

Hermitage Mill, Hermitage Lane, Mansfield

Historic Building Record

Author: M. Hurford, R. Humphreys

Report Number: 077/2015

© Trent & Peak Archaeology

Code: HMH



Trent & Peak Archaeology ©
Unit 1, Holly Lane
Chilwell
Nottingham
NG9 4AB
0115 8967400 (Tel.)
0115 925 9464 (Fax.)



SUMMARY

- Trent & Peak Archaeology was commissioned by Germane Properties to undertake a Level 3 building record of Hermitage Mill located on Hermitage Lane, Mansfield, Nottingham centred on Ordnance Grid Reference SK 52398 59881 prior to the site's proposed conversion into 25 flats, heritage space and coffee bar (Planning Application No. 2014/0616/PR).
- Hermitage Mill is believed to have been constructed in 1780 by the fourth Duke of Portland as part of a series of mills along the River Maun. It was built during the boom in mill building that occurred in the late eighteenth century. Originally powered by a water wheel it was converted to steam power in the nineteenth century, producing hosiery. The building continued to be enlarged and altered until the late twentieth century. The principal elements of the current building were however in existence by the publication of the First Edition Ordnance Survey map of 1878.
- Hermitage Mill is a good example of a cotton mill from the late eighteenth century with much original fabric surviving, though the original machinery has all been removed. It is of note that the layout of the wheel pit and the location of the gearing mechanism at Hermitage Mill is the same as that recorded in 1843 at Field Mill, also located on the River Maun.
- Of particular interest is an early chimney which is probably associated with a type of hot air system pioneered by William Strutt. Hot air heating systems were prevalent across the Midlands during the later eighteenth and early nineteenth century as it was safer than having open fires within a fibre filled environment of a cotton mill, where a small spark could easily ignite the ready supply of fuel which the raw cotton and yarn provided.

Hermitage Mill, Hermitage Lane, Mansfield

Historic Building Record

Author: M. Hurford, R. Humphreys

June 2015

CONTENTS

SUMMARY	2
CONTENTS	3
ACKNOWLEDGMENTS	7
1. INTRODUCTION	8
1.1 Background	8
1.2 Building Recording	8
1.3 The Report	8
2. SITE BACKGROUND	8
3. HISTORICAL BACKGROUND	9
4. BUILDING DESCRIPTION	11
5. DISCUSSION	14
6. BIBLIOGRAPHY	15

LIST OF FIGURES

Figure 1: Location of Hermitage Mill, Hermitage Lane, Mansfield, Nottinghamshire (highlighted by the arrow) Scale 1:25,000.

Figure 2: Hermitage Mill and mill pond based on a drawing provided by the client. Scale 1:1500 at A4

Figure 3: Hermitage Mill depicted on the First Edition Ordnance Survey map of 1878.

Figure 4: Hermitage Mill depicted on the Ordnance Survey map of 1899

Figure 5: Hermitage Mill depicted on the Ordnance Survey map of 1916

Figure 6: Hermitage Mill depicted on the Ordnance Survey map of 1939.

Figure 7: Building phases at Hermitage Mill based on a drawing provided by the client. Scale 1:500 at A4.

Figure 8: Plans of the the floor levels at Hermitage Mill and the viewpoints of the plates shown in the report, based on drawings provided by the client. Scale 1:400 at A3.

LIST OF PLATES

Plate 1: A photograph of the west elevation of Hermitage Mill viewed looking east taken before 1916.

Plate 2: A photograph of the west elevation of Hermitage Mill viewed looking east taken in 1950.

Plate 3: General view of the northern end of the western elevation, viewed looking east.

Plate 4: General view of the roof of Phase A, viewed looking south.

Plate 5: The wheel pit viewed looking south-west.

Plate 6: Plan of the water wheel at Field Mill, Mansfield in 1843.

Plate 7: General view of the room to the north of the wheel pit, viewed looking north-west.

Plate 8: The mill from the south, the arrow indicating the location of the chimney possibly relating to Phase A, viewed looking north.

Plate 9: The cornice and wall paper in the first floor of Phase B.

Plate 10: The west gable of the engine house, viewed looking east.

Plate 11: The roof over Phase D viewed looking south-west.

Plate 12: The southern brick extension Phase E viewed looking west. Note that the mill is abutted by the sub-station Phase H, the white brick building on the left and the modern shed Phase M.

Plate 13: The upper ground floor of Phase E, viewed looking north-east.

Plate 14: The interior of the boiler house, Phase F, viewed looking north. Note the earlier chimney highlighted by the arrow in the right hand corner of the room which is abutted by the wall of the engine house Phase C and the wall of the mill Phase E.

Plate 15: The north elevation of Phase G, viewed looking south.

Plate 16: General view of the second floor of Phase G, viewed looking south-west.

Plate 17: The interior of the Phase I, viewed looking south-west.

7. ARCHIVAL REPORT

Figure 9: External photographic viewpoints, based on a drawing provided by the client. Scale 1:500 at A3.

Figure 10: External photographic viewpoints, based on a drawing provided by the client. Scale 1:200 at A3.

Figure 11: Plan of the existing lower ground floor with the photographic viewpoints indicated, based on a drawing provided by the client. Scale 1:200 at A3.

Figure 12: Plan of the existing upper ground floor with the photographic viewpoints indicated, based on a drawing provided by the client. Scale 1:200 at A3.

Figure 13: Plan of the existing first floor with the photographic viewpoints indicated, based on a drawing provided by the client.. Scale 1:200 at A3.


Figure 14: Plan of the existing second floor with the photographic viewpoints indicated, based on a drawing provided by the client. Scale 1:200 at A3.

Figure 15: Plan of the existing third floor with the photographic viewpoints indicated, based on a drawing provided by the client. Scale 1:200 at A3.

Figure 16: Thumbnails of the 259 digital images.

Hermitage Mill, Hermitage Lane, Mansfield.

Figure 17: Elevations of Hermitage Mill based on drawings provided by the client. Scale 1:200 at A3.

Prepared by Date	Matthew Hurford, Project Officer Ruth Humphreys, Project Officer 28 June 2015
Approved by Signed Date	Dr. S. Malone  08/07/15
Report Number	077/2015
Status	Final Report

ACKNOWLEDGMENTS

The fieldwork for this project was carried out by Matt Hurford and Ruth Humphreys and the project managed by Matt Hurford. Thanks are extended to Germane Properties for commissioning the work.

1. INTRODUCTION

1.1 Background

1.1.1 Trent & Peak Archaeology was commissioned by Germane Properties to undertake a Level 3 building record of the disused Hermitage Mill, located to the south-west of Mansfield town centre at Ordnance Grid Reference SK 52398 59881 (Figures 1-2), prior to the site's proposed conversion into 25 flats, heritage space and coffee bar (Planning Application No. 2014/0616/PR). The building is a Grade II listed former textile mill dating to the late eighteenth century. Originally powered by a water wheel (driven by a runoff from the nearby River Maun), it was converted to steam power in the nineteenth century, producing hosiery prior to becoming a builder's merchant in the late twentieth century. The fieldwork recorded in this report was undertaken between 16th-18th June 2015 by Matthew Hurford and Ruth Humphreys. A photographic survey of the interior and exterior of the mill was undertaken, assisted by recent architect's plans of the building.

1.1.2 The Mill is located on Hermitage Lane. Set just back from the road, it is situated within an area previously home to a wider mill complex. An approximate construction date of 1780 has been suggested for the original phase of the building, however it has been subject to numerous extensions and alteration, which continued right up until the 1980s.

1.1.3 The site is bordered by Hermitage Lane to the East, with the Mansfield to Nottingham Railway line to the North. An artificial Mill Pond lies to the west, a subsidiary of the Kings Mill Reservoir which was originally constructed in 1838 to serve the nearby water mills. The River Maun and further industrial buildings are situated to the south.

1.2 Building Recording

1.2.1 Where specific briefs are supplied by relevant planning authorities with regard to buildings they may require a survey based on classifications as outlined in English Heritage's guide *Understanding Historic Buildings* (2006). In this instance a Level 3 survey of the building was required. The methodology employed also follows advice from the Chartered Institute for Archaeologists' (CIfA) *Standard and Guidance for the Archaeological Investigation and Recording of Standing Buildings and Structures* (2014).

1.2.2 Where an existing building/structure is not protected by listing and permission is sought or granted for demolition or major alteration, the local authority may require that a full archival record be made first, in order to 'preserve by record'. Similarly, where a building is subject to national designation, such a survey will be required prior to the commencement of improvement works or development of the structure.

1.3 The Report

1.3.1 The building recording has involved a detailed examination of the former factory both externally and internally. This has allowed for a brief written description of the building and its background with 8 figures and 17 plates as illustrations. A second part of the report (Section 7: Archival Record) comprises a list of illustrations to support the archival record. The latter consists primarily of 259 digital images and black and white negatives and prints from all or part of 6 films, comprising 197 negatives with 197 prints held in archival quality sleeves. The report includes copies of the digital images together with plans showing their viewpoints. All 259 digital images are included in a separate CD affixed to the back of the report.

2. SITE BACKGROUND

2.1.1 Germane Properties proposed to convert the Mill and its wider site into 25 flats, heritage space and coffee bar (Planning Application No. 2014/0616/PR). This will consist of a mixture of new builds within the Mill grounds and the conversion of the building itself into domestic properties.

3. HISTORICAL BACKGROUND

3.1.1 The town of Mansfield has known settlement origins in the Roman period, with a cache of Roman coins discovered close to the proposed development area at the former site of King's Mill (now King's Mill Hospital). The town is recorded in Domesday as Mammesfield, whilst the town's market petition of 1227 is completed in the name of Maunnesfield, both certainly derived from the town's proximity to the River Maun. Within the modern town, the majority of the buildings date from the seventeenth century onwards, with Medieval visibility largely confined to religious architecture.

3.1.2 Hermitage Mill is believed to have been constructed in 1780 by the fourth Duke of Portland as part of a series of mills along the River Maun. The Industrial Monuments Survey, carried out over the latter half of the twentieth century by the Nottinghamshire Local History (formerly Council) Association, records that the mills were known as 'The Leatherbreeches', with White's History, Directory and Gazetteer of Nottinghamshire (1832:521) referring to seven mills along the River Maun as 'extensive...with their capacious dams of crystal water reflecting the buildings and the adjacent hills'.

3.1.3 Documentary research within the Nottinghamshire County Archives has produced an original counterpart to the demise of the mill, contracted in 1835 between the 4th Duke of Portland and Mr. James Fisher, a lace merchant from London. It details that the Mill, along with 4 ½ acres of meadow and adjoining land, was let at the yearly rate of £84 (around £4000 in modern terms). The agreement included a substantial surrounding complex, listed within the document as '*several cottages, stables, blacksmith shop, store rooms, engine house, turner's shop, counting house, and all other singular appurtenances to those said above*'. It also implies the mill was fully operational at the time as further conditions of the lease specific that it includes '*machinery for manufacturing and spinning cotton with, as with the wheels and shafts hereafter described and intended to be hereby demised*' adding that they specifically '*constitute a cotton mill*'.

3.1.4 The demise was written for 21 years in 1835 (expiring in 1856), however it appears that James Fisher did not stay for the full extent of his contract. Trade directories have revealed the following chronology of proprietors for Hermitage Mill, beginning in 1832 (White, 1832:537);

Proprietor	Job description	Reference
James Heygate	Cotton Spinners and Lace Thread Manufacturers	White, 1832
James Fisher	Lace Merchant	White, 1844 Legal Demise, 1835
John Taylor	Cotton Manufacturers	White, 1853
I and W Taylor	Cotton Manufacturers	Wright, 1883
Samuel Eden and Son (company)	Hoisery Manufacturers	Kelly's, 1906 Kelly's, 1922 Kelly's, 1936

3.1.5 No data is available for occupancy prior to 1832.

3.1.6 A photograph taken before 1916 (Plates 1), collected by The Industrial Monuments Survey (1963, 1973), depicts the western elevation of the mill, looking east from across the mill pond. The photograph shows 3 clear building phases to the main mill building at that time. The original eighteenth century stone mill building in the centre can be seen to have three visible floors with a steeply pitched roof suggesting a possible fourth floor. To the south a brick extension mimics the mill's construction, adding extra space to all floors. By contrast, whilst the northern extension is built from stone, implying an earlier date, it is only two storeys in height. Also visible in the photograph are several outbuildings or extensions abutting the western elevation of the mill. The most notable of these is located close to the join between the stone and redbrick sections of the mill; aligned east-west, it is between 2 and 3 storeys high. To the south are two smaller single storey buildings, which are largely obscured by the Mill Pond undergrowth, with a further single storey structure, aligned north-south, running

parallel to the red brick portion of the mill building. The purpose or function of these smaller buildings is not clear, as is the case with the single storey lean-to extension propped against the southern elevation. Immediately behind the lean-to structure is what appears to be a small cottage, or at least a single storey extension with its own chimney stack. A large, freestanding, square industrial chimney, taller than the mill itself is located adjacent to the western elevation of the main building. The setting of the mill is completely rural with no further buildings visible of the site boundary.

3.1.7 A photograph recovered from Picture the Past photographic archives shows the mill shortly before it ceased operation in 1950 (Plate 2). Taken from a similar angle and distance as the older photograph recovered from Nottinghamshire Archives, the image shows that the two storey stone extension at the northern end of the structure has been extended to four storeys in height. Its roof is now flat, rather than pitched, with the fourth floor built along the same design as the three below. This resulted in large windows allowing far more light into the interior that had previously been possible where a pitched roof provided an additional functional storey. The design of the alterations is such that the lower floors from the original extension were retained. Additionally, the two smaller, single storey buildings abutting the western elevation have been replaced by a single, two storey extension.

3.1.8 Interviews carried out with the owner during the 1963 survey detail that the mill ceased to be operational in May 1954, with the internal machinery all removed by the time of survey. A 1985 photograph of the building shows the title of 'The Clumber Builders Supply Co. Ltd.' Mounted across the mill building.

3.2 Cartographic evidence 1835-1939 (Plates 1-2 and Figures 3-6)

3.2.1 The earliest known plan of the mill comes from Sanderson's map of 1835. Sanderson records a series of mills running east-west along the Maun; Field Mill, Backhill Mill, Sheep Mill, Hermitage Mill and Kings Mill. His scale is too large to provide a detailed account of the mill footprint at this time, however it is possible to clearly identify the relatively large and long mill building along a north-south alignment.

3.2.2 The First Edition Ordnance Survey map, dating to 1878, depicts the long, rectangular mill building with a small protrusion from the northern end of the eastern elevation. A number of buildings are depicted extending from the southern half of the western elevation and a detached structure to the immediate west. A further building is present at the south-east corner of the mill. Several outbuildings are situated east of the mill comprising a large L-shaped structure, orientated approximately north-south, adjacent to the original stone mill building, with a smaller, rectangular structure extending to the east. These may be related to the substantial complex of affiliated buildings described in the demise above.

3.2.3 Little change is recorded in the footprint of the mill and nearby outbuildings between 1878 and the publication of the Second Edition Ordnance Survey in 1899. The far southern extension against the western elevation has been extended to cover the footprint of the adjacent stand alone structure.

3.2.4 The 1916 Edition Ordnance Survey shows an additional rectangular structure has been constructed at the northern end of the western elevation. The building is connected to the oldest part of the mill by a narrow corridor. The building at the south-east corner of the mill has been extended to the north.

3.2.5 The final historic Ordnance Survey map available at the Nottinghamshire Archives dated to 1939. The main body of the mill had undergone no further major alterations, however the footprint of the extension abutting the southern elevation had been altered with around half of the east-west facing structure seemingly removed. It is unclear if the walls of the original structure were retained or is this is a new/re-build on the same site. The building at the south-east corner of the mill has also been remodelled.

4. BUILDING DESCRIPTION

4.1 Hermitage Mill is orientated with its long axis extending from the north-east to the south-west though for ease of reference this report refers to the orientation of the long axis as north to south

4.2 Phase A (Figures 7-8 and Plates 3-8 and 14)

Phase A comprises the central 10 bays of the former mill. It is stone built and of three storeys plus a basement (a lower ground floor, upper ground floor, first floor, second floor and third floor/roof space). The windows of the east elevation have three piece lintels with a flush keystone in contrast to those on the west elevation which have plain stone cills and lintels, the second floor windows are replacements with concrete lintels. All the upper ground floor and first floor windows of the east elevation have been blocked with modern bricks. On the west elevation one window on the first floor has been converted into a doorway to enable material to be winched to and from the ground floor. The frame of the hoist survives which appears to be twentieth century in date. A number of cast iron glazing bar windows of like late nineteenth or early twentieth century survive. The roof is of concrete tiles.

4.2.1 Internally the roof has nine softwood trusses each comprising a king post rising from a tie beam to plank ridge with staggered purlins trenched into the principal rafters which have a collar. The roof structure and floor has no evidence to suggest the presence of drive belts operating within the room and the floor boards have nothing to indicate former machinery. There are gaps in the timberwork of the ceiling on the eastern side of the roof which could be former skylights like the three visible on the eastern side of the roof shown on the pre-1916 photograph suggesting that the room may have been used for both sorting and storing cotton.

4.2.2 The second floor has been refitted as an office and kitchen, including the insertion of a ceiling and modern flooring, thus obscuring any original features.

4.2.3 On the first floor a modern ceiling is present and the original Samson posts replaced by ones encased in concrete. The original timber floor boards are exposed however which clearly show that machinery formerly stood down the eastern half of the room, with the western half used as an access route through the building, indicating that this part of the mill was used to process cotton or manufacture lace.

4.2.4 As with the floor above, the original Samson posts of the upper ground floor have been replaced by ones encased in concrete. A trap door is located in the ceiling in the southern part of the room where the processed goods could have been lowered from above. The northern part of the floor is of stone suggesting that textiles were dyed in this part of the building. The southern half of the floor, which is located above the wheel pit in the lower ground floor, is a later insertion dating to when the waterwheel was decommissioned and removed (see below). It is constructed of timber planks overlaid with modern tiles and so it cannot be ascertained with certainty whether machinery was present in this part of the building. The ceiling beams above however have no evidence suggesting the presence of former drive belts indicating that this part of the mill was possibly used to store the woven textiles prior to dyeing.

4.2.5 The lower ground floor comprises a west to east aligned wheel pit constructed in stone. It was designed for a single wheel powered by water emerging from the low archway in the west wall. The depth of the archway suggests that mill had an undershot waterwheel. The water originated in the mill pond to the west which fed the head leat that extended to the mill. Control of the flow of water would have been through sluice gates on the leat. The tail leat was located to the west of the waterwheel escaping through the former archways in the bases of the north, east and south wheel pit walls. To the south of the wheel pit is the contemporary stone structure housing the metal gearing mechanism, fragments of which survives. The layout of the wheel pit and the location of the gearing mechanism at Hermitage Mill is the same as that recorded in 1843 at Field Mill, also located on the River Maun.

4.2.6 Once the waterwheel was decommissioned the south wall of the lower ground floor was truncated by later openings, former features infilled with brick and the floor level raised thus

creating usable space within the wheel pit area. The floor above was extended across the building once the waterwheel was removed though this necessitated the lowering of the walls of the wheel pit.

4.2.7 A room is present in the northern half of the lower ground floor, accessed via an inserted doorway, or enlarged window, in the north wall of wheel pit. It has a stone floor, partially covered in timber and whitewashed stone walls. A central pillar supports the ceiling above with additional support provided by a single Samson post. Baltic timber marks are present on a number of the ceiling beams though paint obscures much of the detail. In the north wall is a former window and in the east wall a former doorway. As with the wheel pit the stone walls and central pillar have been lowered for the floor above.

4.2.8 Of note to the south-west of the mill is a stone built square feature that extends to the eaves of the mill. It is abutted by the engine house (Phase C) and the brick extension to the mill (Phase E). There can be little doubt that it is a former chimney probably associated with a hot air heating system. Though the relationship between it and Phase A could not be established the two are likely to be contemporary as both are constructed in the same way using the same materials and pre-date the other building phases.

4.3 Phase B (Figures 7-8 and Plates 9)

Hermitage Mill was subsequently extended to the north, prior to the publication of the First Edition Ordnance Survey map of 1878, with a stone built three storey building range (a ground floor, first floor, second floor and third floor/roof space) transforming the property into an L-shaped building. As with phase A the roof is of concrete tiles, the eastern section being hipped. Cast iron glazing bar windows are used throughout, the lintels in the east elevation are segmental stone arched ones and those of the west elevation plain single piece ones of stone. Two former ground floor doorways are present on the east elevation. The third floor north wall has been partially rebuilt in brick, probably originally having a former single large opening for materials hoisted from the ground floor. Further blocked windows are present on this elevation to the lower floors.

4.3.1 The extension provided additional manufacturing space to the west of the centrally located staircase. Those rooms to the east were separated from the manufacturing side of the mill and were probably offices. The room on the first floor retained its decorative cornice and wallpaper indicating that this was a higher status room, possibly the managers office.

4.4 Phase C (Figures 7-8 and Plates 8 and 10)

A stone built engine house was constructed to the south-west corner of the mill, probably replacing an earlier building associated with the chimney of Phase A. Again, this building is present on the 1878 Ordnance Survey map though it is likely to have been a relatively new building as waterwheels were still in operation on the river Maun as late as 1843 as demonstrated by the illustration produced that year of the wheel pit and gearing mechanism from Field Mill. It was originally a three storey building (lower ground floor, upper ground floor and first floor) of three trusses and four bays with a roof hipped to the east and gabled to the north, currently of concrete tiles. The south elevation has the roof line of a former building and a large doorway, which appeared to be a later insertion, blocked with brick. Two doorways are present in the west elevation, the upper one also blocked with the brick and the lower one closed with a timber shutter.

4.4.1 Internally the original two floors have been removed and a new one inserted, truncating the walls of the lower level, creating a building of two storeys. Unsafe flooring prevented an inspection of the upper floor though the lower floor was entered. The masonry blocks used in the construction of the lower level are far larger than those used higher up, many of which are covered in a black oily deposit originating from the former engine.

4.5 Phase D (Figure 7-8 and Plates 1 and 11)

To the north of the engine house an extension (Phase D) was built over the mill race, the south wall of which is contemporary with that of Phase C. It was part of a stone built two storey building with a gabled roof, partially visible in the pre-1916 photograph. The building was subsequently re-modelled in brick after 1899. It is of two storeys with a gabled roof to the

west and a hipped roof to the south, of concrete tiles. In a number of cases the segmental windows retain their cast iron glazing bars. The principal entrance was in the west gable wall that has a chamfered sandstone window lintel above the door.

4.5.1 The building is of four bays with three queen strut trusses. Straight struts rise from the queen struts to the principal rafters which have back purlins on cleats. Due to an unsafe flooring this phase of the building could not be safely entered.

4.6 Phase E (Figure 8 and Plates 12-13)

The mill was extended in brick to the south prior to 1878. This addition comprises eight bays. It is brick built and of three storeys plus a basement (a lower ground floor, upper ground floor, first floor, second floor and third floor/roof space). The segmental windows of the first three floors retain many of their original cast iron glazing bars, the second floor windows have all been partially infilled and modern glazing inserted. An upper ground floor window on of the west elevation and a first floor window of the east elevation have been converted into doorways. As with other phases of the mill a number of the windows have been infilled with brick in recent years to prevent vandals entering the building. The gabled roof is of concrete tiles.

4.6.1 Internally the roof space has seven softwood trusses. Non-structural timber additions to the trusses and the presence of a cast iron wheel bolted to one indicates that a drive belt operated in the top of the roof. The skylights in the roof would have provided sufficient light for processing to have been undertaken within the room. Materials were hoisted into the building via a doorway in the south gable and any processed goods lowered to the floor below through the trap door located at the south end of the building.

4.6.2 The second floor has been refitted as an office, including the insertion of a ceiling and modern flooring, thus obscuring any original features.

4.6.3 On the first floor a modern ceiling has also been inserted and the original Samson posts replaced by ones encased in concrete. The timber floor boards clearly show that machinery formerly stood down the eastern half of the room. In the south-west corner is a staircase to the upper ground floor. Raised planking on the floor extending down the west side of the room suggests the presence of machinery. The room was therefore used to process cotton or manufacture lace.

4.6.4 As with the floor above, the original Samson posts of the upper ground floor have been replaced. The floor-beams have non-structural timbers present for the suspension of a drive belt indicating that processing machinery was positioned down the eastern side of the room, if not the western side also. A number of the floor-beams have Baltic timber marks.

4.6.5 The floor-beams of the lower ground floor are supported by original metal Sampson posts with further support from two centrally positioned modern posts bridged by a steel girder. The east elevation has an inserted modern entrance. There was nothing to suggest that manufacturing was undertaken within this part of the building, the most likely use for it would have been storage.

4.7 Phase F (Figure 7-8 and Plate 14)

4.7.1 Phase F has been interpreted by the Germane Properties Survey as the former boiler house. Cartographic analysis indicates that it was built between 1878 and 1899. It is a brick built with a gabled roof. A large modern entrance has been inserted into its south gable wall. Internally it is of six bays with five metal trusses which rest on stone corbels. No original fixtures or fittings are present. The brickwork of the building clearly abuts the stonework of the engine house (Phase C) and walling of the mill (Phase E).

4.7.2 Phase G (Figure 7-8 and Plates 3, 14 and 15)

The mill was extended to the north. Based upon cartographic evidence and the pre-1916 photograph this occurred prior to 1878 and comprised a two storey stone built structure with a gabled roof. Between 1899 and 1916 it was remodelled into its current form. This comprised

the rebuilding of the north and east wall and the heightening of the west wall to form a four storey building with a flat roof. The principal entrance, a decorative arched doorway, was in the east elevation. Each of the windows has a plain stone lintel with original cast iron glazing bars surviving in the east and north elevations. The north wall is buttressed and retains a cast iron external stairway providing access to second, third and fourth storey doorways. The west elevation originally had central doorways on the upper three floors with a hoist, which is still present, at the top of the building for lifting materials into each floor and a large arched doorway on the ground floor.

4.7.3 The uppermost three floors were open plan rooms. Two cast iron Sampson posts support the central floor beam of each room. Scissor-bracing, typical of the period, is used between the joists. Indents in the floorboards indicated the presence of former machine beds on the first and second floor, the absence of which on the top floor suggest that this was used for the storage of the raw materials. A small lift, complete with mechanism is present in the corner of the top floor that extends to the second floor. As the ground floor has the principal entrance into the building and is sub-divided it is tempting to suggest that this was an office.

4.7.4 This building phase is interesting as it is a self contained unit with access to all floors for both people and goods without the need to enter the earlier phases to the south. It is tempting to suggest that it was built as a hosiery factory by Samuel Eden and Son.

4.7 Phase H (Figure 8 and Plate 12)

Located on the south-east corner of the mill is the sub-station, Phase H, a single storey brick structure with a tile roof and ridge. It first appeared in its current form on the 1939 edition of the Ordnance Survey map though a building has been present on the site from the publication of the first edition map of 1878 and so it cannot be ruled out that Victorian fabric is incorporated within the building. However, the brickwork of the west elevation clearly abuts that of the south gable of the mill (Phase E) suggesting that the buildings depicted on earlier maps within the footprint of the sub-station have been demolished to make way for it between 1916 and 1939.

4.8 Phase I (Figure 7-8 Plate 17)

Abutting the former boiler house is a brick built shed with a gable corrugated roof. It could be the building depicted on the 1899 Ordnance Survey Edition map and shown on the pre-1916 photograph though there is the possibility that it is a later shed built on the footprint of an earlier building. It is of three bays with two king post trusses comprising a tie beam supporting a plank ridge with struts extending from the tie beam to principal rafters that support two sets of purlins with cleats. The presence of metal straps suggests a late nineteenth century or later date.

4.9 Phases J-M (Figure 7-8 Plate 8)

Phases J and K are small brick lean-to sheds abutting the south gable of the mill which post date the photograph of the site taken in 1950. Phase L is an enclosed brick staircase probably dating to the 1960s or 1970s. The latest structure is a metal shed which probably dates to the late 1980s when the site operated as a builder's yard.

5. DISCUSSION

5.1 The boom in mill building occurred between 1780 and 1788, by the latter year there were at least 208 mills in operation in England (Trinder 1990, 58). Hermitage Mill is a good example of a cotton mill from this period with much original fabric surviving, though the original machinery has all been removed. It is of note that the layout of the wheel pit and the location of the gearing mechanism at Hermitage Mill is the same as that recorded in 1843 at Field Mill, also located on the River Maun. The mill continued to be developed into the early twentieth century and many of these building phases are present though unfortunately the majority of the original fixtures and fittings, including the steam engine, are absent.

5.2 Of interest is the chimney which is probably associated with a type of hot air system pioneered by William Strutt. Hot air heating systems were prevalent across the Midlands during the later eighteenth and early nineteenth century as it was safer than having open fires within a fibre filled environment of a cotton mill, where a small spark could easily ignite the ready supply of fuel which the raw cotton and yarn provided. The technology was pioneered by William Strutt in his Derby mills, most notably North Mill, which was rebuilt after a fire in the 1790s (http://www.belper-research.com/strutts_mills/mills.html).

6. BIBLIOGRAPHY

Chartered Institute for Archaeologists (CIfA). 2014. *Standard Guidance for the Archaeological Investigation and Recording of standing buildings or structures.*

(1906) *Kelly's Directory of Nottinghamshire.* London

(1922) *Kelly's Directory of Nottinghamshire.* London

(1936) *Kelly's Directory of Nottinghamshire.* London

Trinder, B., 1990 *Companion to the Industrial Revolution*

White, W. (1832) *White's History, Directory and Gazetteer of Nottinghamshire.* Sheffield

White, F and J. (1844) *White's History, Directory and Gazetteer of Nottinghamshire.* Sheffield

White, F and J. (1853) *White's History, Directory and Gazetteer of Nottinghamshire.* Sheffield

White, F and J. (1864) *White's History, Directory and Gazetteer of Nottinghamshire.* Sheffield

Wright, C. (1883) *Directory of Nottinghamshire.* London



Figure 1: Location of Hermitage Mill, Hermitage Lane, Mansfield , Nottinghamshire (highlighted by the arrow) Scale 1:25,000.
Contains Ordnance Survey date © Crown Copyright and database right 2015.

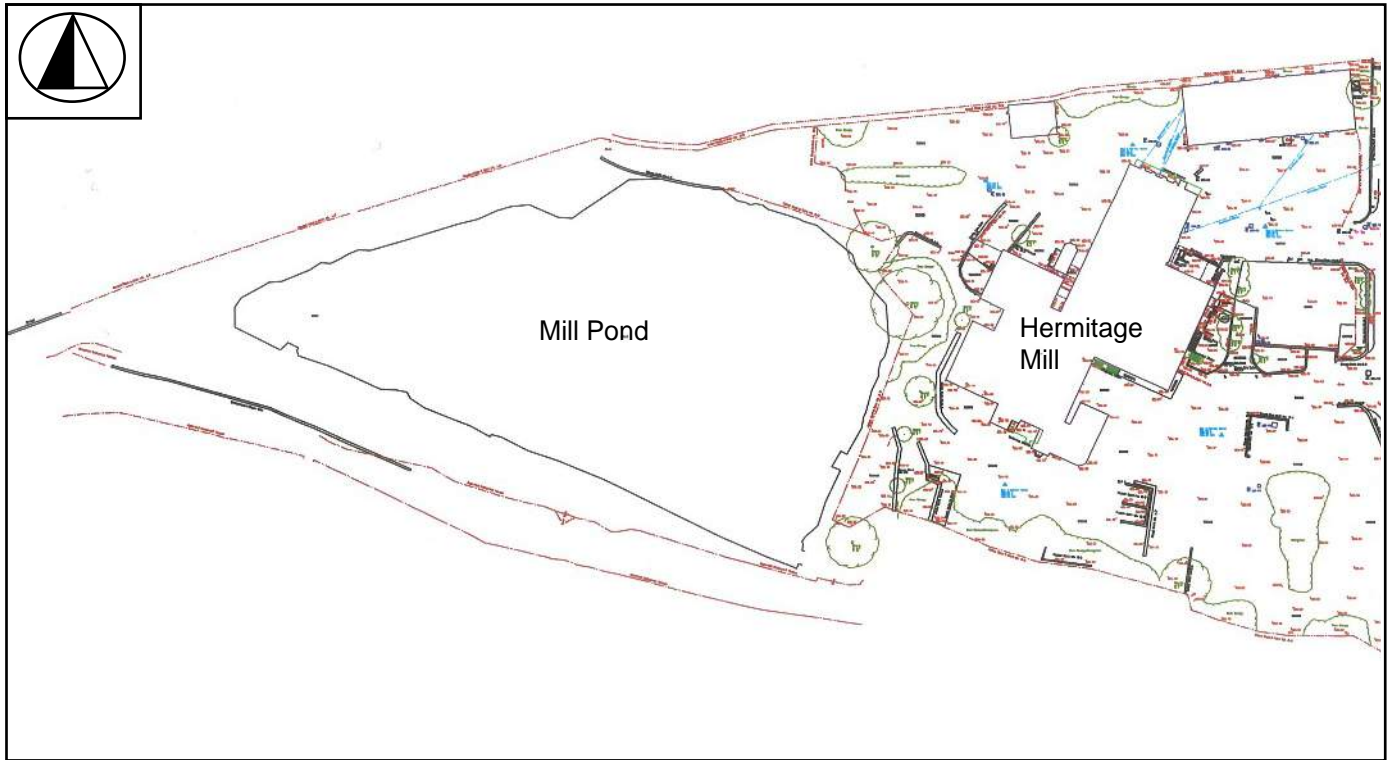


Figure 2: Hermitage Mill and mill pond based on a drawing provided by the client. Scale 1:1500 at A4.

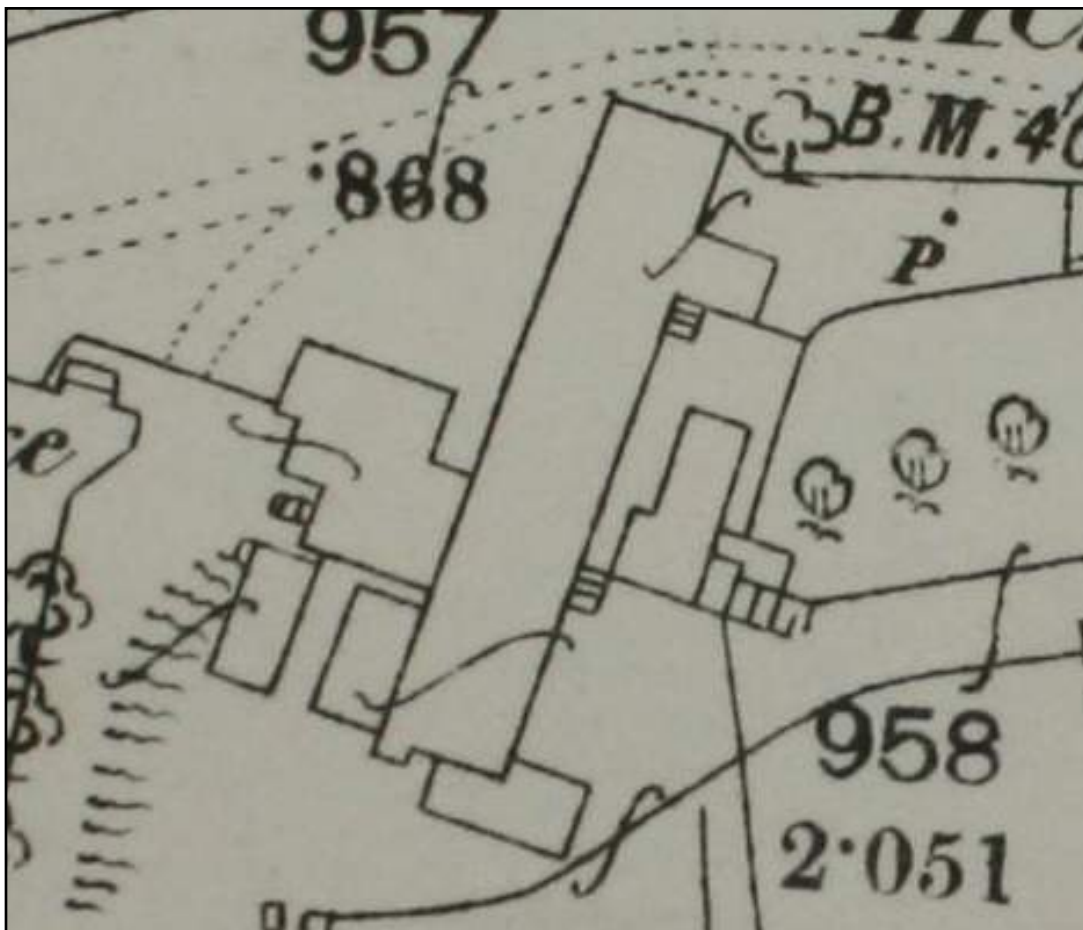


Figure 3: Hermitage Mill depicted on the First Edition Ordnance Survey map of 1878.

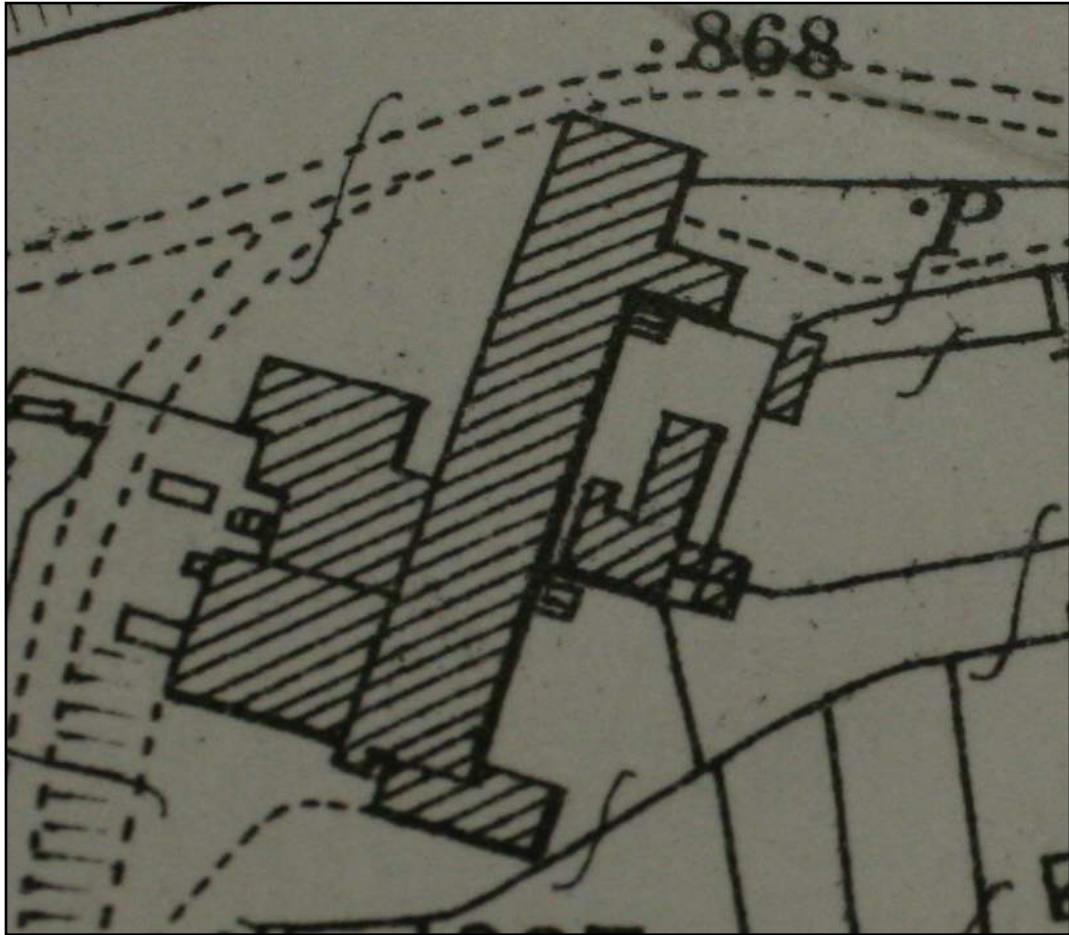


Figure 4: Hermitage Mill depicted on the Ordnance Survey map of 1899.

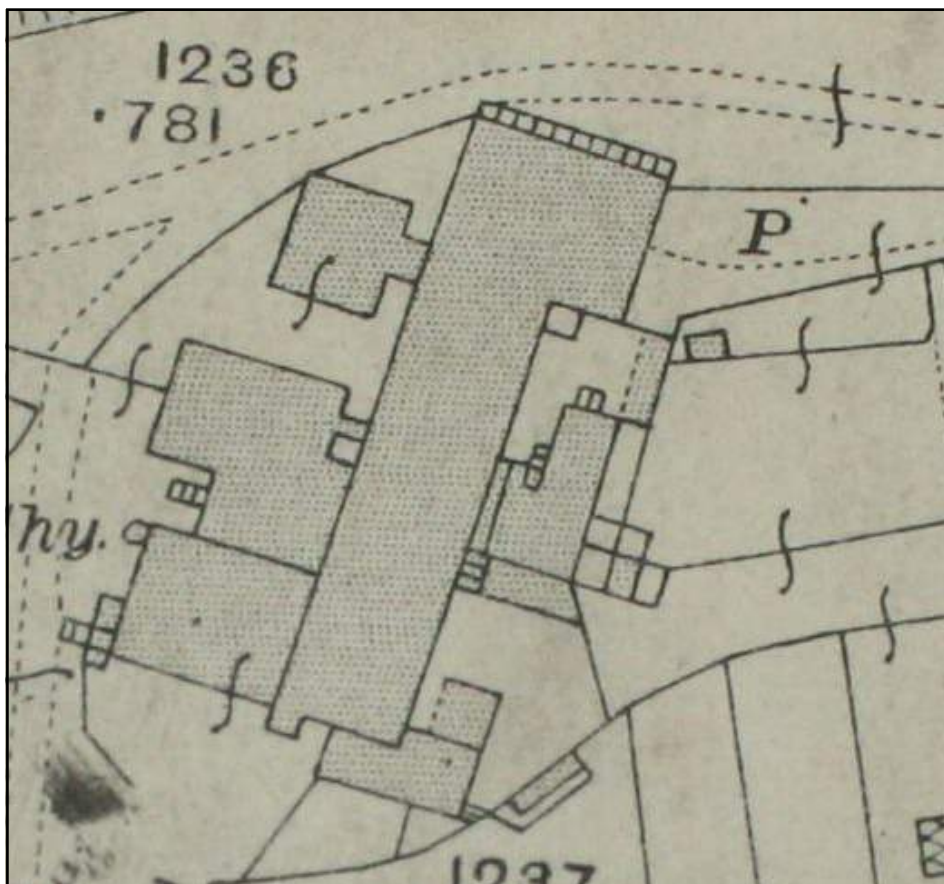


Figure 5: Hermitage Mill depicted on the Ordnance Survey map of 1916.

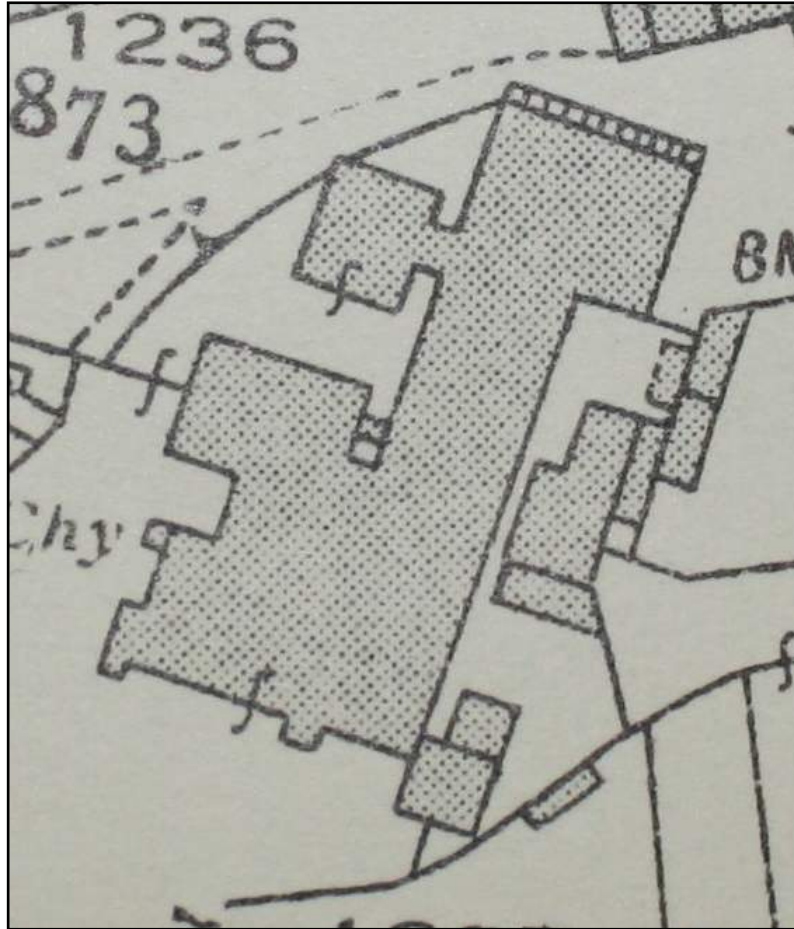


Figure 6: Hermitage Mill depicted on the Ordnance Survey map of 1939.

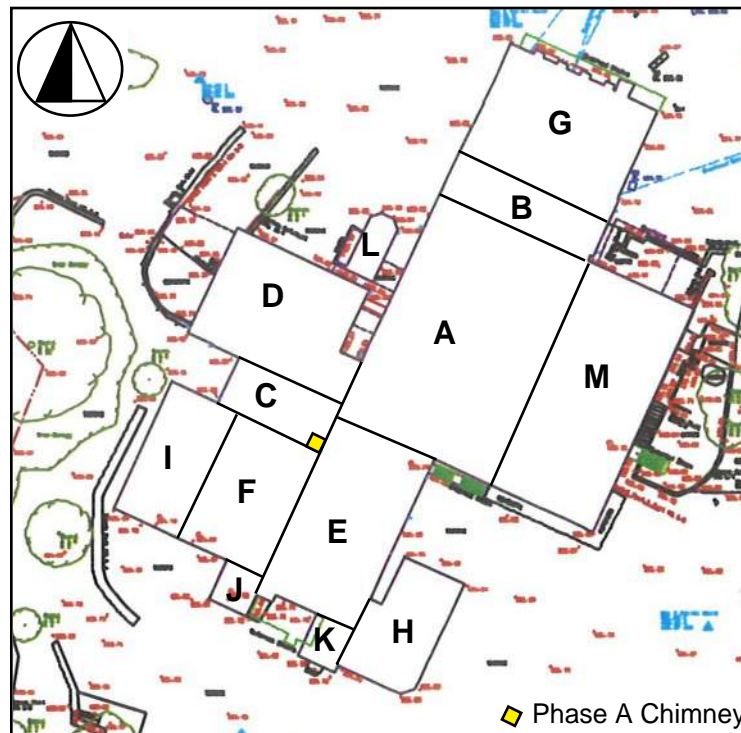


Figure 7: Building phases at Hermitage Mill based on a drawing provided by the client. Scale 1:500 at A4.

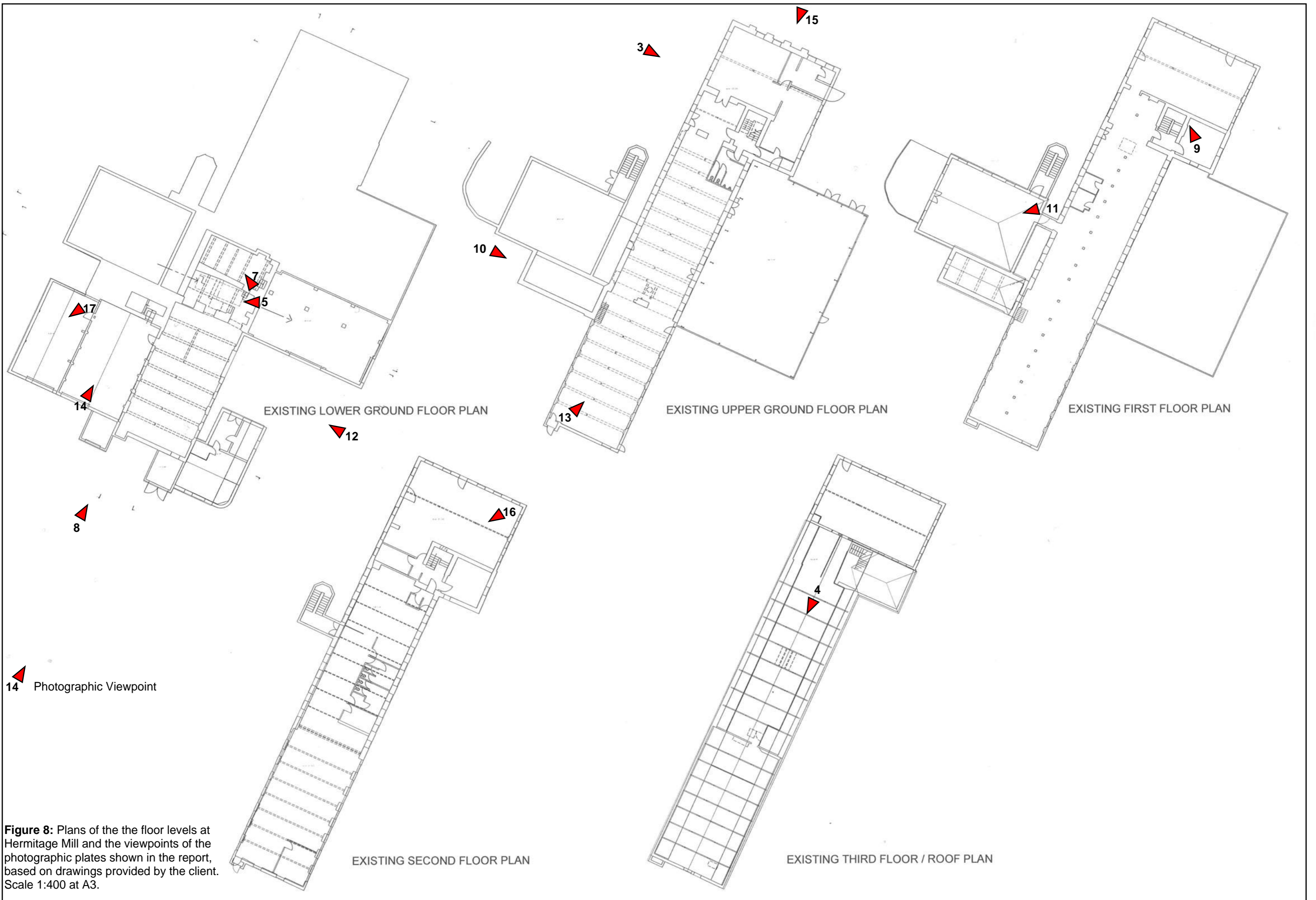


Figure 8: Plans of the the floor levels at Hermitage Mill and the viewpoints of the photographic plates shown in the report, based on drawings provided by the client. Scale 1:400 at A3.



Plate 1: A photograph of the west elevation of Hermitage Mill viewed looking east taken before 1916.



Plate 2: A photograph of the west elevation of Hermitage Mill viewed looking east taken in 1950.



Plate 3: General view of the northern end of the western elevation, viewed looking east.



Plate 4: General view of the roof of Phase A, viewed looking south.



Plate 5: The wheel pit viewed looking south-west.

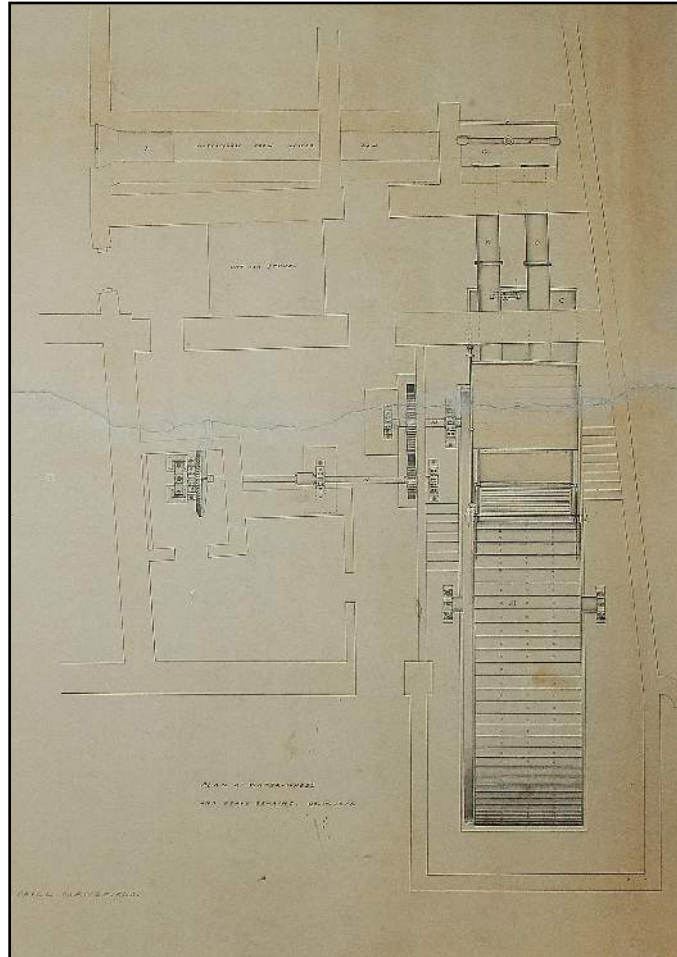


Plate 6: Plan of the water wheel at Field Mill, Mansfield in 1843.



Plate 7: General view of the room to the north of the wheel pit, viewed looking north-west.



Plate 8: The mill from the south, the arrow indicating the location of the chimney possibly relating to Phase A, viewed looking north.



Plate 9: The cornice and wall paper in the first floor of Phase B.



Plate 10: The west gable of the engine house, viewed looking east.



Plate 11: The roof over Phase D viewed looking south-west.



Plate 12: The southern brick extension Phase E viewed looking west. Note that the mill is abutted by the sub-station Phase H, the white brick building on the left and the modern shed Phase M.



Plate 13: The upper ground floor of Phase E, viewed looking north-east.

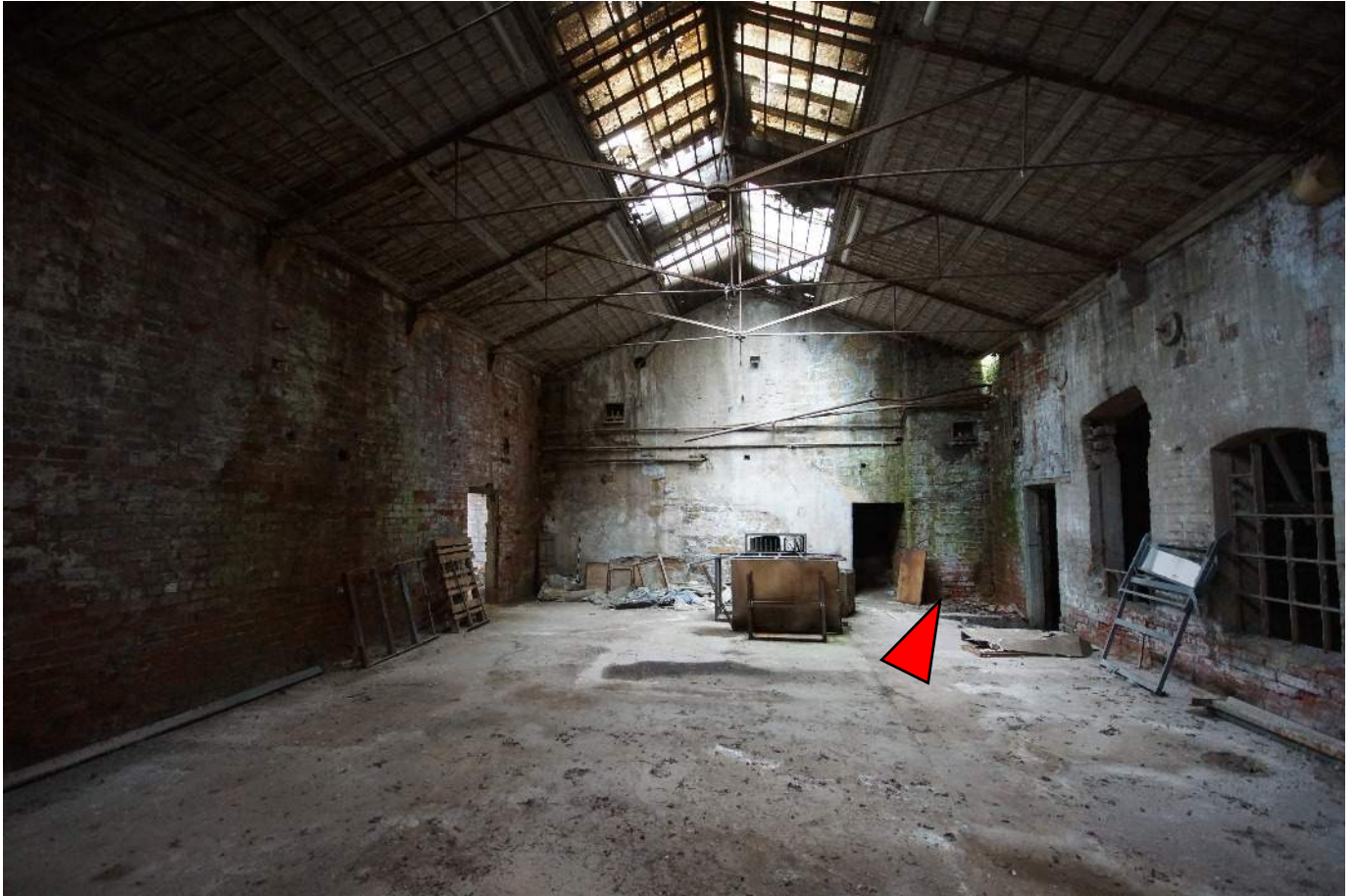


Plate 14: The interior of the boiler house, Phase F, viewed looking north. Note the earlier chimney highlighted by the arrow in the right hand corner of the room which is abutted by the wall of the engine house Phase C and the wall of the mill Phase E.



Plate 15: The north elevation of Phase G, viewed looking south.

Plate 16: General view of the second floor of Phase G, viewed looking south-west.





Plate 17: The interior of the Phase I, viewed looking south-west.



Figure 9: External photographic viewpoints, based on a drawing provided by the client. Scale 1:500 at A3.

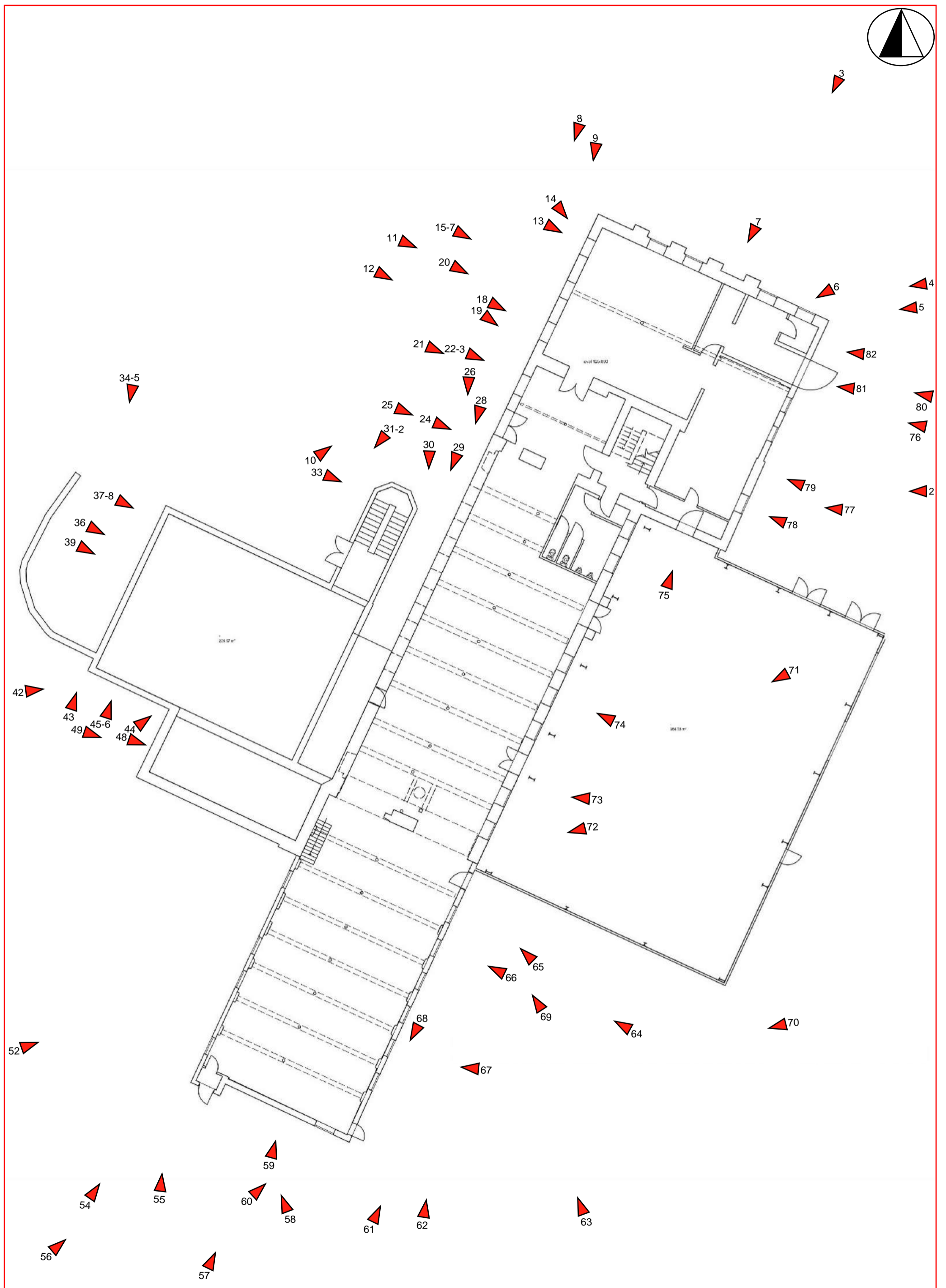


Figure 10: External photographic viewpoints, based on a drawing provided by the client. Scale 1:200 at A3.

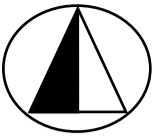


Figure 11: Plan of the existing lower ground floor with the photographic viewpoints indicated, based on a drawing provided by the client. Scale 1:200 at A3.

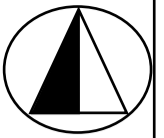


Figure 12: Plan of the existing upper ground floor with the photographic viewpoints indicated, based on a drawing provided by the client. Scale 1:200 at A3.

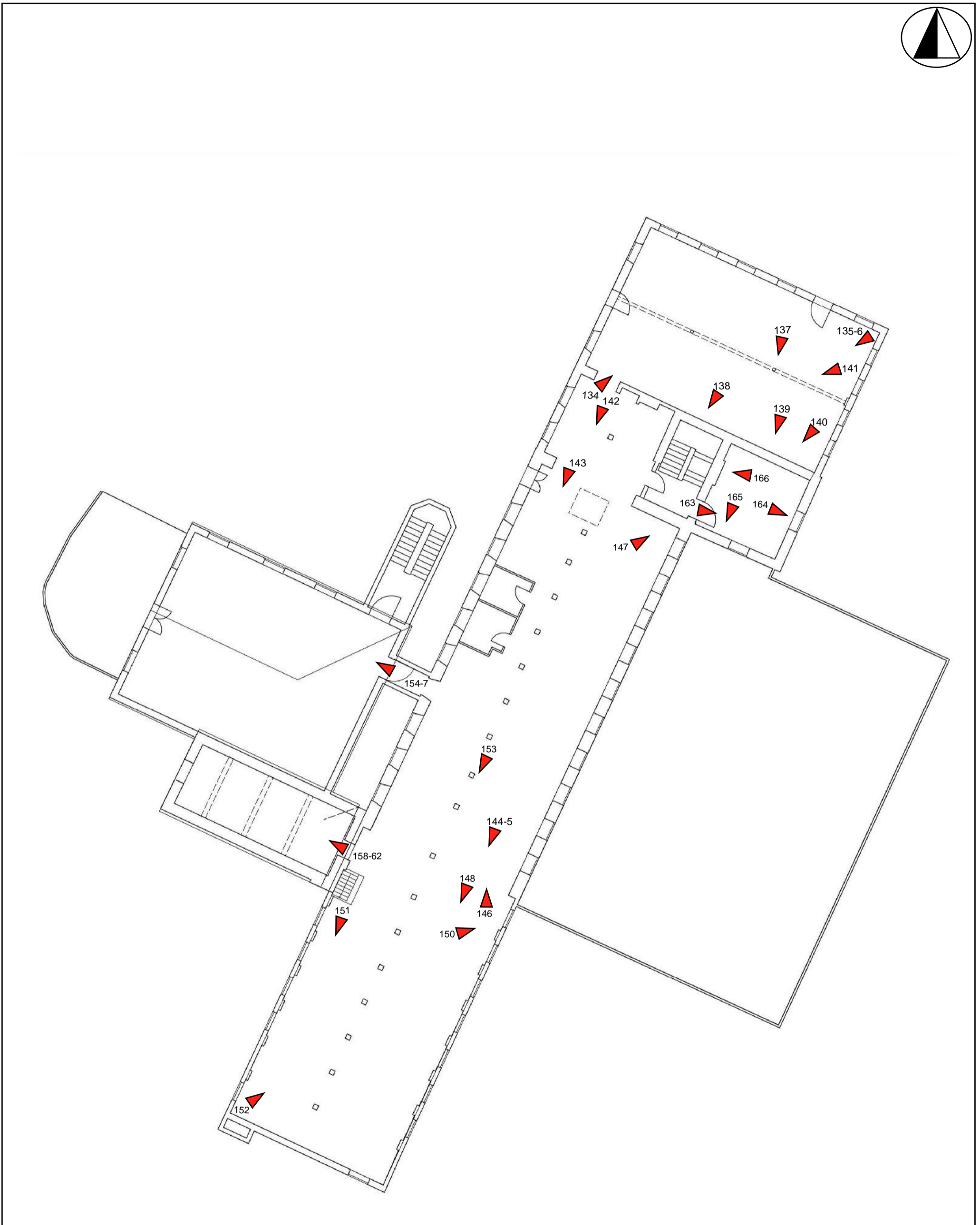
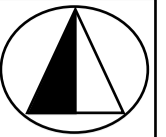


Figure 13: Plan of the existing first floor with the photographic viewpoints indicated, based on a drawing provided by the client. Scale 1:200 at A3.

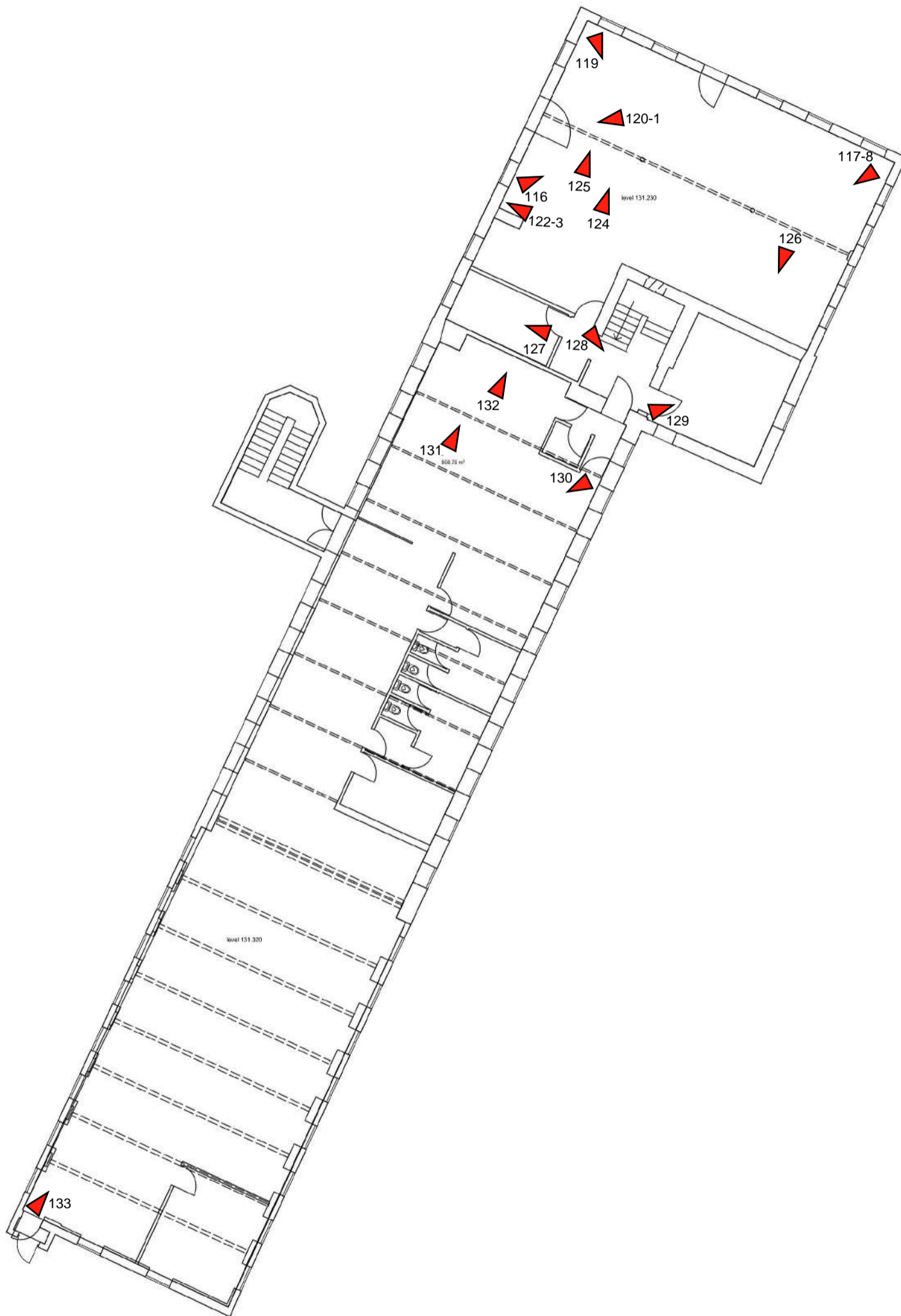
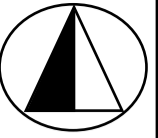


Figure 14: Plan of the existing second floor with the photographic viewpoints indicated, based on a drawing provided by the client. Scale 1:200 at A3.

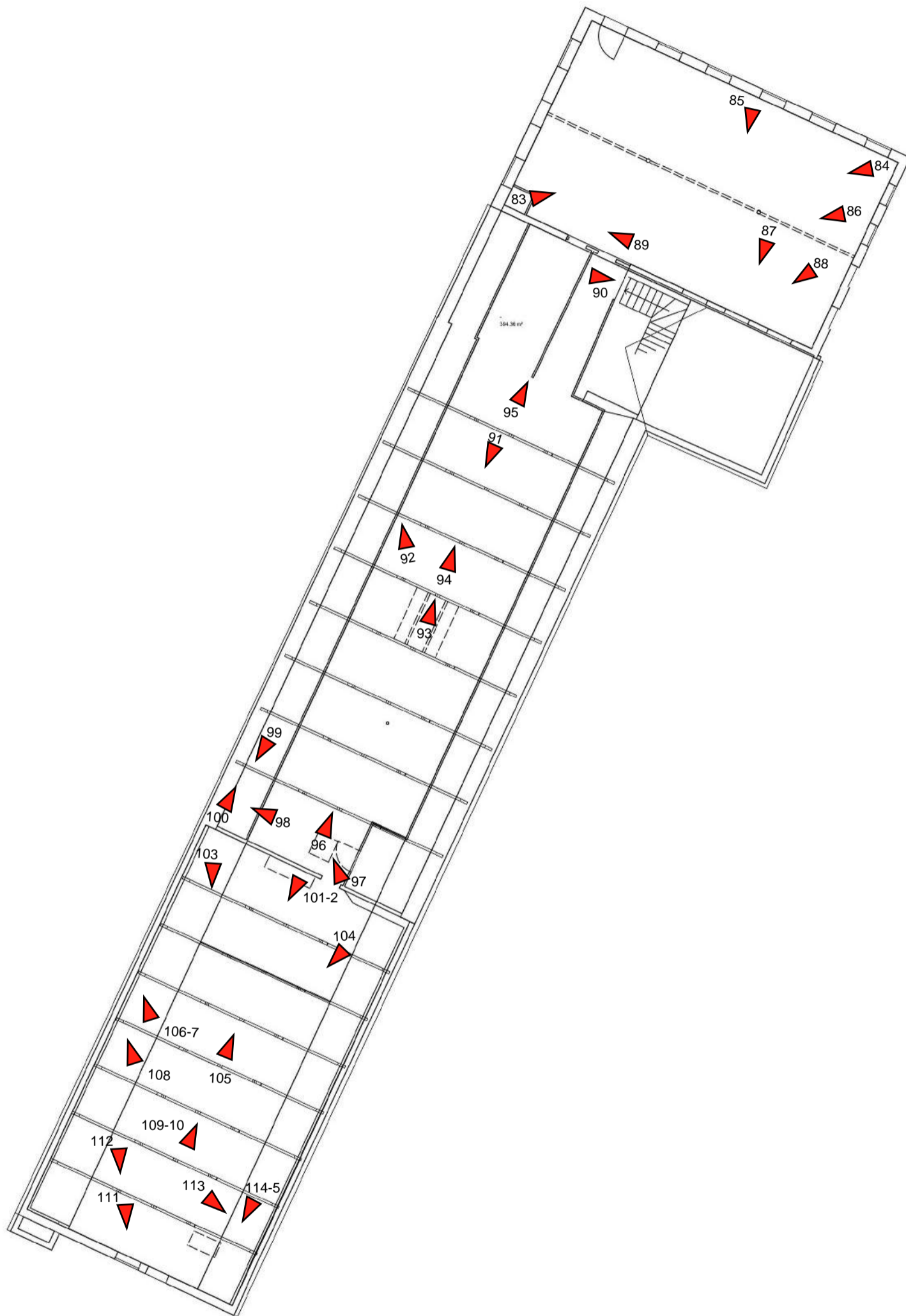
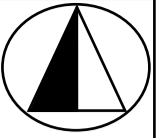


Figure 15: Plan of the existing third floor/roof space with the photographic viewpoints indicated, based on a drawing provided by the client. Scale 1:200 at A3.

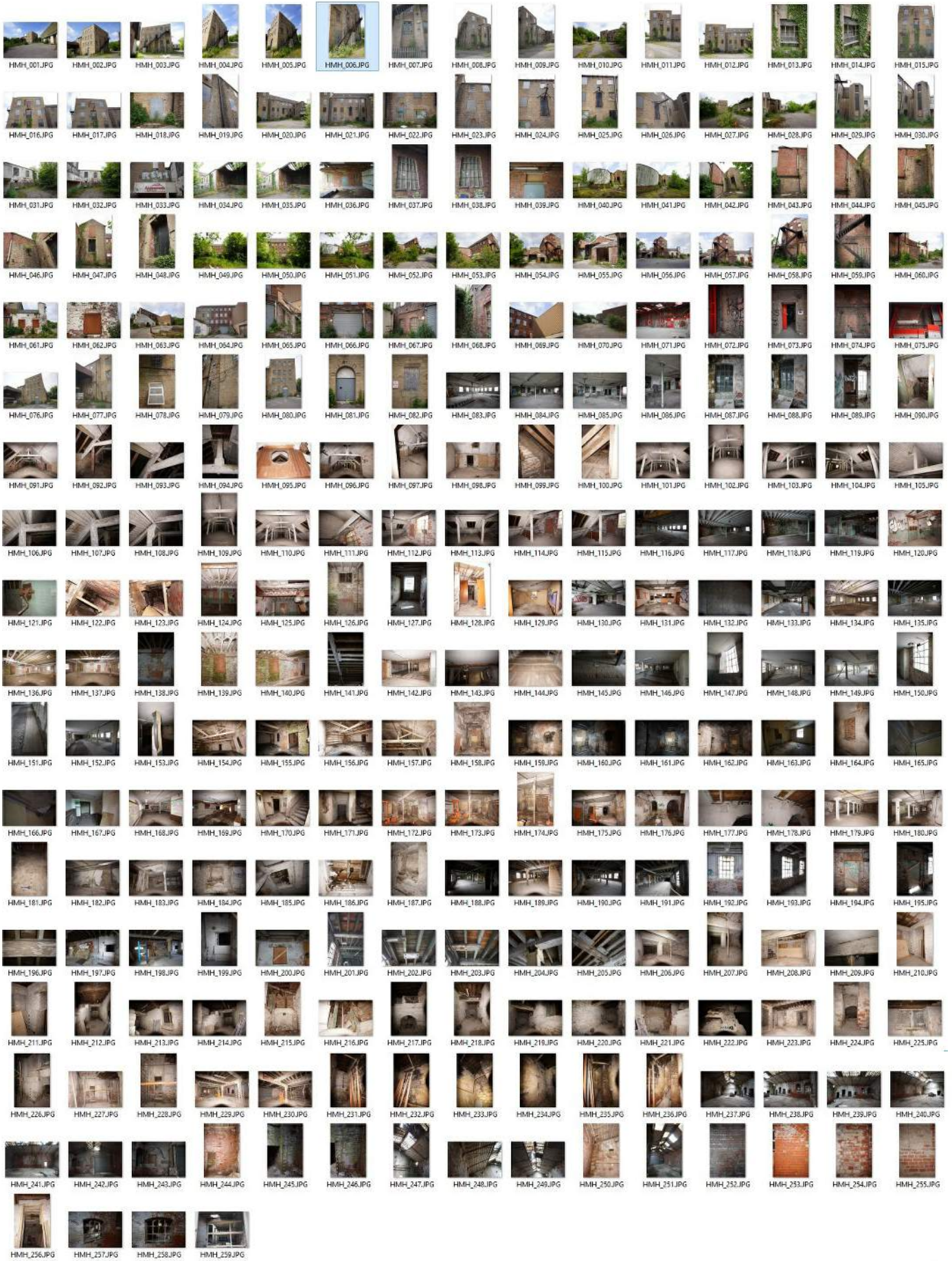
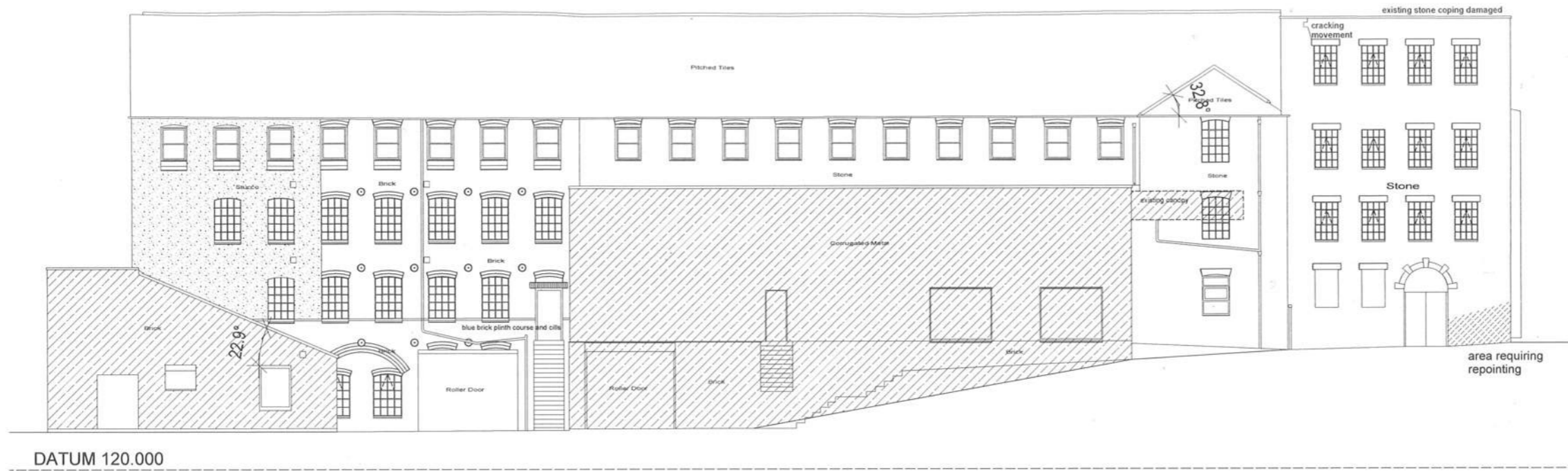


Figure 16: Thumbnails of the 259 digital images.



EXISTING EAST ELEVATION



EXISTING WEST ELEVATION



EXISTING NORTH ELEVATION



EXISTING SOUTH ELEVATION

Figure 17: Elevations of Hermitage Mill based on drawings provided by the client. Scale 1:200 at A3.