeology of the Exe.

However, whilst part of the building was roofless, there remained a substantial 13 bay building of probably early 19th century date which contained a series of rooms/spaces and most of its 19th century roof of king post trusses survives. There is nothing at Silverton Mill that can be considered to parallel the structure at Countess Mill in either date or level of survival.

- 3.7.4 Another Devon example is **Tuckenhay Mill** (2) which has two listed elements, converted to residential and holiday let uses. The earliest building is of early 19th century date and of three storeys and cellar. The later building was constructed in 1889 and survives substantially intact including king and queen-post roof trusses. This element of the site also includes a large Italianate clock tower and features such as louvered ventilator to the roof and some cast-iron framed windows.

3.7.5 **Laverstoke Mill** (3) in Hampshire has a modern list description which goes into some detail on the architectural and historic interest of the buildings which were built in 1854 and 1881. Whilst there has been sub-division within the buildings, both survive substantially intact. Laverstoke Mill is a site of importance in the history of paper-making as the use of watermarks was developed by its owners, the Portals, and printing for the Bank of England banknotes was undertaken here until the mid-20th century. It was also one of the largest paper mills in the country and the summary of importance notes that the one of the buildings ‘retains its external authenticity’ and that ‘both buildings have significant historic and architectural interest in the context of the production of bank notes for the Bank of England and also have a strong group value with the listed mill cottages... and Laverstoke Mill House’.

3.7.6 Two other sites, **Weir Mill** (4) in Kent and **Wookey Hole Paper Mill** (5) Somerset represent paper mill structures that date from the 18th – early 20th century. Weir Mill is partly of the 18th century and, importantly, retains its mill wheel. Wookey Hole Paper Mill was built in c.1860 and, despite some later alterations, stands as an example of a relatively large industrial building of the late 19th century.

3.8 *Silverton Mill Buildings: Assessment of Significance*

An assessment of the significance of the individual elements of the mill has been made, as required by the brief.

**TABLE I
ASSESSMENT OF SIGNIFICANCE OF BUILDING ELEMENTS**

- A. Of no historical significance. Removal or demolition would have no negative impact on the site's historical significance
- B. Of limited historical value. Retention would be desirable but equally the feature/building could be accurately recorded before removal. Or the building/feature could be retained ex-situ?
- C. Of significant historical value. Should be retained

BUILDING	DATE & COMMENTS	SIGNIFICANCE
1	Pallet shed – unlocated on plan 1904 – 1967	
2	Admiralty Shed Building used for storage of torpedoes during WWII	B
3	Finished Goods Warehouse 1842-1879 but considerably altered and extended. It is possible that the N wall is a later rebuilding. The Watts's report suggests that the S wall may also be later rebuilding, as noted in the description of 5 (p11). Extended to W and E between 1889 and 1904. This structure and the adjoining Tunnel Passage (5) have been raised in height in 20 th century to create a sale (inspection area)	B
4	Paper Cutting and Storage Post 1904 extension to W of 6.	B
5	Tunnel Passage. This area is not a building but a former open alleyway between 3 to the N and 6 to the S, created between 1889 and 1904. Covered over in 20 th century to form salle above this area and 3. Historic maps show tramlines running down this alley to the N end of the former Sorting Room. These are no longer visible.	
6	Paper-making Room that housed Paper Making Machine No 3, now removed. 1889 – 1904	B
7	Starch Kitchen The Watts's report says that this area was occupied by a building on the 1889 and 1904 maps but it is only the northern part that aligns with Finished Goods Waterhouse (3) to the W that may have formed part of the Esparto Sheds shown on the 1779 and 1885 maps as well as the later OS maps. The central and southern part of this area was open, surrounded by structure until after 1904. The building phase plan compiled by the NT is incorrect in identifying it as Pre 1905.	
8	Dissolving Unit Post 1904, probably 1920s built against the N wall of 7. This is not Pre 1905 as suggested in the building phase plan compiled by the NT.	B
9	Tank Room Post 1904, probably 1920s built against N wall of 7	B
10	Grass Boiler House Post 1904, probably 1920s built against N wall of 7	B
11	Store – former Pulp Shed 1920s, substantially rebuilt	A

12	De-inking plant Post 1904	B
13	Sand filters Post 1904	B
14	Conveying Area Post 1904	B
15	<p>Stock Preparation and Pulpers This area incorporates the areas of several different buildings that were shown on maps from 1879 including the angled range built alongside the south back of the river. A wall, probably largely rebuilt but containing some stonework at its NW end, is a remnant of this structure. If this element was complete then its retention would be preferable but it is only a fragment.</p> <p>This area also extends S into the area of structures that were associated with the Engine House as shown on the 1885 map. It is probable that at least some of the earlier buildings in this area have been raised to two storeys or their upper storeys have been replaced by the present upper floor.</p>	B
16	<p>Extension of Stock Preparation Area Rather than being an extension to another element, this area probably represents the North Range that was built over the river by 1879 with its wide, flat arches bridging the river channel. There is a small area of rubble stonework surviving at the S end of the E wall which may represent a fragment of the original structure and so suggesting later, extensive rebuilding.</p> <p>It is not known whether this building was of one or two storeys but the creation of the present first floor has completely altered the upper part/roof of this early range leaving the walls as fragments.</p>	B
17	<p>Pump House This structure contains some rubble masonry in its walls. Possible built between 1889 and 1904 – on the latter map a structure built partly over the river is shown.</p>	B
18	<p>Leat-Head Race area A covered area open to the E with the Pump House (17) to the N, Bdg. 15 to the W and the N walls of 19 and 20 to the S. Probably covered over in its present form in early 20th century</p>	B
19	<p>Old Chalk House/Lubrication Store Post 1904, possibly 1920s</p>	B
20	<p>Power House Post 1904, probably 1920s with a later 20th century section of the S elevation to the E. Plant being removed at time of writing report.</p>	B
21	<p>Compressor Room Post 1904 The S elevation of this building and the adjacent building to the W shows different phases including a former gable end to this element which has been raised in height (see also 22). The N wall of this building also has a former gable wall embedded in the now higher wall but whether these represent the two gables of the same building is uncertain – a measured plan would help in the interpretation. The first floor is probably a later insertion or alteration and some blockwork ‘offices’ have been constructed at first floor level – these are of no significance.</p>	B
21A	<p>The NT building phase plan identifies this small element as being Pre 1905. As it is part of a range that probably dates to the 1920s within an area of the complex that underwent major</p>	

	alteration in the early 20 th century, it is not part of the pre 1905 mill.	
22	<p>Reactor House Post 1904</p> <p>The S wall shows similar multi-phase construction including evidence for a gable within the heightened wall similar to the gable within the S wall of 21. The area between appears to show a straight joint suggesting that this central part was higher than the two ranges either side. This division between the W and central ranges is not reflected at ground floor level.</p> <p>In the W wall adjacent to the NW corner there is a remnant of a brick archway, now blocked, which extended beyond the line of the present N wall.</p>	B
23	<p>Main Paper Making area</p> <p>This is a large open area that incorporates the areas of several buildings, elements of which survive within the N, E and W walls. This part of the complex has been considerably extended to the S and SW, the latter extension involving the removal of the back corner of the adjacent cottage.</p>	B
24	<p>Passages and Rooms including Office Probably covered post 1904</p>	B
25	Demolished	
26	<p>Site Plant Engineer's Office Late 20th century</p>	A
27	<p>Engineer's Office Late 20th century</p>	A
28	<p>Electricians' Workshop Post 1904 – probably 1920s</p> <p>Retains travelling hoist but generator and possible steam engine that were housed here have been removed.</p> <p>Good N elevation and largely complete structure with a later extension to S. Historically, this is not a key building in terms of understanding the paper-making process and so has limited significance.</p>	B
29	<p>Reel shed Pre 1967, probably mid-20th century</p>	A
30	<p>Engineering Workshop and Instrument Department Pre 1967, probably mid-20th century</p> <p>Retains travelling hoist</p>	A
31	<p>Offices in bridging structure between Power House (20) and Bdgs 28 and 30. 1904 – 1967, post 1920s</p>	B
32	<p>Garage Pre 1967</p>	A
33	<p>Stores Pre 1967</p>	A
34	<p>Civil workshop/Carpenters' Workshop Post 1967</p>	A
35	<p>Clock Tower and Offices Built in 1897 to commemorate the Diamond Jubilee of Queen Victoria</p>	C
36	<p>Covered Way to N of Finished Goods Warehouse Pre 1967</p>	A

4.0 CONCLUSIONS

- 4.1 Silverton Paper Mills is not a site without interest but it is considered that there are no elements within the complex at Silverton Mills that are of sufficient special architectural or historic interest, either individually or as a group, to merit listing or scheduling as an ancient monument.
- 4.2 This assessment of significance has examined the group as a whole under the four headings of *Evidential, Historic, Aesthetic and Communal Values*. Overall, it is considered that whilst values under each of these aspects can be identified, none can be considered to have High value. It should be noted that Communal value has not been properly considered as there has been no opportunity to engage with the communities for whom the mill may have significance.
- 4.3 Examination of listed paper mill buildings in England suggests that there are up to 30 mill complexes where substantial remains of mills that have operated at some time as paper mills. These buildings generally retain 18th or early to mid-19th century fabric include sites with water wheels or other machinery in-situ or historical associations that contribute to the special interest of the listed building. The five examples that are discussed in more detail in this report all survive with much of their fabric intact although most do not represent a complete site – the elements that do survive are generally roofed buildings of two or three storeys with historic roof structures and include features such as mill wheels or have notable historic interest. There are no built elements within the main complex at Silverton Mill that can be considered complete – even those parts built in the 1920s (Bdg. 20) in the south-east part of the site have lost side walls so that there are only gable walls standing.
- 4.4 When the various structures of the mill are examined individually it is considered that there are few elements that rank at level C significance i.e., they are of Significant historical value and considered to be worthy of retention. Most of the historic elements of the mill have been assessed at Level B, Limited historical value and where retention is preferable but ‘preservation by record’ may be considered an option. The difficulty with a complex of buildings such as Silverton Mills is the inter-relation of the elements and the fragmentary nature of the remains of the buildings. This means that if parts are demolished from the edges of the building then the remaining parts that are left exposed are unlikely to have been intended to be external and so the appearance is almost certain to be compromised. There is also a risk that demolition will result in structural issues for the remaining elements.
- 4.5 In terms of assessing which elements of the complex could be demolished without adversely impacting on the historical significance of the mill it is suggested that the following buildings could be removed after recording:
- Building 11, former Pulp Store which has been largely rebuilt
 - Building 12, De-inking plant
 - Building 13, Sand filters
 - Building 18, Covered area to the leaf head race
 - Building 19, Old Chalk House/Lubrication Store
 - Buildings 26, 27, 32, 33 and 34

- 4.6 It is considered that, on the basis of historical interest alone, the remaining elements of the complex may be considered to have sufficient interest to merit their retention although the loss of the machinery from the complex results in a major loss in the potential to understand the processes involved in paper-making that occurred here.
- 4.7 It is acknowledged that any significance assigned to the complex will need to be balanced against other issues such as the structural condition of the buildings, the potential costs of repair and the potential to find an economic use that will support their on-going repair and maintenance. The risk is that if any further elements above those listed above are removed, there is no obvious point at which demolition should stop – there is not a substantial early core of buildings that the complex can be ‘taken back’ to. It is a case of keeping most of the complex or nothing.

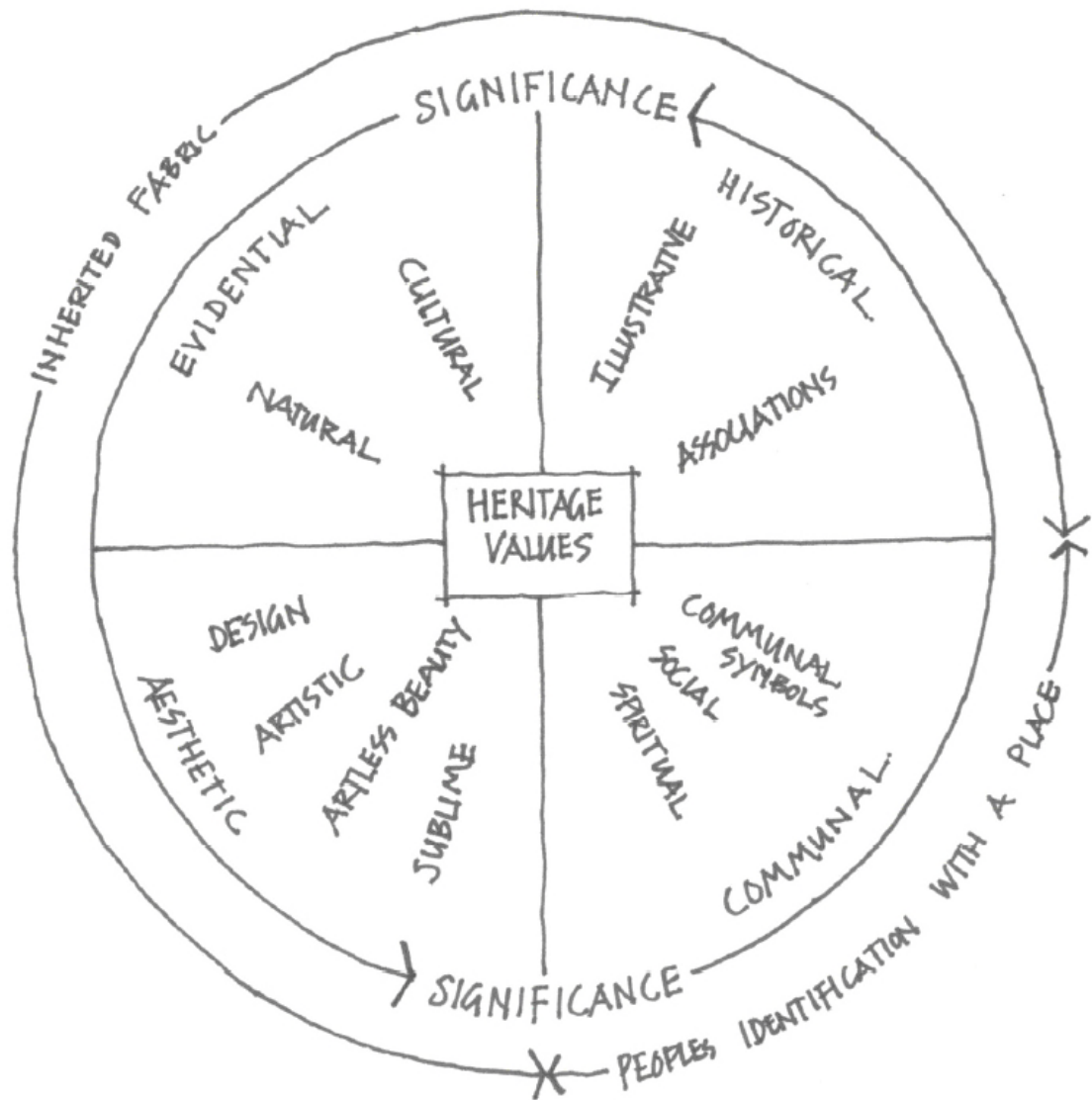


Figure A1 'Heritage Wheel'

Selected Examples of Listed Paper Mills

1. Countess Weir Paper Mill, Mill Lane, Exeter, Devon

Grade II

List Description:

Paper mill. Disused and in poor condition at time of survey. Probably early C19. Brick laid English bond; natural slate roof, gabled at ends (partly roofless); cast iron windows. Plan: Sited on an island formed from the division of a leat off the River Exe and surrounded by controlled water. The existing building is all that survives above ground, apart from some low walls, of what was a large industrial complex by the 1880s. Rectangular 13-bay building, on a NW/SE axis, which once extended further at both ends. The NW five bays, divided from the rest of the building by a full-height brick wall, are now roofless and were evidently partly or wholly 2 storey at one time with two tiers of windows in the rear (W) wall and evidence for joist sockets on the NW end wall. The rest of the building is single storey and divided into two by a timber-framed crosswall. The three SE bays contain a small office and the remains of a pit parallel to the end wall. Exterior: Single storey, partly 2 storey at the NW end at one time. Asymmetrical 13-bay E front with segmental-headed windows with brick arches and small-pane cast iron fixed windows (glass missing) that may have had an opening pane in the centre, judging by the pattern of the glazing bars. 2 round-headed doorways, the right-hand (N) doorway taller with surviving timber frame, door missing. The next doorway to the left (S) is also round-headed with a vertical plank door with strap hinges and simple metal latch. The third doorway, which is segmental-headed with a ledged and braced vertical plank door is probably a conversion from a window, judging from a c.1880 model of the site. The rear (W) elevation also has cast iron windows with 2 tiers of windows in the N five bays. The building evidently extended further to the N at one time, evident in the stump of a longer front wall and the model indicates that there was a tall lean-to attached to this end. The building also extended further to the S - the SE end wall cuts one of the rear windows in half and the rear wall here survives for another two window bays. INTERIOR: The S wall of the roofless section contains one metal-framed slot and another with a metal sill, relating to circular marks on the wall and presumably for drive shafts with wheels. There are no joist sockets in this wall suggesting that it is secondary or that this portion of the building was not floored throughout. The central cell has three king post and strut trusses with a ridgeboard and two tiers of trenched purlins. A vertical slot on the front wall with a neat bullseye opening accommodated a clock. Two of the trusses have metal plates fixed to them, probably for fixing machinery of some sort. The timber-framed partition with slender scantling is built up below the tie beam of a truss and has two slim vertical braces. The S end cell incorporates a roofed room made of partitions of vertical planks and retains some shafting (not in situ) and gear wheels. There is a pit parallel with the end wall, towards the front. The end wall, although evidently not the external wall at the time when the model was made, incorporates two blocked round-headed openings. Special Features. A C19 sluice gate with later restoration survives about 5m N of the building. It controls the leat that passes round the W side of the mill. A shaft to the S turns a cogged iron wheel which turns a bar ratchet fixed to the gate. Historical Note: According to documentation collected by the Exeter Archaeological Field Unit there was a paper mill on this site from at least the late C18 and possibly far earlier. This was Higher Mills at Countess Weir. Newspaper accounts describe it as being "entirely destroyed" in 1816 and the rag house burnt in another fire of 1856, although it is not clear where this was sited. In 1869 Messrs Harris and Martin were described as having "built a new set of mills". Production is said to have ceased in 1884 and the 1905 OS map shows that most of the buildings had been demolished by then. The paper mills seem to have transferred from using rags for paper-making to esparto grass from N Africa. A scale model of considerable local interest survives, probably dating from c.1880 or perhaps a little earlier. This is said to have been made by an apprentice at the mills and shows this building in its setting. There is also a late C19 photograph showing the extent of the complex at that date and a boiler attached to the exterior of this building. Although the building is in poor condition it is a significant survival from the C19 mill and of interest in a national context. It is of historic interest as evidence of an industry that was once important to the economy of Devon, which had 41 paper mills in 1820, and to the industrial archaeology of the Exe.

2. Tuckenhay Mill, Tuckenhay, Cornworthy (2 separate list entries)

Grade II

List Description:

II Paper mill, converted to house. Circa 1829 converted to house in late C20. Slate rubble, colourwashed on north east side with boarded first floor and partly slate-hung on south west side. Grouted scantle slate hipped roof. Plan: L-shaped on plan main ranges with a cellar under the north west end. Single storey wing on the south west corner. Exterior: 3 storeys over a cellar at north west end where the ground is at lower level. The top (second) storey was originally open-sided with posts and wooden louvres or slats between; it is partly still open-sided and the first floor accommodation is set back inside forming a loggia. the stone north west end wall rises up to the eaves and has 2 blocked round-headed cellar doors with 2 basket arch openings on the ground floor and similar but blocked openings on first floor; 4 rectangular openings on the second floor, the centre 2 blocked. The north east side has wide elliptically arched cellar doorway to the right and a regular 6-window range of C20 casements with glazing bars on the ground and first floors; above the second floor originally open for ventilation with wooden vertical slats and now with some small late C20 aluminium sliding windows. Similarly slatted top floor of east wing to left with a later C19 2-storey lean-to addition in the angle with a vertically boarded front and a slate monopitch roof. At the north east end of the wing and ground floor a wide vehicular entrance with a timber lintel and late C20 aluminium window in vertically boarded storey above. The north west side of the main range is slate hung on ground and first floors and has late C20 casements with a late C20 timber balcony. Above the second floor is open with timber posts and some of the bays with vertical slats. To the right a low single storey wing with a hipped slate roof and late C20 casements. Interior: not inspected. Note: The paper mill is said to have begun work in 1829 (Hoskins). It produced high quality hand-made paper and was the only surviving 'vat' mill in Devon. Source: W H Hoskins, Devon (published 1954), page 322 (under Ashprington parish)

Paper mill converted into holiday accommodation. Dated 1889 (datestone H.S. 1889); converted into holiday accommodation in late C20. Mainly slate rubble with red brick window and doorway dressings. West elevation of north range is rendered with ashlar joint lining and partly slate hung. Welsh slate roofs with gabled ends and black glazed ridge tiles. wing on Plan: The main block in on a NNW-SSE (say N-S) axis has a broad wing on the east side and a low narrow wing on the west side. At a lower ground is level across the north end is the vat house and in the angle to the east is a single storey detached range. Exterior: Built on a steeply sloping site on various levels with range of 1, 2 and 3 storeys. The tall main block is south gable at higher ground level has 3 large segmentally arched windows with keystones and 2 smaller similar windows above with datestone. H.S. 1889 in between and bullseye above in the gable. This block has similar north gable end, its west elevation is partly glazed with a large 4 light window from eaves to the second floor level and a slate hung gable-ended slightly lower wing to left (North west) Over the ridge of main block a large Italianate clock turret, square on plan hung at its base, boarded above and with a clock face on each side with small louvres above under the deep bracketed eaves and hipped slate roof with an ornate metal finial and weathervane. To the north of the turret on the ridge of the main range a louvred ventilator with a gable-ended slate roof, segmented headed windows on the north and south sides and in the gable end wall a bull's-eye. At the lower level across the north side of these 2 blocks a gable-ended single storey range with round headed cast-iron frame windows with glazing bars, end walls have 2 storeys of these windows and a bullseye in gables, the west end is rendered and east end has wide round-arched doorway to right with keystone and C19 6-panel double doors with a fanlight above. Also at east end, in the angle with main range, a small single storey gable-ended building with large round-headed windows with keystones, frames and a doorway, with fanlight with glazing bars and plank double doors. Also in north east angle a single storey detached range with round-headed windows and a lunette and west gable end and bullseye in east gable both with keystones. At the south west side of the main block is a long and irregular single storey range which on its north side is built on a revetment and has C20 casements and raking roof dormers. Interior: The north range was complete late C19 roof of soft wood the trusses with both king and queen-posts with struts and with boarded roof. The other roof also seem to retain their late C19 roofs. Note: This building appears to be an extension to the earlier paper mill (Tuckenhay Mill (qv) which is said to have begun work in 1829. It produced high quality hand-made paper and was the only surviving 'vat'-mill in Devon (Hoskins). Source: W H Hoskins, Devon (published 1954) page 322.

3. Former wheel house and glazing house at Laverstoke Mill, Laverstoke, Overton, Hampshire (Mill House and workers cottages also listed, not described here)

Grade II

List Description:

Laverstoke Mill was a large multi-phase paper mill which operated between 1719 and the 1950's. Within the mill complex, building No.5 is a wheel house which was part of a major rebuild of the mill in 1854. The architect of this rebuild was Thomas Hellyer of Ryde. Building No.1 is a glazing house dating to 1881. Both buildings are of red brick with slate roofs.

PLAN: The two buildings abut at their gable ends, and are aligned north-south, with the south wing of building No.5 being the northernmost of the two. The south wing of Building No.5 is separated from the remainder of Building No.5 by a corridor, but forms a continuous west-facing façade with building No.1, and is therefore grouped with the latter. They form a linear development, aligned north south, facing west onto a courtyard which contains the mill pond.

EXTERIOR: Building 1 is a two storey six bay structure of red brick with vitrified brick dressings. There is a dentilled eaves course, and the pitched slate roof incorporates three louvers, with a raised pediment at the northern gable end. There are six windows on the first floor and five windows and a door on the ground floor. Each window is a six panes over nine iron framed casements, with plain lintels and cast iron sills. The sills and lintels are painted white, and the building has been similarly painted to head height. The northern bay has a half glass door in place of the lower window, and the fifth bay has two plaques between its pair of windows. The upper plaque is an oval within a moulded rectangle inscribed 'This house and mill was built by Henry Portal in the year 1719', and the plaque below it, within a moulded rectangle is inscribed 'Rebuilt by Wyndham S. Portal 1881'. Attached ranges to east and south not of special interest.

The south wing of Building No.5 abuts Building No.1 on its north side, and is similarly of two storeys and of red brick. It has a pitched slate roof with a west facing pediment with a dentilled eaves course similar to Building No.1. It has one casement and three semi-circular headed windows at first floor level, with ribbed and gauged voussoirs and an oculus above. There is a half glazed mezzanine balcony, and at ground floor level are three casement windows and a corridor abutting the south elevation of building No.5. The east external wall of building No.5, which has a pulley system relating to the sluice gates, is now enclosed by an additional early C20 structure. Attached wing to north is not of special interest.

INTERIOR: Internally both buildings have been adapted for later use. Building No.1 has been subdivided into office accommodation, and shows no evidence of its former function. Building No.5 is similarly subdivided on its first floor. On the ground floor the wheel house remains with the control wheel for the sluice gates still in situ, although this ground floor room has been subdivided by the insertion of a concrete wall.

HISTORY: Laverstoke Mill was founded as a paper mill in 1719 by Henry Portal, and operated as such until the 1950's. Prior to 1719 it was the site of a corn mill belonging to Laverstoke Manor, probably one of the two Laverstoke mills recorded in the Domesday Book. The paper mill produced mainly hand-made rag paper, and at the peak of its production in the early 1920's it was one of the largest hand-made paper mills in the country. After the 1950's paper production was transferred to the nearby Overton Mill which had been built in 1920-22. The Overton Mill became the focus for investment in new technology, and is still producing banknote paper today.

During the whole period of its operation Laverstoke Mill was owned by the Portal family. From 1724 they held an exclusive contract with the Bank of England for the manufacture of bank notes, treasury bills and dividend warrants. Laverstoke also produced currency for a number of other countries including, from 1860, the Government of India. The Portals had a close relationship with the Bank of England, and the Laverstoke site was expanded in response to initiatives from the Bank concerning printing technology, contracts for new products, denominations and issues. The present accumulation of buildings on site, with its variety of dates, is a result of this ad hoc development.

There are no buildings remaining from the earlier periods of the site, and the earliest buildings standing today are from a rebuilding programme in the mid-1850's, just before the issue of fully

printed bank notes. It was in the early 1850's that the mill was largely rebuilt, and new machinery installed including a water-turbine, a ten horse power steam boiler, and drying and sizing machines, although the paper continued to be mould-made. Later buildings on the site were added in response to individual contracts.

Building No.1 is a glazing house dating to 1881. In the early C20, and possibly earlier, the ground and first floor acted as glazing rooms, where a smooth surface was put onto the paper by pressing it between rolls or calendars. By the early C20 the first floor room had become the picking room where women workers in cubicles removed blemishes from the paper with picking knives. The building was subdivided into offices in the 1950's, and all trace of its former use has been removed.

The south wing of Building No.5 is the wheel house, built in 1854. It is thought to be a re-build of a structure, which has the same footprint, shown on a c.1848 plan. In 1854 a water turbine was installed, replacing an original water wheel, situated below the wheel house and above the mill tail, with a sluice gate system to direct water onto the turbine. The turbine appears to have been removed in the mid C20.

SUMMARY OF IMPORTANCE: Building No.1 and the south wing of Building No.5 at Laverstoke Mill are part of later development at a paper mill which originated in the early C18 and produced Bank Note paper for the Bank of England. Building No.5 belongs to a period in the 1850's when the mill was undergoing a rebuilding programme to incorporate new machinery and to take it forward into the new era. It retains the wheel house and other features relating to the change to turbine power and the control of water flow through the sluice gates. Thus it retains some evidence of its original function. Building No.1 is an imposing building which was one of the show pieces of the Mill complex, and bears two plaques with inscriptions relating to the foundation of the mill and the rebuilding of Building No.1. It was a glazing house, and although none of the original machinery survives, it retains its external authenticity. Both buildings have significant historic and architectural interest in the context of the production of bank notes for the Bank of England and also have a strong group value with the listed mill cottages to the south of them as well as with the listed Laverstoke Mill House.

SOURCES: Geraint Franklin, Laverstoke Mill, Whitchurch, Hampshire, An assessment by the architectural investigation team London and SE team (January 2006). Edis & Lowe, Historical and Architectural Analysis Laverstoke Mill, Hampshire (September 2005) for CgMs.

4. Weir Mill, Mill Street, East Malling and Larkfield, Kent

Grade II

List Description:

EAST MALLING & LARKFIELD MILL STREET TQ 65 NE (south side) 7/169 15.11.73 - II Paper Mill. C18 and circa 1900. Built in two parts, the earlier to the rear. **REAR PORTION:** Ground floor of red brick with grey headers, 2 upper floors weather-boarded. Left side 2 glazing bar sash elevation with 2 industrial doors below. Right side, upper storey only weather-boarded. 4 glazing bar sash elevation. South end gabled with 1 glazing bar sash window. Mill wheel. Interior carried on square wooden supports. **FRONT PORTION:** Red brick with slate roof. 4 pilasters through all floors. 2 metal-framed cambered windows with cambered brick heads. Tall central weather-boarded lucarne with 2 round windows and curved wooden bargeboards. 3 industrial doors. Weather-boarded belvedere on roof. Left side with 8 windows and similar weather-boarded lucarne. 3-storey matching extension attached to right side. Sources: Michael T Fullan, The Watermills of the East Malling and Wateringbury Streams, Maidstone, 1980.

5. Wookey Hole Paper Mill, High Street, Wookey Hole, St Cuthbert Out, Somerset

Grade II

List Description:

Paper mill, now used for exhibition purposes and part a factory with offices. Circa 1860, for W S Hodgkinson, later alterations. Coursed and squared rubble, freestone dressings, dressed alternating quoins, slate roofs, coped verges and copings at roof divisions, large gabled oblong roof ventilators with slate roofs, brick stack. Road frontage of 3 storeys, 18 bays on first floor, predominantly 20-pane metal casements in freestone surrounds with cambered heads and emphasised keys, some windows with louvred shutters; 3 stone mullioned and transomed windows to left of ground floor. Shallow gabled wing to left, segmental arch door opening on first floor, paired doors, reached by later steel gallery with plain railings. Between wing and rain portion a segmental headed throughway. Extensive attached ranges to rear in conforming style, one with gabled ashlar bellcote with windvane, (Atthill R, Old Mendip, 1964).

APPENDIX II
Location of Photographs

PLANS:

- A1 Ground floor NW part of site
- A2 Ground floor NE part of site
- A3 Ground floor SE part of site
- A4 Upper floor NW part of site
- A5 Upper floor NE part of site

2. Admiralty Shed (Finishing warehouse)

Weighbridge

8. Dissolving unit

9. Tank Room

10. Former Grass Boiler House

7. Starch Kitchen

11. Store (Former Pulp Shed)

16. Extension of Stock Prep area

14. Conveying area

12. Former Detinking plant

13. Sand Filters

15. Stock Preparation & Pulpers

Foot Bridge

22. Reactor house

21. Compressor Room

17. Pump house

17a

18. Leaf headrace

Tank

20. Power house

19. Compressor Room

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21a. Compressors

26. Site Plants Engineers office

34. Civil workshops formerly carpenters shop

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Tank

7. Starch Kitchen

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16. Extension of Stock Prep area

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14. Conveying area

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12. Former Detinking plant

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13. Sand Filters

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15. Stock Preparation & Pulpers

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9418-9

9420-2

9423/4

9425/6

9427/8

9429/31

9432/3

9434/5

9436/7

9438/9

9440/1

9442/3

22. Reactor house

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21. Compressor Room

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17. Pump house

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18. Leaf headrace

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20. Power house

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21a. Compressors

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26. Site Plants Engineers office

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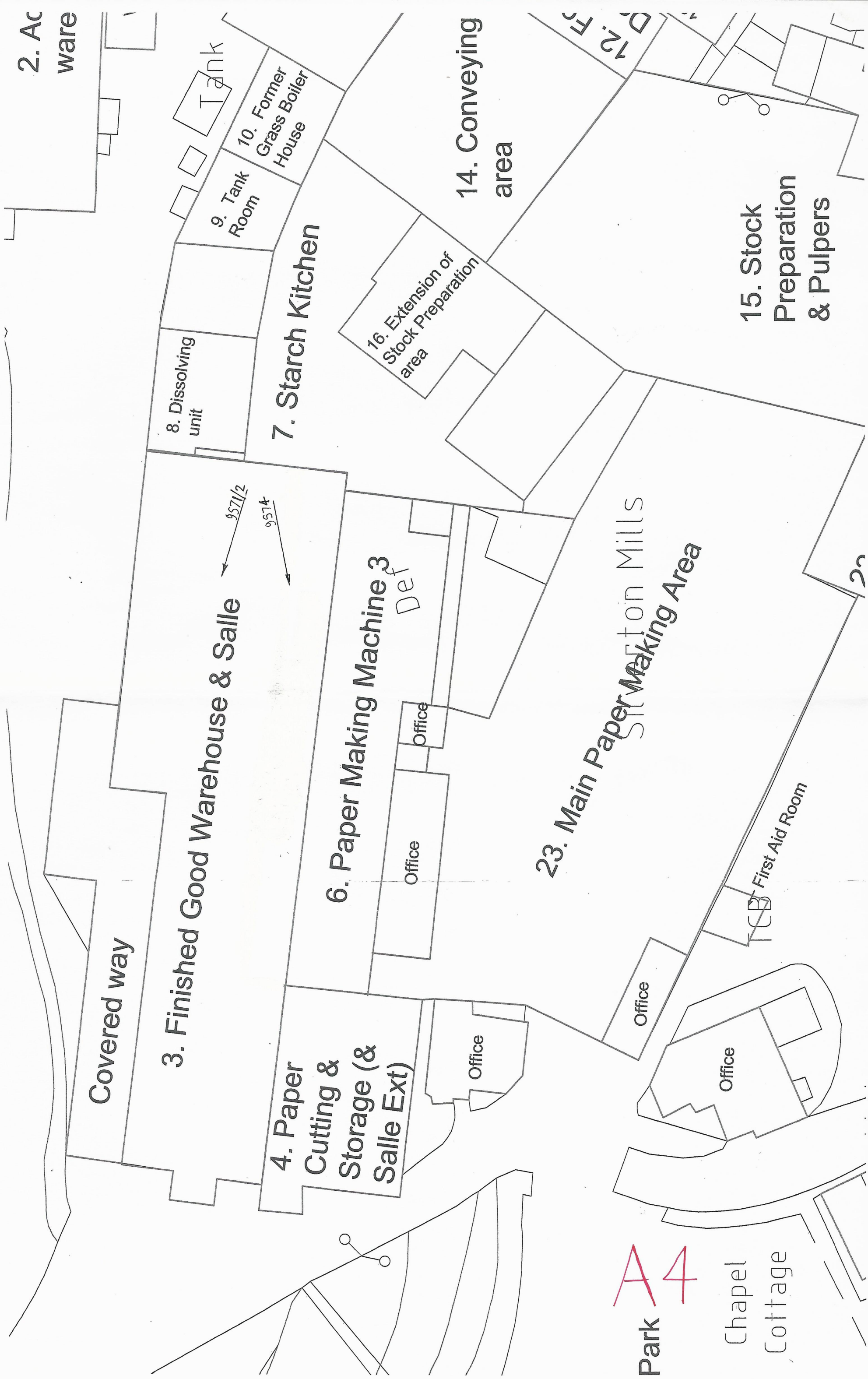
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2. Ac
ware



3. Finished Good Warehouse & Salle

4. Paper Cutting & Storage (& Salle Ext)

6. Paper Making Machine 3

23. Main Paper Making Area

7. Starch Kitchen

8. Dissolving unit

9. Tank Room

10. Former Grass Boiler House

14. Conveying area

16. Extension of Stock Preparation area

15. Stock Preparation & Pulpers

Covered way

Office

Office

Office

Office

Office

First Aid Room

Park A

Chapel Cottage

9571/2

9574

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