



LUNESIDE WEST LANCASTER

Archaeological Building Assessment



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SUMMARY

Following an earlier proposal to redevelop the former Lune Mills complex, St George's Quay, Lancaster (centred on SD 4630 6200) in 2002 a programme of archaeological investigation, comprising a desk-based assessment and site visit, was carried out (OA North 2002). After alterations to the original scheme and the demolition of some buildings the Lancashire County Archaeology Service requested a further scheme of assessment was requested to establish the condition, survival and potential of the site and the need for further recording.

The assessment was carried out in July 2005, and a number of recommendations for further work were made, based on the current condition of the buildings. In some cases these have been totally demolished and only the outline of the foundations remains to be recorded, but in most considerable historic fabric survives and it is considered worthwhile recording the majority of this to RCHME Level II-type standards.

ACKNOWLEDGEMENTS

Oxford Archaeology North (OA North) would like to express its thanks to Countryside Properties for commissioning and supporting the project. In addition thanks are due to Mike Foy, for his help in providing access to the site.

Daniel Elsworth carried out the building assessment and wrote the report, utilising the results of the initial investigation carried out by Chris Wild. Emma Carter and Chris Wild produced the illustrations, which were updated by Mark Tidmarsh. Alison Plummer managed the project and edited the report.

INTRODUCTION

1.1 CIRCUMSTANCES OF THE PROJECT

- 1.1.1 Following a proposal by Michael Courcier and Partners Ltd to redevelop the former Lune Mills complex, St George's Quay, Lancaster (centred on SD 4630 6200), an archaeological desk-based assessment was carried out by OA North (OA North 2002) as part of an environmental impact assessment for the site. At this time a number of buildings were in the process of being completely or partially demolished. Due to alterations in the proposals Lancashire County Archaeology Service (LCAS) requested an additional assessment of the current condition of the site. This was to comprise a rapid examination of the standing and demolished remains in order to determine their significance and the need for additional work.

1.2 LOCATION AND TOPOGRAPHY

- 1.2.1 The mill complex is situated at the western end of the port of Lancaster, adjacent to the New Quay. The site lies at approximately 6.5m OD. The solid geology in the general area consists predominantly of Silesian grey-brown or reddened medium to coarse-grained sandstones of the Pendle Grit Formation, which is part of the Millstone Grit Group (British Geological Survey 1967). These sandstones are thickly bedded with thin siltstone partings, but with mixed sandstone/siltstone units near the top. The geology dates to the Upper Carboniferous era, which ended about 280 million years ago. The overlying drift geology deposits are somewhat mixed, and comprise predominantly fluvio-glacial sheet horizons of clayey sandy gravel and gravel (*ibid*).

2. METHODOLOGY

2.1 PROJECT DESIGN

- 2.1.1 After consultation with Doug Moir at the Lancashire County Archaeology Service (LCAS) a project design was submitted by OA North (*Appendix 1*). Following the acceptance of this by LCAS the work was carried out in July 2005.

2.2 BUILDING ASSESSMENT

- 2.2.1 The building assessment utilised the results of the original desk-based assessment and site visit. This had produced a brief gazetteer of structures present within the former Lune Mills complex. Before, during and after the site visit a number of the buildings within the complex were totally or partially demolished. The purpose of the building assessment was therefore to identify the extent of the demolition and determine whether or not the original assessment of the structures was accurate in the light of any further information that had been revealed. Similarly an assessment was made of whether the recommendations for further work were justified, and a photographic record of the surviving and demolished structures was also made.
- 2.2.2 The information gathered during the initial site visit was compared with the surviving structures following demolition using the original gazetteer and site plans. Photographs of the site were taken in black and white and colour print 35mm format, and comprised shots of specific buildings, features of interest and general views of the site as a whole.

2.3 ARCHIVE

- 2.3.1 A full professional archive has been compiled in accordance with current Institute of Field Archaeologists and English Heritage guidelines (English Heritage 1991). The paper and digital archive will be deposited with the Lancashire County Record Office in Preston (LRO(P)) on completion of the project, and a copy of the report will be deposited with the Lancashire Historic Environment Record (HER).
- 2.3.2 A complete list of the photographs taken during the assessment is produced in *Appendix 2*. A camera fault during the initial assessment required the photographs to be re-taken. There are therefore two sets of 35mm black and white and slide photographs showing the same views within the archive (Films 1-4 and 5-8), but these are the same only one list of these is present in *Appendix 2* (Films 5-8). A plan showing the location of all of the photographs was also produced (Fig 3).

3. HISTORICAL BACKGROUND

3.1 INTRODUCTION

3.1.1 The background history to the site is taken from the initial assessment (OA North 2002), which was compiled largely from secondary sources. The more detailed history of the site is compiled from primary and secondary sources, and was also originally produced for the initial assessment (*ibid*).

3.2 THE WILLIAMSONS IN LANCASTER

3.2.1 The history of the Williamson family in Lancaster from the mid-nineteenth century is well documented (e.g. Gooderson 1996). Therefore, this study provides only a brief summary of the family history, to provide the relevant background to the circumstances leading to the purchase and growth of Lune Mills in the late nineteenth century.

3.2.2 James Williamson moved to Lancaster to work as an apprentice painter and decorator in 1827 (*ibid*, 64). After completing the apprenticeship he travelled to London and Liverpool, before returning to Lancaster and entering a business partnership with Ellen Shrigley in 1837 (*ibid*, 66). In 1847 he started his own business as a ‘*house and ornamental painter and gilder*’ (Lancaster Gazette, 8 May 1847).

3.2.3 Williamson’s interest in oilcloth manufacture probably arose whilst travelling in London (Gooderson 1996, 68). He may have first manufactured oilcloth in 1844 in Lancaster although there appears to be little documentary record for this date. James Williamson and Son Ltd celebrated their centenary in 1944, and a company publication at that time recounts the first successful manufacture of table-baize (oilcloth) in 1844 (Williamson’s of Lancaster 1944).

3.2.4 Through the 1850s Williamson’s company grew, with the construction of a new factory at St George’s Works on the quayside *c*1855 (Gooderson 1996, 70). In the census of 1861 Williamson was described as a ‘*table-baize manufacturer*’ (*ibid*). In 1862 he extended St George’s Works (Lancaster Gazette, 30 August 1862), and in 1864 built Greenfield Mill on Moor Lane to weave the cotton-backing for table-baize (Gooderson 1996, 72). In 1870 he purchased Bath Mill (Lancaster Guardian 21 May 1870).

3.2.5 Thus by 1870 James Williamson had established a large industrial base within Lancaster, not only producing oilcloth and leathercloth, but also owning two mills to produce cotton backing for these two products.

3.3 THE LINOLEUM INDUSTRY

3.3.1 The linoleum industry grew out of the oilcloth industry in the mid-nineteenth century. Oilcloth was well established as an alternative to carpet in country houses by the eighteenth century (Gooderson 1996, 25), and comprised cotton

or jute cloth coated with an amalgam principally containing linseed oil (*ibid*, 26). By adding pigments and varnish or oil coatings, oilcloth could be made to any colour and could be printed or embossed (*ibid*, 29). Leathercloth, also manufactured by Williamson, was originally simply embossed oilcloth, although a nitrocellulose finish was added from 1884 to give greater durability (*ibid*, 31).

- 3.3.2 Linoleum was invented by Frederick Walton in 1863, when he added ground cork to the oxidised linseed oil mixture (*ibid*, 33). The increased demand for higher quality floorcloth in the mid/late nineteenth century can be shown by the number of similar products manufactured in the 1870s. As well as linoleum, similar products included kamptulicon, corticine, suberium, and boulinikon (*ibid* 34). Unfortunately for Walton, he did not make linoleum a trademark, but merely patented the process. In 1877 his patent expired, and the well-known brand name could be manufactured by others, primarily Michael Nairn and Co (*ibid*).
- 3.3.3 James Williamson died in 1878. The company was inherited by his two sons, James and Thomas, although James quickly bought his brother's stake. The company was then renamed Jas Williamson and Son Ltd.
- 3.3.4 Williamson did not start manufacturing linoleum until 1887. The company came to linoleum flooring manufacture from table-baize and leathercloth production, and adapted their technology to suit. Whilst their competitors relied on block or flat-bed printing, Williamsons engineers adapted steam powered rotary printing, which they used in the production of oilcloth (*ibid*, 36). This process was far more cost-effective, which gave Williamsons a huge commercial advantage over their competitors (*ibid*, 34), and had a major effect on the technology of the industry.
- 3.3.5 Due to the drop in the price of linoleum by 1887, and their use of improved technology, Williamsons were able to develop cheap linoleum for the working-class market, where it had previously been deemed 'too expensive' (*ibid*, 36). Even by the late nineteenth century, most working class floors were either uncovered, or had rugs made from rags. A huge market therefore existed for cheap floor coverings, with the only rival at that time being coconut matting (*ibid*, 41).

3.4 SITE HISTORY

- 3.4.1 **Introduction:** an outline assessment of selected documentary material was made and is presented below. The scope of this project did not allow for full consultation of all possible documentary sources, and some of these may provide a valuable resource in the future, and may reveal additional information regarding this and other similar sites. There is a wealth of documentary evidence regarding James Williamson Jnr (Lord Ashton), the development of the linoleum industry, and the rivalry between the Williamsons and Storeys in Lancaster. This documentary study concentrated on material of direct relevance to the development of the Lune Mills site.

- 3.4.2 Unfortunately, the Williamsons' company, and probably the whole linoleum industry, was greatly suspicious about industrial espionage (G Niven pers comm), and thus many important records relating to the mill complex, its machinery and manufacturing processes were destroyed. However, small but informative collections survive, particularly those held by George Niven (former Technical Director at Lune Mills), Lancaster City Library, and the Lancashire Record Office in Preston.
- 3.4.3 The cartographic information, especially that held by George Niven, was extremely useful in aiding the understanding of the development of the site. All mapping prior to the Ordnance Survey 1st edition 25": 1 Mile series of 1893 (Fig 3) shows little activity. The 2nd edition of 1913 shows the complex at almost its fullest extent, as shown on the plan of the Lune Mills complex in about 1910 (Fig 4).
- 3.4.4 As this assessment concentrated on the mill and its immediate environs, only a limited examination of the Lancashire SMR was undertaken. No records were identified within a 0.5km radius of the study area, and there was no entry for the Lune Mills complex itself.
- 3.4.5 **History of Lune Mills:** the site lies within an area of Lancaster known as 'the Marsh'. An act for enlarging, draining and embanking the Marsh was obtained in 1795 (Simpson 1852, 330), prior to which time it was 'a stinted pasture'.
- 3.4.6 A new quay for the town of Lancaster was constructed to the north of the site, on the edge of the Marsh in 1767 (White 1992, 47) to allow the larger commercial ships to access the port, which was too shallow further along the quayside.
- 3.4.7 The 1st edition Ordnance Survey 6": 1 Mile map of 1844 shows only the New Quay, and a small sub-rectangular structure, c5m² approximately 50m to the east, on the south side of the road. No mention was found during the documentary study of this structure, which is also shown on a plan of the Lune Shipbuilding Yard dated 1863 (LRL A193). This company was formed in 1862 (G Niven pers comm), and purchased land adjoining the New Quay from Lancaster Corporation prior to the plan of December 1863. Accounts of the company to December 31st 1867 quantify 'buildings' at £4250, with £104 11s having been spent in that year (LRL Scrapbook 4, 35). A photograph (in Docton 1973, 41) of the Clipper 'Wennington', built at Lancaster in 1865, shows very temporary structures of timber and sheet metal, which were presumably erected to the specifications of the ship being constructed within.
- 3.4.8 Three large iron-hulled sailing ships and two steamers were launched between 1865 and 1869 but by 1870 the company had debts of £13,000 and was put into liquidation (Christie 1964, 33).
- 3.4.9 James Williamson bought the site, measuring c14 acres, in 1871 for £3130 (Conveyance of Freehold 1931). By 1873 structures had been erected and varnish production, and probably more, had been transferred from St George's works to Lune Mills (Gooderson 1996, 74).

- 3.4.10 With the death of James Williamson in 1879, the company initially passed into the ownership of his two sons, James and Thomas, but by 1881 the invalid Thomas had sold out to his younger brother (*ibid* 73). Expansion appears to have been rapid at Lune Mills. A report in the Lancaster Guardian reported ‘*a serious fire at the table-baize and varnish works of Messrs Williamson on the New Quay on 24 March 1880. The fire occurred in the third storey of the large building at the west end of the works, and in one of the drying rooms. The rooms of these works are all constructed on a fireproof principle*’. The structure in question appears to be No. 2 Mill (Fig 4). The structures at Lune Mills were numbered chronologically, with separate series for mills, boilers, reservoirs and similar. Thus No. 2 Mill was the second to be constructed, and was obviously one of a number of buildings, given the description of its location in the newspaper. The insurance documents of 1969 (Sedgwick, Collins and Co Ltd, 1969) date many of the structures, but do not give precise building dates for many of the early structures. The earliest dated building is No. 8 Mill, which was constructed in May 1888. Therefore, Mill Nos. 1-7 were certainly constructed prior to this. The newspaper description of No. 2 mill as large in 1888, may suggest that No. 5 Mill, which was larger (as shown in Fig 4), had not been constructed by that time.
- 3.4.11 Several of the structures listed in the 1963 insurance plan have assumed construction dates prior to 1888. The earliest is that for No. 4 Mill, listed as 1870, whilst No. 2 was assumed to be 1890. No. 1 Mill was rebuilt in 1896, and it is probable that all were originally constructed prior to 1880, the date assumed for No. 5, No. 6 and No. 7 Mills.
- 3.4.12 Lune Mills was a large enough complex by the end of 1880 to warrant the installation of the first telephone system in Lancaster. The Lancaster Guardian of 15 January 1881 reported the recent installation of a loud-speaking Gower Bell Telephone. This comprised ‘*one instrument at Lune Mills, the wire running from there along the riverside to St George’s Works, thence over houses to Greenfield and Bath Mills allowing communication between all sites*’.
- 3.4.13 By 1883 James Williamson was attempting to buy more land from Lancaster Corporation, for the expansion of the complex (Gooderson 1996, 77). Prior to this date, two other structures had emerged within the present Lune Mills site, an Infectious Diseases Hospital, and a brickworks. A new separate isolation hospital was first suggested by the Sanitary Committee in 1876 (Lancaster Guardian 14 October 1876). This was a contentious proposal, but a site was agreed for the hospital on Lancaster Moor the following year. In 1878 the Lancaster Guardian reported that the ‘*wooden structure on the Moor was not to be used and was to be pulled down*’ (*ibid*, 23 February). In 1879 the Medical Officer of Health proposed ‘*a timber structure galvanised with iron...made to be removable*’, and the Chairman suggested building three such structures, at Glasson, Carnforth and Skerton (*ibid*, 2 August). However, a new site was subsequently proposed by the Corporation for an isolation hospital in the north-east corner of ‘*Workhouse or Top field*’, close to the road to the Asylum, by the boundary wall of Williamson Park. This plan was rejected at a meeting on 21 January 1880, and by 21 February the Corporation

had ‘*no new site to recommend*’ (*ibid*). A report of 24 April 1880 stated that the council had ‘*settled on Marsh field*’ for the new site of the hospital, despite having been petitioned by residents of the Marsh on the 21 April. The new building was to be a ‘*wooden parallelogram*’ (*ibid*). An announcement in the Lancaster Guardian on 1 May 1880 stated the new hospital ‘*would be built on the Old Brick Croft. This field is next to Messrs Williamsons Lune works*’ (*ibid*).

- 3.4.14 At a meeting of the Sanitary Committee on 27 April 1880, the surveyor ordered the production of tenders for the ‘*getting out the foundations for the infectious hospital on the Marsh*’, and at a subsequent meeting it was agreed to accept that from Mr William Harrison (*ibid*). Progress with building appears to have been slow but in a meeting of 27 July 1880 William Harrison was ‘*directed to erect a stone foundation wall 15” thick as a foundation for a brick fence wall at the hospital field*’ (*ibid*). A letter in the Lancaster Guardian of 18 November 1880 conveyed surprise at the delay of the opening of the new infectious diseases hospital (*ibid*). No record of the opening was found, although it was this area of land that Williamson was attempting to purchase in 1883.
- 3.4.15 Williamson is known to have purchased 600yds² of land forming a track down the eastern boundary of Lune Mills in 1888 for £82 10s (Conveyance of Freehold 1931). He finally managed to purchase the remainder of the hospital site, with the exception of 1853yds² comprising the road from the quayside to the hospital, and to the site boundary to the south, in 1890 for £4268. This included an apparently nominal £1 10s for the hospital itself. Demolition would have been swift, but the hospital is shown on the 1st edition Ordnance Survey 25” 1 Mile Map of 1893, which was surveyed in 1890 presumably prior to its purchase. An undated plan within the Williamson archive at the Lancashire Record Office also shows the hospital, but is incorrectly catalogued as being c1930 (DDX 909/32).
- 3.4.16 To the west of Lune Mills was a brick works, shown on the 1st edition Ordnance Survey 25” Map of 1893 (Fig 3). It is not shown on the 1st edition Ordnance Survey 6” Map of 1844 but appears to have been referred to during the discussions on the location of the Infectious Diseases Hospital, as the Old Brick Croft. This suggests that the works were redundant by 1880. However, the brick works shown on the 1893 OS map was located to the west of Lune Mills, whilst the hospital was to the east. It is possible that a new brick works was built specifically to meet the demand of the expansion of Lune Mills in the 1880s. The brick works was in operation at least between 1882 and 1888, and was owned by an ally of Williamson’s on Lancaster Council (Gooderson 1996, 77).
- 3.4.17 Another major development of the early 1880s was the construction of the Glasson Dock branch of the London and North West Railway (LNWR). The line was first proposed in 1845 by the Preston and Wyre Railway Co. Renewed interest appears to have been driven by the two large oilcloth companies of Williamson’s and Storey’s, both requiring access to the port at Glasson, given the continued decline and unsuitability of the port of Lancaster. Contractors were appointed in August 1879, with the first goods

train running in April 1883. In 1887 Williamson exchanged a narrow strip of land along the southern boundary of the Lune Mills site with the LNWR Company, for a triangular segment of the same size (1185yds²) at the southern end of the main reservoir in the centre of the southern boundary (Conveyance of Freehold 1931; LNWR Co 1888, LRL PL52/81). Whilst Lune Mills had its own internal tramway by 1890, this was not linked to the main branch line until after the Ordnance Survey 2nd edition map of 1913 (and possibly even after the 1931 Conveyance plan).

- 3.4.18 The expansion of Lune Mills continued throughout the late nineteenth and early twentieth century. Very little survives of the original documentation of this important phase but what does survive, gives an insight into the scale of work undertaken. The 1st Edition Ordnance Survey 25": 1 Mile map, surveyed in 1890 (Fig 3), shows Mills Nos. 1-8, K1 Kivver Mill (kivver being the thin paste of ingredients added to the linseed oil and drying agent), three steam boilers, six oil boilers, five reservoirs and various cork sheds and warehouses. Linoleum was first produced at Lune Mills in 1887, and it is likely that much of the new construction was specifically to expand its production with the rapid growth of the market. The undated plan within the Williamson archive at the Lancashire Record Office, incorrectly catalogued as being c1930 (DDX 909/32), shows the site shortly after the Ordnance Survey plan. The two plans are very similar, with the buildings shaded on the undated plan. However, only the outlines of No. 9 Mill and No. 10 Mill were recorded, suggesting that they were under construction. The Insurance Plan of 1963 dates No. 10 Mill to June 1891, but gives an assumed date of 1895 to No. 9 Mill.
- 3.4.19 Fire was a major problem associated with oilcloth manufacture. The Lancaster Guardian of 24 September 1887 stated that *'all buildings had water main, with sprinklers and steam-injectors on every landing'*. Floors were wooden, but the planks were laid on their sides to give greater fire protection (G Niven pers comm), and often had steel plate coverings. Only one mill (No. 4) was built with brick arch ceilings, typical of fireproof building in cotton mills, and this was one third more expensive to build than the wooden floors used elsewhere (G Niven pers comm). To further reduce risks internal walls were added to stop the spread of fire, and oil-boilers and varnish storage were located in small detached buildings. A fire on 18 August 1892 was reported in the Lancaster Guardian to have been dealt with by the employees before the town fire brigade arrived. A second undated plan within the Williamson archive at the Lancashire Record Office, catalogued as being c1910 (DDX 909/31), shows a fire station within Lune Mills, just south of the New Quay. A huge fire on 2 February 1895 was reported by both the Lancaster Guardian and Lancaster Observer. The report in the Guardian gives good background information to the site, stating *'there are 14 mills in all, each constructed of brick in the fireproof principle'*. The site was also described as *'the most extensive linoleum manufactory in the world'*. The fire, reported in the Lancaster Observer as *'one of the biggest fires in Lancaster in the last 20 years...took place in No. 7 department, used for the manufacture and hanging of linoleum.'* It also mentioned that the block had been on fire twice before, most recently in 1891, demonstrating that it was constructed much earlier than

1890. No. 1 Mill was also damaged by fire the following year and rebuilt in April 1896 (Sedgwick, Collins and Co Ltd, 1969).

- 3.4.20 The eastern part of the site, purchased from the Lancaster corporation in 1890 was rapidly filled with warehousing, saw mills, stores, cookhouses and a joiner's shop. The large four-storey brick warehouse was probably one of the last structures constructed in this area, and was completed in March 1899. In 1896 Williamson purchased 27 acres of land at the western end of the site for £17,488 8s. This almost doubled the size of the complex, and was the single largest expansion in the history of the site. By 1903 Williamson had managed to purchase the outstanding strip of Corporation land within the eastern end of the site, along with a strip of land forming a road within the new western extension of the site, for £620 8s 9d. A final purchase of c17 acres to the south of the Glasson Branch Line in 1906, completed the procurement of land for the Lune Mills complex, and allowed storage of coal, and later the construction of a power station, outside the main mill complex.
- 3.4.21 A small bundle of papers within the Lancashire Record Office give an insight into the growth of the complex in the early twentieth century (DDX 909/33). Some papers give evidence of machinery purchased for the works, such as 'disintegrators' in 1894, 1900, 1902, and twice in 1906, 'hydraulic pressure pumps' in 1907, and 'Green's economisers for steam boilers' in 1907 and 1916. Of more interest to this project were quotes from brick companies and roofers for undertaking construction of the new mills. A letter dated 7 July 1900 requests a price for over 20,000 glazed bricks from the engineers' department at Lune Mills. Estimates were obtained from several local companies for roofing No. 8 Mill in 1906, presumably because of fire damage, slating new stores in 1906, and roofing the extension to No. 3 Boiler House in 1908.
- 3.4.22 The plan catalogued as c1910 (DDX 909/31; Fig 4) is probably slightly later than the 1910 revision to the Ordnance Survey 25": 1 Mile map, published as a 2nd edition in 1913, as it does not show No. 3 Mill. This appears to have been demolished shortly after, but remained as a yard. The Ordnance Survey 2nd edition map of 1913 shows the works at the end of the massive expansion, with little other than rebuilding taking place until after the Second World War. The plan shows the new Power Station (Structure 88 on the Sedgwick, Collins and Co Ltd plan 1969), built to house a turbine driven by No. 3 Reservoir, which provided mains electricity to the entire complex before 1910, and probably c1902 (G Niven pers comm).
- 3.4.23 The major-post war construction at Lune Mills was that of a new large Thermal Electric Generating Station in 1949 (The Engineer, 9 September 1949), which provided all the power needs of the entire site, at a cost of £1,000,000, and superseded the need for steam engines. Rail transport sheds were also constructed for the siding built off the Glasson Branch Line in 1945 (Sedgwick, Collins and Co Ltd 1969). A final period of building occurred in the 1950s when new technology required different structures for the production of linoleum, and several of the manufacturing units were replaced.

3.4.24 An aerial photograph taken in 1961 (G Niven Archive) shows the fullest extent of the Lune Mills complex, shortly before the Insurance Plan and survey of 1963, which gives a complete record and use of the structures at that time. Shortly afterwards the industry entered a terminal decline, with an area roughly corresponding to the 27 acres Williamson purchased in 1896, sold and demolished in the late 1960s. A report in the Lancaster Guardian of 17 April 1970 stated that '*25 multi-storey buildings have been retained*'. Manufacturing finally ceased at Lune Mills in 2001.

4. RESULTS

4.1 INTRODUCTION

4.1.1 The results of the assessment were added to the gazetteer compiled for the previous investigation (OA North 2002). Where buildings had been totally or partially demolished this was recorded and appropriate alterations were made to the plan of the site and the gazetteer. Changes to the recommendations based on the present condition of the buildings were also added to the gazetteer.

4.2 SIGNIFICANCE

4.2.1 There are a number of different methodologies used to assess the archaeological significance of sites; that to be used here is the 'Secretary of State's criteria for scheduling ancient monuments' which is included as Annex 4 of PPG 16 (DoE 1990). The sites listed in the gazetteer (*Section 4.4*, below) were each considered using these criteria, with a general consideration of the significance of the site as a whole outlined below.

4.2.2 **Period:** the former Lune Mills complex is typical of many large industrial sites of its period, although its scale is perhaps unusual, especially so for Lancaster. The type of site is also rare for the period as while there are many industrial complexes connected to the cotton spinning industry in the north-west, for example, dating to the late nineteenth century sites producing linoleum are much less common (Ashmore 1982). During the early twentieth century it had become '*the largest of its kind in the world, controlling every stage of the process and employing over 2000 men and boys in Lune Mills alone*' (Winstanley 2001, 183).

4.2.3 **Rarity:** as mentioned above the former Lune Mills complex is rare in the immediate locality because of its vast size. Similarly, while it is rare for its period it is also rare in general because of the type of process taking place at the site.

4.2.4 **Documentation:** the desk-based assessment (OA North 2002) revealed a large number of documentary sources relating to the site, many of which are currently in private hands and/or unpublished. This gives the site considerable additional significance and the potential for further information contained within these records is, as yet, unknown. Published information about the linoleum industry in Lancaster has tended to concentrate on the individuals involved and the development of the trade (e.g. Gooderson 1996) and there is still scope for additional research into the buildings themselves and the processes that took place within them.

4.2.5 **Group Value:** individually it is unlikely that any of the buildings at former Lune Mills would be considered to be of any particular significance. As a group, however, they form an important late nineteenth century industrial complex, which had a major impact on the economic history of Lancaster

(Winstanley 2001, 182-183). Collectively they are therefore of great significance.

- 4.2.6 **Survival/Condition:** despite the demolition of large parts of the site the majority of the buildings that remain appear to be in a relatively good structural condition. They therefore have the potential to reveal a great deal about the types of activities that went on at the site as well as retaining large amounts of fabric of historical and archaeological interest. There have been a number of severe alterations made to the complex, however, and superficially they appear to be in a poor condition, and this is likely to have led to the loss of some historic fabric.
- 4.2.7 **Fragility/Vulnerability:** the generally good condition of the buildings at the former Lune Mills complex means that none are particularly significant on account of their fragility or vulnerability. Indeed, the most immediate and severe threat they face is demolition as part of redevelopment, but this is the only type of activity likely to be undertaken at the site that would be able to cause much damage.
- 4.2.8 **Diversity:** although the site is diverse, in that there are a large number of constituent parts, many of these were used for similar processes and therefore add little to the overall significance of the site. Nevertheless, its size means that there are still enough buildings with a diversity of functions to give it some significance.
- 4.2.9 **Potential:** the documentary evidence and the probable lack of research into sites of this type means that there is considerable potential for additional information to be discovered about it both from documentary study and survey. The possibility of below-ground remains surviving also means that the site has the potential to reveal information about the former isolation hospital, brick works and ship yard.
- 4.2.10 **Summary:** the large size of the complex and the lack of research into the buildings making it up gives it a degree of significance not recognised by statutory protection or other designations. While this does not necessarily mean that the site should be preserved, and the current condition would make this seem unnecessary, further investigation would be beneficial in order to better understand the nature and use of the individual structures, as well as provide a detailed record of them. The former Lune Mills complex has had an important impact on the economic and industrial history of Lancaster (Winstanley 2001, 182-183), and the buildings that were involved in the processes that were involved in this deserve to be recognised for it.

4.3 RECOMMENDATIONS

- 4.3.1 In general the interpretation of the site and the recommendations for further work correspond with those expressed in the initial investigation (OA North 2002). The demolition of standing buildings has led to the loss of considerable parts of the historic fabric, but there is still a large amount remaining, much of which is worthy of additional recording. Where a building has been totally demolished but is considered to have been of some historic interest it is recommended that a plan of the surviving foundations be made in order to record the exact location of the building and identify whatever features might

still remain. A recommendation is also made for any structures considered to be of architectural or historical interest or that retain considerable amounts of historic fabric to be retained. Details of the recommendations for each site are presented in the gazetteer below, and a summary is presented in Table 1:

Structure No.	Description	Recommendations
1	Gate house	RCHME Level II recording
2	Workshops	RCHME Level II recording
4	Joiners shop	RCHME Level II recording
10	Warehouse	RCHME Level II recording
11	Warehouse	RCHME Level II recording
14	Transport warehouse	RCHME Level II recording
15	Warehouse	RCHME Level II recording
16	Offices	RCHME Level II recording
19	Cork store/paper hydropulper	RCHME Level II recording
21	Paper plant machine rooms	RCHME Level II recording
22	Yard/warehouse	RCHME Level II recording
23	Inspection/warehousing area	RCHME Level II recording
24	Warehouse	RCHME Level II recording
26	Boiler house	RCHME Level II recording
27	Hessian backing plant	RCHME Level II recording
28	Offices	RCHME Level II recording
31	Floor printing mill	RCHME Level II recording
34	Reservoir	RCHME Level II recording
35	Cable store	RCHME Level II recording
36	Pump house	RCHME Level III recording
38	Colour shop	RCHME Level II recording

Table 1: Summary of recommended further work

4.4 GAZETTEER

4.4.1 A summary description based on the results of the original inspection (OA North 2002) was produced for each structure (the term 'structure' is used in the gazetteer as a generic term for the various types of site present within the complex). In addition, recommendations for further recording and an assessment of each structure are also presented below:

Structure number	1
Site type	Gatehouse
Period	Late-nineteenth century
Source	Visual inspection

Description

A two-storey sandstone gatehouse, with central octagonal louvered turret and weather vane (Plate 25). The western, internal, face has had alterations during the mid/late twentieth century, but much of the original character is retained. Evidence of high quality stables was observed to the north of the central arch. The early twentieth century Avery weigh-bridge is *in situ* below the arch. It has changed little since the initial assessment (OA North 2002; Plate 25), apart from superficial damage and water ingress.

Assessment and recommendations

The gatehouse is a visually striking feature of the complex, marking its eastern extent. It formed the main access to the site at the height of the mills' production, and was probably constructed during the expansion of linoleum manufacture at the end of the nineteenth century. The structure should be recorded to RCHME Level II-type standards prior to redevelopment.

Structure number	2
Site type	Workshops
Period	Late-nineteenth century
Source	Visual inspection

Description

A range of single-storey sheds constructed along the northern boundary of the site (Plate 21). The northern façade is constructed of dressed sandstone, whilst the remainder of the workshops are constructed of brick. Internally, it is divided into 7 cells, originally open to the rafters, with timber queen-post trusses. At the western end of the workshop range is a small gatehouse, which has been significantly remodelled during the twentieth century. The western half had a second floor added during the mid-twentieth century.

Assessment and recommendations

The northern façade formed an important part of the site boundary, marking the extent of expansion at the end of the nineteenth century. It is recommended that the remainder of the range should be recorded to RCHME Level II-type standard prior to redevelopment.

Structure number	3
Site type	Loading Bay
Period	Mid-twentieth century (1956)
Source	Visual inspection

Description

Twentieth century loading bay with internal platforms. The structure is of brick construction, with unusual concrete roof trusses, forming a continuous frame across the building without cross-members or bracing. Now demolished (Plate 1).

Assessment and recommendations

Although late in relationship to the development of the site, the structure formed an integral part of its development. Concrete trusses of this style are uncommon, and relate to a specific architectural period of the mid-twentieth century. As the structure is now demolished there are no recommendations for further work.

Structure number	4
Site type	Joiners Shop
Period	Late-nineteenth century
Source	Visual inspection

Description

Single-storey brick mill, with north/south aligned multiple-span roofs and queen-post timber trusses (Plates 2 and 16). Probably contemporary with Structure 2. Divided into two bays by central north/south aligned wall. The west wall of the structure is of rubble stone construction, with gable scars of east/west aligned roofs, suggesting an earlier phase of construction.

Assessment and recommendations

The mill appeared to be a remodelling of an earlier stone Joiners' shop. It is recommended that this should be recorded to RCHME Level II-type standard prior to redevelopment.

Structure number	5
Site type	Railway loading bay/ Sawmill
Period	Late-nineteenth century
Source	Visual inspection

Description

Single-storey brick shed with east/west aligned roof with timber queen-post roof trusses. Butts the eastern side of stone Structure 12. Remains of the metal railway platform edge were observed within the floor surface. This originally formed part of the nineteenth century sawmill. Now demolished (Plate 1).

Assessment and recommendations

The shed appeared to relate to the expansion of the site and the loading/unloading of materials for transport to/from the site by rail after World War 2. It was originally constructed as part of a sawmill. As the structure is now demolished there are no recommendations for further work.

Structure number	6
Site type	Sawmill
Period	Late-nineteenth/early twentieth century
Source	Visual inspection

Description

Single-storey brick shed with two-span north/south aligned roof with timber queen-post roof trusses. A single round-section stanchion was observed within the structure, which was originally part of the sawmill and was significantly remodelled in the mid/late-twentieth century. Now demolished (Plate 1). The remaining concrete floor is evidently supported by brick columns, and large voids are visible beneath.

Assessment and recommendations

Although not individually very significant, the structure formed an integral part of the sawmill serving the former Lune Mills complex at its largest extent. As the structure is now demolished there are no recommendations for further work.

Structure number	7
Site type	Sawmill
Period	Late-nineteenth/early twentieth century
Source	Visual inspection

Description

Single-storey brick shed with two-span north/south aligned roof with timber queen-post roof trusses supported on a north/south aligned internal wall. The shed is further divided by an internal cross-wall, with a small office with ornate roof truss, constructed in the south-west corner of the northern cell, which has openings in the cross-wall supporting the roof valley. Now demolished (Plate 1). The remaining concrete floor is evidently supported by brick columns, and large voids are visible beneath.

Assessment and recommendations

The shed related to the sawmill, and appeared to have been constructed during a period of expansion of the complex, coinciding with its maximum production at the end of the nineteenth century. As the structure is now demolished there are no recommendations for further work.

Structure number	8
Site type	Sawmill
Period	Late-nineteenth/early twentieth century
Source	Visual inspection

Description

Single-storey brick shed with pitched roof. East/west aligned timber tie-beams are the only remains of the original roof structure. The western wall is of rubble stone construction. Now demolished (Plate 1). The remaining concrete floor is evidently supported by brick columns, and large voids are visible beneath.

Assessment and recommendations

The western wall formed the external wall of the 1888 expansion of the mill, and was therefore of significance to the development of the Mill. As the structure is now demolished there are no recommendations for further work.

Structure number	9
Site type	Yard
Period	Late-nineteenth/early twentieth century
Source	Visual inspection

Description

East/west aligned yard with junctions, either side of Structures **10/11**. A further yard runs south from either junction, each abutting the stone boundary wall of the complex, which is c2m high and is continuous, suggesting no access to the railway to the immediate south. Brick walls above the boundary wall, and late-nineteenth/early-twentieth century style metal trusses, suggest that the yard was roofed as a secondary phase. All of the roofing has now been removed, probably due to or in association with the demolition of adjoining buildings. The floors of the yard are almost totally covered by rubble.

Assessment and recommendations

The yard is important element of the complex, showing the road retained by the Lancaster Corporation until 1903, and giving an idea of the movement of materials around the complex. The addition of a roof suggests a change in process, or gives an example of the wealth generated by the mill, allowing previously open spaces to be enclosed. The boundary is significant to the growth of the complex, and if possible should be incorporated into the new development. As the structure is now demolished there are no recommendations for further work.

Structure number	10
Site type	Warehouse
Period	Late-nineteenth/early twentieth century
Source	Visual inspection

Description

Single-storey brick warehouse with multiple-span north/south aligned roof comprising queen-post timber trusses, which are supported on brick walls. These divide the structure into three cells. The warehouse fills the angle between the four-storey warehouse (Structure **11**) and the southern boundary wall, and is triangular in plan. The boundary wall forms the lower part of the southern elevation and is of stone construction. The gables are thinner above wall-head height than the wall below.

Assessment and recommendations

The warehouse forms an integral part of Structure **11** to the immediate north. Few such examples survive, and it should be recorded to RCHME Level II-type standard prior to redevelopment.

Structure number	11
Site type	Warehouse
Period	Late-nineteenth/early twentieth century
Source	Visual inspection

Description

Four-storey brick warehouse with multiple-span roof (Plate 3, 16 and 17). It has three lift-shafts, all apparently intact, and a walkway at first floor level over Structure **9** into Structure **17**. Original timber flooring and much of the metal sheeting on the ceilings survives internally, as do the large round-section columns supporting each floor. Metal-lined apertures observed on the upper floor may possibly relate to power or

storage systems. Although it was not possible to access the building the demolition of adjoining structures allowed a more detailed inspection of the ground floor. The ceiling is supported on multiple rows of cast iron columns with double flanged brackets supporting iron girders. The edge-laid floorboards forming the floor above are clearly visible.

Assessment and recommendations

This structure is the most striking of the surviving buildings, and appears to have been purpose built for fireproof storage in the late nineteenth century. Most of the original fabric survives. The structure should be recorded RCHME Level II-type standard prior to redevelopment.

Structure number	12
Site type	Storage?
Period	Early twentieth century
Source	Visual inspection

Description

Single-storey sandstone shed, with east/west aligned roof supported by metal trusses. Now mostly demolished; the west wall remained until recently (Plates 1 and 4). The exposed structure of the wall reveals a sandstone rubble construction.

Assessment and recommendations

This structure formed the enclosure of the road to the hospital, purchased in 1903. It is an important element of the complex, giving physical evidence of the gradual purchasing of the site at the turn of the twentieth century. The boundary is significant to the growth of the complex, and if possible should be incorporated into the new development. As the structure is now demolished there are no recommendations for further work.

Structure number	13
Site type	Yard
Period	Late-nineteenth/early twentieth century
Source	Visual inspection

Description

Yard to the south of Gatehouse 2, enclosed into a roofed structure in the mid-twentieth century. The roof was being removed at the time of the visual inspection, and it is now completely demolished.

Assessment and recommendations

The yard was important element of the complex, giving physical evidence of the gradual purchasing of the site at the turn of the twentieth century. The addition of a roof suggests a change in process by the mid-twentieth century. As the structure is now demolished there are no recommendations for further work.

Structure number	14
Site type	Transport Warehouse
Period	Late-nineteenth/early twentieth century
Source	Visual inspection

Description

Single-storey sandstone shed with north/south aligned roof supported on timber queen-post trusses and round-section stanchions. A brick-built square 'tower' of two storeys is situated on the south-west corner. This is either a later addition or formed part of Structure 17.

Assessment and recommendations

This is one of the few stone built structures within the complex of surviving buildings and as such should be recorded to RCHME Level II-type standard prior to redevelopment.

Structure number	15
Site type	Warehouse
Period	Late-nineteenth/early twentieth century
Source	Visual inspection

Description

A two-storey shed, the ground floor of which is of sandstone construction, whilst the first floor is brick (Plate 21). No evidence of an original roof survives within the late twentieth century first floor offices.

Assessment and recommendations

This warehouse is a good example of surviving phased relationships within the complex of surviving buildings and it is recommended that it is recorded to RCHME Level II-type survey prior to redevelopment.

Structure number	16
Site type	Offices
Period	Late-nineteenth/early twentieth century
Source	Visual inspection

Description

Two-storey sandstone shed with some brick rebuilding (Plate 21). The lift and headgear survive within the structure, which has been converted to late twentieth century offices on the first floor. This probably forms part of the same building as Structure 15 as there is no obvious join between the two.

Assessment and recommendations

This is one of the few stone built structures within the complex of surviving buildings. The structure and lift should be recorded to RCHME Level II-type standard prior to redevelopment.

Structure number	17
Site type	Warehousing
Period	Late-nineteenth/early twentieth century
Source	Visual inspection

Description

Large single-storey sandstone rubble constructed structure (Plate 5). It is divided internally into six roughly equally-sized cells by similar stone walls and has north/south aligned roofs with timber queen-post trusses, and retains many of the better preserved features observed within the structures of this date. A large part of the south end has been demolished, exposing later internal walls constructed of brick and concrete blocks.

Assessment and recommendations

This warehouse is the largest surviving stone-built structure and retains many original features typical of the style of construction during this phase of expansion of the mill complex. It is recommended that this is recorded to RCHME Level II-type standard prior to redevelopment. However, this structure would appear to be inaccessible due to health and safety reasons

Structure number	18
Site type	Yard
Period	Late-nineteenth/early twentieth century
Source	Visual inspection

Description

Yard to the south-west of Structure **9**, enclosed into a roofed structure in the twentieth century (Plate 18). The metal roof trusses are higher than those observed elsewhere (especially when compared to those in Structure **21** to the immediate north), and seem to have been inserted specifically to suit the function of the structure created by enclosing the former yard. The roof has now been completely removed and the flooring is obscured by rubble.

Assessment and recommendations

The yard was an important element of the complex, giving an idea of the movement of materials around the complex. The unique roof showed a specific function change to offices in the mid-nineteenth century. As the structure is now demolished there are no recommendations for further work.

Structure number	19
Site type	Cork storage/paper hydropulper
Period	Late-nineteenth/early twentieth century
Source	Visual inspection

Description

Single-storey high brick constructed processing shed with several *in-situ* processing tanks (Plate 18). The lowest c6m of the southern wall was constructed in sandstone rubble, and forms the boundary wall of the site. The remainder is comprises a frame of iron girders infilled with bricks. The north/south aligned metal-trussed roof appears to be a replacement of an earlier, lower roof, and is probably contemporary with that of Structure **20** to the west.

Assessment and recommendations

This structure is a good example of surviving phased relationships within the complex of surviving buildings. It contains fabric from the original cork storage sheds associated with the earliest phases of the development of the site and should be recorded to RCHME Level II-type standard prior to redevelopment.

Structure number	20
Site type	Cork storage/paper rag room
Period	Late-nineteenth/early twentieth century
Source	Visual inspection

Description

Single-storey high brick constructed processing shed with several *in-situ* concrete machine bases. The north/south aligned metal-trussed roof appears to be a replacement of an earlier timber queen-post truss roof, a single truss of which survives in the south-west corner (Plate 6). Part of the north end of the building has been demolished leaving approximately half still standing.

Assessment and recommendations

This structure was a good example of surviving phased relationships within the complex of surviving buildings. The building contains fabric from the original cork storage sheds associated with the earliest phases of the development of the site. The remaining section should be recorded to RCHME Level II-type standard prior to redevelopment. However, this structure would appear to be inaccessible due to health and safety reasons

Structure number	21
Site type	Paper plant machine rooms
Period	Late-nineteenth/early twentieth century
Source	Visual inspection

Description

Open fronted structure, similar to the adjoining part of Structure **9** to the immediate east (Plate 7). It has a late twentieth century roof, but appears to have originally formed part of Structure **9**. The north end has now been demolished, revealing an internal dividing wall.

Assessment and recommendations

The structure was important element of the complex, giving an idea of the movement of materials around the complex. The remaining section should be recorded to RCHME Level II-type standard prior to redevelopment.

Structure number	22
Site type	Yard/warehouse
Period	Late-nineteenth century
Source	Visual inspection

Description

Narrow single-storey sandstone rubble structure. It has a north/south-aligned roof with queen-post timber trusses (Plate 8). The south end has been partially demolished revealing the structure, which comprises an outer skin of sandstone blocks and an inner face of brown and white glazed brick marked 'Leeds Fireclay Co Ltd' and 'LFC England' (founded 1889 (Burnmantofts Pottery History n.d.)). The relationship of its walls to Structure **24** suggests that it is earlier.

Assessment and recommendations

This is one of the few stone built structures within the complex of surviving buildings. It relates to the earlier phases of the expansion of the mill, and forms the northern end of the parcel of land bought in 1888. Despite the damage, it should be recorded to RCHME Level II-type standard prior to redevelopment.

Structure number	23
Site type	Inspection/warehousing area
Period	Late-nineteenth/ century
Source	Visual inspection

Description

Large single-storey sandstone rubble constructed structure (Plate 22). It is divided internally into four cells by similar stone walls and has north/south aligned roofs, originally with timber queen-post trusses, some of which survive and many of which are now visible due to the demolition of Structure **25**. Gable roof-scars within the southern part of the structure demonstrate a change of roof level.

Assessment and recommendations

This warehouse appears to be early, and shows phasing related to probable of change of function. It should be recorded to RCHME Level II-type standard prior to redevelopment.

Structure number	24
Site type	Warehouse
Period	Late-nineteenth century
Source	Visual inspection

Description

Single-storey sandstone rubble structure with rock-face finished outer skin of sandstone blocks to the south-east of Structure **23** (Plate 9). It would appear to relate to the adjoining structure and may have been used to store material before or after processing. Some original timber queen-post roof trusses survive in the southern part of the building and there are numerous modern additions in brick, particularly raising the roof height.

Assessment and recommendations

This warehouse appears to be early and related to Structure **23**. It forms an integral part of the processing within this part of the early mill. It should be recorded to RCHME Level II-type standard prior to redevelopment.

Structure number	25
Site type	Storage shed?
Period	Twentieth century
Source	Visual inspection

Description

Twentieth century extension to Structure **23** (Plate 9). Evidence for a continuation of the stone wall of Structure **23** into the building in the north-west corner suggested it may have contained early fabric relating to early steam boilers. Now largely demolished, apart from parts of the north, east and south-east walls. These reveal a number of roof pitches, seven or eight in total, continuing those in Structure **23**, and a sandstone rubble construction faced with rock-faced blocks. The building runs the full length of the south side of Structure **23** until it meets Structure **22**.

Assessment and recommendations

Although the structure initially appeared late, it is possible that it may have contained earlier fabric. Due to the condition of the structure no further work is recommended.

Structure number	26
Site type	Boiler house
Period	Early twentieth century
Source	Visual inspection

Description

Single-storey brick building infilling and area between Structures **23** and **27**, showing the expansion of the complex, probably in the early twentieth century. It is largely built of modern brick and corrugated metal sheeting but the east end comprises an earlier stone wall of dressed sandstone blocks. There are concrete blocks, presumably engine bases along what is now the exterior of the south wall (Plate 15), suggesting that some demolition has occurred.

Assessment and recommendations

The boiler house is a good example of surviving phased relationships within the complex of surviving buildings, with the replacement of early boilers in a new structure in the same location. It should be recorded to RCHME Level II-type standard prior to redevelopment.

Structure number	27
Site type	Hessian backing plant
Period	Late-nineteenth/early twentieth century
Source	Visual inspection

Description

Two-storey brick warehouse with flat roof supported on large I-section beams. It comprises a two-storey brick warehouse (Plate 23). The first floor windows are blocked with brick and the south gable has been extensively rebuilt. It was rebuilt in 1896, but as a four-storey hessian backing mill but the top two floors were removed in the mid-twentieth century after a fire. This is the only large structure with a flat roof in the complex.

Assessment and recommendations

Although brick constructed, this warehouse is early and appears to have been constructed in the footprint of the original No.1 Mill. It was rebuilt for use in the manufacture of linoleum, adding the hessian backing. It was partially destroyed by a fire in the mid-twentieth century, further documenting the history of the complex. The structure is significant to the complex and should be recorded to RCHME Level II-type standard prior to redevelopment.

Structure number	28
Site type	Offices
Period	Late-nineteenth century
Source	Visual inspection

Description

Three-storey sandstone built offices on the northern boundary of the site (Plate 24). Its condition has changed little since the previous assessment (OA North 2002).

Assessment and recommendations

This is one of the few stone built structures within the complex of surviving buildings, and is relatively early. The structure is unique within the complex, apparently built specifically for administration, rather than production or warehousing. It is one of the

few well-preserved stone buildings and should be recorded to RCHME Level II-type standard prior to redevelopment.

Structure number	29
Site type	Gatehouse
Period	Late-nineteenth/early twentieth century
Source	Visual inspection

Description

Single-storey sandstone constructed gatehouse, largely remodelled in the late-twentieth century with the rear (south) section rebuilt in brick (Plate 23). It appears to occupy an early important gatehouse position by the late-nineteenth century New Quay. A late-nineteenth/early-twentieth century Avery weigh-bridge is located to the east.

Assessment and recommendations

Although most of the fabric of the structure is late, it may contain fabric from the earliest phases of the mill. It is located in an important position within the site and should be recorded to RCHME Level II-type standard prior to redevelopment.

Structure number	30
Site type	Kivver Mill
Period	Late-nineteenth/early twentieth century
Source	Visual inspection

Description

Large single-storey brick shed. It was almost completely demolished at the time of the initial inspection, but part of the external south wall, and a row of round-section stanchions survived, suggesting it had an east/west aligned roof. Now totally demolished. There are east/west orientated railway tracks in the yard running along the north side of this structure (Plate 12).

Assessment and recommendations

The mill is located within the earliest part of the mill complex, and may have retained archaeologically significant information. It was the K1 Kivver Mill, constructed in the-mid 1880s. A plan of the surviving foundations should be produced in order to locate it accurately within the complex.

Structure number	31
Site type	Floor printing mill
Period	Late-nineteenth century
Source	Visual inspection

Description

Large three-storey brick mill in use as a warehouse at the time of the original visual inspection, and not entered. The windows have rubbed brick voussoirs and there are details picked out in concrete including coping and ball finials. Many of the first floor windows are blocked with brick (Plates 10 and 19).

Assessment and recommendations

The structure is located within the earliest part of the mill complex and may be significant because of its age and continued usage. It should be recorded to RCHME Level II-type standard prior to redevelopment.

Structure number	32
Site type	Mechanics dept. and boiler shop
Period	Late nineteenth century
Source	Visual inspection

Description

Derelict three-storey brick mill to the west of Structure **31**, and joined by a gantry at first floor level (Plate 10). The building was not inspected internally during the original assessment on grounds of Health and Safety. It is now almost totally demolished apart from a small section of standing wall in the north-east corner. Some of the bricks from the rubble are marked 'Claughton Manor Brick Co Caton'.

Assessment and recommendations

The structure was located within the earliest part of the mill complex and probably retained significant information relating to maintenance processes within a large industrial complex at the turn of the twentieth century. As the structure is now demolished there are no recommendations for further work.

Structure number	33
Site type	Sheet metal shop
Period	Mid twentieth century
Source	Visual inspection

Description

Two-storey shed adjoining northern side of Structure **32** (Plates 10 and 11). The structure has been demolished prior to the original assessment and survives only as a wall-scar on the external elevation of Structure **32**, part of which still survives.

Assessment and recommendations

The shed was associated with Structure **32**. As the structure is now demolished there are no recommendations for further work.

Structure number	34
Site type	Reservoir
Period	Late-nineteenth century
Source	Visual inspection

Description

Reservoir towards the western end of the mill complex (Plate 14). Parts have been remodelled with concrete, but much of the original nineteenth century fabric probably survives.

Assessment

The reservoir is an important part of the power source mill complex and is associated with the later pump house (Structure **36**). It should be recorded to RCHME Level II-type standard (as appropriate and feasible) prior to redevelopment.

Structure number	35
Site type	Cable store
Period	Early twentieth century
Source	Visual inspection

Description

Narrow single-storey brick store with flat concrete roof (Plate 13).

Assessment and recommendations

The store is relatively late, but is also unique within the complex, and should be recorded to RCHME Level II-type standard prior to redevelopment.

Structure number 36

Site type Pump house

Period Late-nineteenth/early twentieth century

Source Visual inspection

Description

Single-storey brick built pump house on the western side of the reservoir (Plates 13 and 20). It appears to retain many of its original tiling and internal fittings, and was vital to power generation within the mill complex. There is evidence for alterations to the roofline and an inserted doorway in the north gable. A smaller outshut extension with stepped flanking walls is present on the east side.

Assessment and recommendations

This is a well-preserved and important structure within the mill complex. It should be recorded to RCHME Level III-type standard prior to redevelopment.

Structure number 37

Site type Unknown

Period Late-nineteenth/early twentieth century

Source Documentary study

Description

Sub-rectangular structure shown on present Ordnance Survey 1:10,000 mapping. The building had been demolished prior to the visual inspection in 2002.

Assessment and recommendations

This was an isolated structure in the south-west corner of the site, and may have been associated with the storage of volatile/dangerous chemicals. As the structure is now demolished there are no recommendations for further work.

Structure number 38

Site type Colour shop

Period Late-nineteenth/early twentieth century

Source Documentary study

Description

Brick built mill at the western end of the surviving mill complex, substantially rebuilt in 1947 (Plate 13). It is two storeys tall, with details in concrete including coping, lintels and ball finials. There are three large loading doorways in the north side with timber hoist canopies above and the east end has three smaller gabled extensions. The site lies outside the area of the development and is currently occupied. The building was not included in the original visual inspection.

Assessment and recommendations

Although this structure lies outwith the last phase of the site, it originally formed part of the former Lune Mills complex and should be recorded to RCHME Level II-type standard prior to redevelopment.

4.5 SUMMARY

- 4.5.1 In most cases the surviving structures are considered to be worthy of further recording, to at least RCHME Level II-type standards (DoE 1994, 6-7). This should enable a plan of the principle floors of each structure to be produced as well as appropriate cross-sections, with an associated written descriptive record and photographs. This will allow an outline understanding of the phasing of the structures to be produced, without any detailed interpretation. The production of accurate plans showing the location of foundations of demolished buildings should, where possible, be produced from OS mapping and historic plans.

4.6 BELOW-GROUND AND SURFACE REMAINS

- 4.6.1 Where ground-disturbing activities are to be undertaken it is recommended that the relevant areas should be archaeologically evaluated in order to identify any below-ground remains. Three previous sites of historic interest are known to have been present at Lune Mills prior to the completion of the present complex: a shipyard, brick makers, and hospital. A number of sherds of post-medieval pottery and glass were also observed in spoil and disturbed ground around the site, suggesting there is some potential for below-ground remains of some form to be present. There is also the potential for unknown sites of archaeological interest to be present, and these could be impacted upon by the construction of new buildings on the site.
- 4.6.2 In addition any surviving surface features such as railway lines, machine bases and conduits not associated with particular standing or demolished structures should be surveyed in order to accurately position them on a general site plan.

4.7 HEALTH AND SAFETY

- 4.7.1 Although a general recommendation for further recording of the standing remains has been made this needs to be considered against serious health and safety implications on the site. Although the interiors of the buildings were not examined in detail during the assessment, and then only through windows and doorways, it was evident that the condition of many of them was very poor. This is likely to severely restrict the extent to which additional recording can take place and it may be necessary to carry out a health and safety inspection of the site prior to any formal agreement on the amount of further work to be undertaken.

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6. ILLUSTRATIONS

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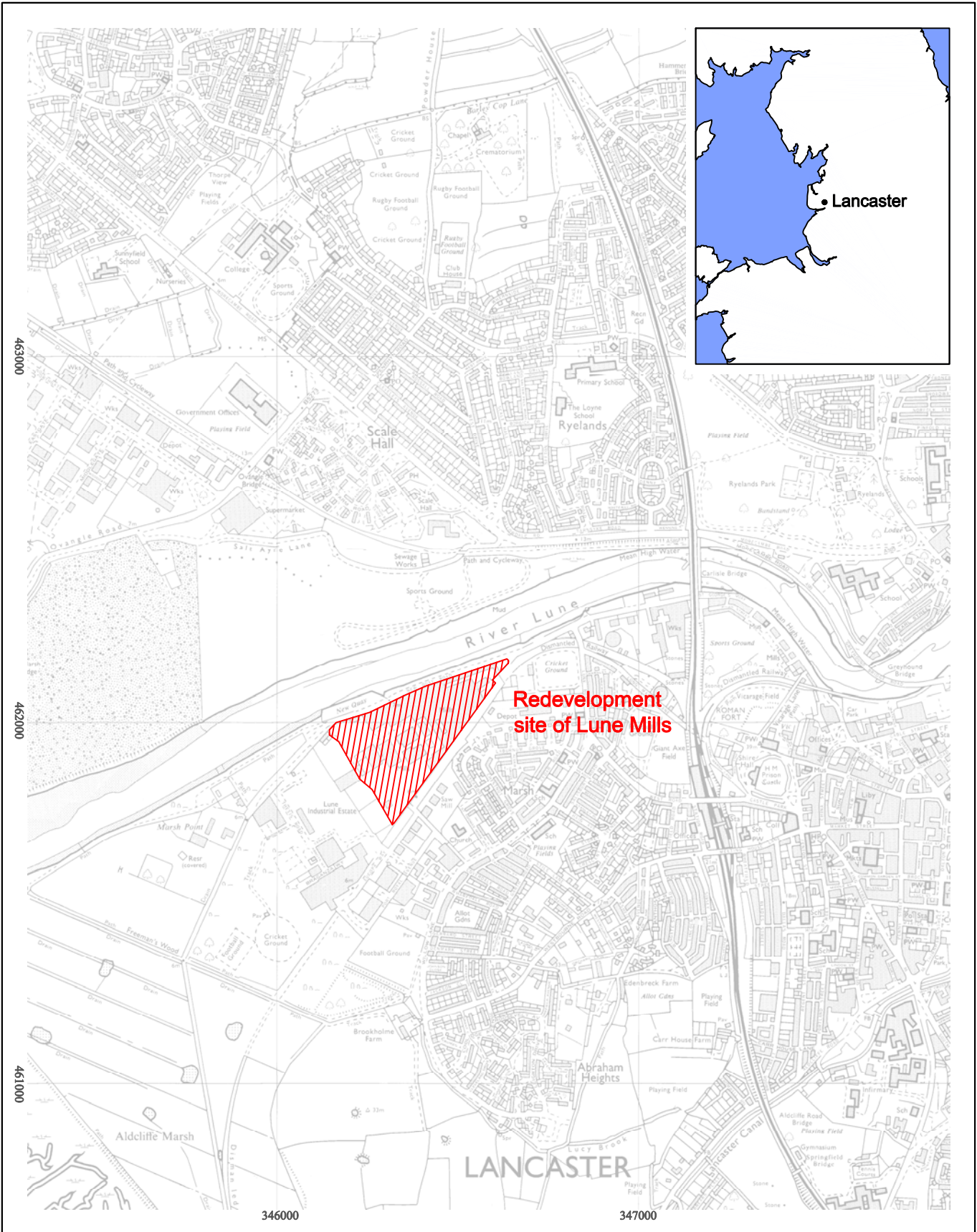
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Figure 1: Location Map






Oxford Archaeology North
 Storey Institute
 Meeting House Lane
 Lancaster
 LA1 1TF
 Tel 01524 848666
 Fax 01524 848606

PROJECT:


 Lune Mills, Lancaster





DRAWING No:

 L9122fig2.dwg


 Scale 1:2500

DRAWN BY: CW/ELC
DATE: November 2002

LOCATION:

 N

KEY
 19th century reservoir
 Before 1890
 1890 - 1910
 1911 - 1950
 21 Gazetteer Sites

TITLE:
 Plan showing site in gazetteer

COMMISSIONED BY:
 Michael Courcier & Partners Ltd

Figure 2 : Plan showing sites in gazetteer. (Appendix 2)



Plate 1: The site of Structures 3, 5-8 and 12-13 following demolition, looking west



Plate 2: Trusses in Structure 4, looking south



Plate 3: General view of Structure **11**, looking southeast



Plate 4: The remains of Structure **12**, looking west



Plate 5: The damaged remains of Structure **17**, looking northwest



Plate 6: The damaged remains of Structure **20**, looking south



Plate 7: The damaged remains of Structure **21**, looking south



Plate 8: The damaged south end of Structure **22**, looking northeast



Plate 9: Structures **22** and **24** and part of the remains of Structure **25**, looking east



Plate 10: The demolished remains of Structures **32** and **33** with **31** beyond, looking north



Plate 11: Structure **33**, looking southeast



Plate 12: Tracks to the north of the site of Structure **30**



Plate 13: Structures **35, 36** and **38**, looking south-west



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Plate 15: Engine bases at the south end of Structure **25**, looking north-west



Plate 16: General view of Structures **4**, **9** and **11**, looking south-west



Plate 17: The columns within Structure **11**, looking south



Plate 18: Structures **18** and **19**, looking south



Plate 19: Structure **31**, looking west



Plate 20: Structure **36**, looking south-west



Plate 21: Structures **2** and **16**, looking west



Plate 22: Structure **23**, looking north



Plate 23: Structures **27** and **29**, looking northeast



Plate 24: Structure **28**, looking southeast (after OA North 2002)



Plate 25: Structure **1**, looking east (after OA North 2002)

APPENDIX 1: PROJECT DESIGN

1. INTRODUCTION

- 1.1 This project design has been compiled for Countryside Properties (hereafter the client). It presents proposals for a building assessment of the proposed development area known as Luneside West, Lancaster (NGR SD 4630 6200). The development area incorporates the site of Lord Ashton's linoleum mill known as Lune Mills. The development site was subject to an archaeological desk-based assessment and visual inspection in 2002 (OA North).
- 1.2 The assessment revealed that Lune Mills is a complex structure, which developed over a century of manufacture, growing rapidly in the late nineteenth century. Although the assessment suggested that the majority of surviving structures do not relate directly to the manufacture of linoleum, the visual inspection highlighted a complex phasing within the structures, which represent a rare survival of unusually large-scale systems of storage, transport and distribution from the late nineteenth century onwards.
- 1.3 Since the desk-based assessment and visual inspection were undertaken a number of buildings on site have been demolished or partially demolished, although no new development has taken place. Prior to any further development related work on site the Lancashire County Archaeology Service (LCAS) has requested that an updated assessment of the structures on site be undertaken. This document offers a method statement for the assessment and has been compiled following consultation with the Development Control Officer at LCAS.
- 1.4 Section 2 of this document states the objectives of the project, Section 3 deals with OA North's methodology. Section 4 addresses other pertinent issues including details of staff to be involved, and project costs are presented in Section 5.
- 1.5 OA North has the professional expertise and resources to undertake the project detailed below to a high level of quality and efficiency. OA North is an **Institute of Field Archaeologists (IFA) registered organisation, registration number 17**, and all its members of staff operate subject to the IFA Code of Conduct.

2. OBJECTIVES

- 2.1 The following programme has been designed to provide an accurate archaeological assessment of the structures based on the information presented in the 2002 Assessment Report. The required stages to achieve these ends are as follows:
- 2.2 **Site Visit:** the undertaking of a visual inspection of the structures on site;
- 2.3 **Report and Archive:** production of a report following the collation of data during section 2.2. A site archive will be produced to English Heritage guidelines (MAP 2) and in accordance with the *Guidelines for the Preparation of Excavation Archives for Long Term Storage* (UKIC 1990).

3. METHOD STATEMENT

3.1 BUILDING ASSESSMENT

- 3.1.1 **Assessment:** a visual inspection of the buildings will be undertaken to RCHME Level I-type survey standards. This level of survey is a visual record, which is

designed to identify the location, age and building type. However, in this instance the emphasis of the survey will be to assess the condition of the structures against the condition presented in the gazetteer of the 2002 Assessment Report.

3.2.2 The written record will include:

- (i) an updated gazetteer highlighting the condition of each structure;
- (ii) recommendations for further work as appropriate.

3.2.3 **Photographic Archive:** a photographic archive will be produced utilising a 35mm camera to produce both colour slides and monochrome contact prints. A high-resolution digital camera (4 megapixels) will also be employed for general coverage. A full photographic index will be produced. The photographic archive will comprise the following:

- (i) The external appearance of the buildings;
- (ii) Any external or internal detail, structural or decorative, which is relevant to the design, development and use of the buildings and where safety permits.
- (iii) If safe access permits any internal detailed views of features of especial architectural interest, fixtures and fittings, or fabric detail relevant to phasing the buildings.

3.2.4 **Site Drawings:** there is no requirement to produce site drawings (plans/elevations/sections) as part of the assessment, however, a site plan will be produced to show the location of the buildings subject to the assessment.

3.3 REPORT

3.3.1 The report will include the following:

- (i) a concise, non-technical summary of the project results;
- (ii) an introduction to the circumstances of the project and the aims and objectives of the study;
- (iii) a summary of the methodology and an indication of any departure from the agreed project design;
- (iv) a copy of the agreed project design;
- (v) a summary of the archaeological/historical background;
- (vi) a location plan and gazetteer of the buildings;
- (vii) an initial assessment of the likely archaeological implications of the proposed development;
- (viii) recommendations for further work as appropriate;
- (ix) appropriate figures and plates;
- (x) a full list of references to and bibliography of primary and secondary sources consulted and a list of any further sources identified but not consulted;

3.3.2 **Report:** this will be issued within eight weeks of completion of the fieldwork. One bound and one unbound copy of a written synthetic report will be submitted to the Client, and a further copy submitted to the LCC SMR within eight weeks of completion of the study. The report will include a copy of this project design, and indications of any agreed departure from that design. It will present, summarise,

and interpret the results of the programme detailed above. The report will also include a complete bibliography of sources from which data has been derived.

3.3.3 Provision will be made for a summary report to be submitted to a suitable regional or national archaeological journal within one year of completion of fieldwork, if relevant results are obtained.

3.3.4 **Confidentiality:** all internal reports to the Client are designed as documents for the specific use of the Client, for the particular purpose as defined in the project brief and project design, and should be treated as such. They are not suitable for publication as academic documents or otherwise without amendment or revision.

3.4 ARCHIVE

3.4.1 **Archive:** the results of all archaeological work carried out will form the basis for a full archive to professional standards, in accordance with current English Heritage guidelines (*Management of Archaeological Projects*, 2nd edition, 1991). The project archive represents the collation and indexing of all the data and material gathered during the course of the project. This archive will be provided in the English Heritage Centre for Archaeology format and a synthesis will be submitted to the Lancashire SMR (the index to the archive and a copy of the report). The paper archive will be deposited with the County Record Office, Preston. Arrangements for deposition of the full site archive will be made with an appropriate receiving museum.

4 OTHER MATTERS

4.1 **Project Monitoring:** whilst the work is undertaken for the Client, the LCC Development Control Officer will be kept fully informed of the work. Any proposed changes to the project design will be agreed with the Archaeological Officer and the Client.

4.2 **Access:** OA North will consult with the Client regarding access to the site.

4.3 **Health and Safety:** OA North provides a Health and Safety Statement for all projects and maintains a Unit Safety policy. All site procedures are in accordance with the guidance set out in the Health and Safety Manual compiled by the Standing Conference of Archaeological Unit Managers (1997). A written risk assessment will be undertaken in advance of project commencement and copies will be made available on request to all interested parties.

4.4 **Work Timetable:** the assessment is expected to take approximately two days to complete in the field. The final report will be completed within approximately eight weeks following completion of the fieldwork, although a shorter deadline can be arranged.

4.5 **Staffing:** the project will be under the direct management of **Alison Plummer BSc (Hons)** (OA North Senior Project Manager) to whom all correspondence should be addressed. An OA North supervisor will undertake all elements of the project. Present timetabling constraints preclude who this will be.

- 4.6 **Insurance:** OA North has professional indemnity to a value of £10,000,000, employer's liability cover to a value of £10,000,000 and public liability to a value of £15,000,000. Written details of insurance cover can be provided if required.

APPENDIX 2: PHOTOGRAPH INDEX

Black and white 35mm prints

Film 5

<i>Frames</i>	<i>Date</i>	<i>Site</i>	<i>Description</i>	<i>Direction</i>	<i>Conditions</i>	<i>Photographer</i>
1-3	25/10/05	Bldgs 32 & 33	After demolition	N	Wet	DWE
4-6	25/10/05	Bldg 32	Remains of building	SE	Wet	DWE
7-9	26/10/05	Bldg 30	Demolished	S	Overcast	DWE
10-12	26/10/05	Bldgs 23 & 25	Exposed walls and trusses	N	Overcast	DWE
13-15	26/10/05	Bldg 25	Exposed walls	NE	Overcast	DWE
16-18	26/10/05	Bldg 20	Exposed trusses	S	Overcast	DWE
19-21	26/10/05	Bldgs 3, 6-8 & 12-13	Demolished	W	Overcast	DWE
22-24	26/10/05	Bldg 12	Remains of wall	W	Overcast	DWE
25-27	26/10/05	Bldg 17	Demolished	NW	Overcast	DWE
28-30	26/10/05	Bldg 14	Damage to S end	NE	Overcast	DWE
31-33	26/10/05	Bldg 21	Damage to N end	S	Overcast	DWE
34-36	26/10/05	Bldg 11	General shot	SE	Overcast	DWE

Film 7

<i>Frames</i>	<i>Date</i>	<i>Site</i>	<i>Description</i>	<i>Direction</i>	<i>Conditions</i>	<i>Photographer</i>
1-3	26/10/05	Bldgs 35-36 & 38	General shot	SW	Overcast	DWE
4-6	26/10/05	Bldg 34	General shot	SE	Overcast	DWE
7-9	26/10/05	Bldgs 27 & 29	General shot	NE	Overcast	DWE
10-12	26/10/05	Bldg 26	Engine bases	W	Overcast	DWE

13-15	26/10/05	Bldgs 24-25	General shot	SE	Overcast	DWE
16-18	26/10/05	Bldgs 22 & 24	Junction of buildings	NE	Overcast	DWE
19-21	26/10/05	Bldgs 2 & 16	General shot	W	Overcast	DWE
22-24	26/10/05	Bldgs 2 & 16	General shot	SW	Overcast	DWE
25-27	26/10/05	Bldg 4	Trusses	S	Overcast	DWE
28-30	26/10/05	Bldg 11	Columns	S	Overcast	DWE
31-33	26/10/05	Bldgs 19 & 21	General shot	SE	Overcast	DWE
34-36	26/10/05	Bldg 31	General shot	W	Overcast	DWE

Colour slide 35mm prints

Film 6

<i>Frames</i>	<i>Date</i>	<i>Site</i>	<i>Description</i>	<i>Direction</i>	<i>Conditions</i>	<i>Photographer</i>
1-3	25/10/05	Bldgs 32 & 33	After demolition	N	Wet	DWE
4-6	25/10/05	Bldg 32	Remains of building	SE	Wet	DWE
7-9	26/10/05	Bldg 30	Demolished	S	Overcast	DWE
10-12	26/10/05	Bldgs 23 & 25	Exposed walls and trusses	N	Overcast	DWE
13-15	26/10/05	Bldg 25	Exposed walls	NE	Overcast	DWE
16-18	26/10/05	Bldg 20	Exposed trusses	S	Overcast	DWE
19-21	26/10/05	Bldgs 3, 6-8 & 12-13	Demolished	W	Overcast	DWE
22-24	26/10/05	Bldg 12	Remains of wall	W	Overcast	DWE
25-27	26/10/05	Bldg 17	Demolished	NW	Overcast	DWE
28-30	26/10/05	Bldg 14	Damage to S end	NE	Overcast	DWE
31-33	26/10/05	Bldg 21	Damage to N end	S	Overcast	DWE

34-36	26/10/05	Bldg 11	General shot	SE	Overcast	DWE
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Film 8

<i>Frames</i>	<i>Date</i>	<i>Site</i>	<i>Description</i>	<i>Direction</i>	<i>Conditions</i>	<i>Photographer</i>
1-3	26/10/05	Bldgs 35-36 & 38	General shot	SW	Overcast	DWE
4-6	26/10/05	Bldg 34	General shot	SE	Overcast	DWE
7-9	26/10/05	Bldgs 27 & 29	General shot	NE	Overcast	DWE
10-12	26/10/05	Bldg 26	Engine bases	W	Overcast	DWE
13-15	26/10/05	Bldgs 24-25	General shot	SE	Overcast	DWE
16-18	26/10/05	Bldgs 22 & 24	Junction of buildings	NE	Overcast	DWE
19-21	26/10/05	Bldgs 2 & 16	General shot	W	Overcast	DWE
22-24	26/10/05	Bldgs 2 & 16	General shot	SW	Overcast	DWE
25-27	26/10/05	Bldg 4	Trusses	S	Overcast	DWE
28-30	26/10/05	Bldg 11	Columns	S	Overcast	DWE
31-33	26/10/05	Bldgs 19 & 21	General shot	SE	Overcast	DWE
34-36	26/10/05	Bldg 31	General shot	W	Overcast	DWE

Digital

<i>Shot No</i>	<i>Date</i>	<i>Site</i>	<i>Description</i>	<i>Direction</i>	<i>Scale bar</i>	<i>Photographer</i>
1	26/10/05	Bldgs 32 & 33	After demolition	N	-	DWE
2	26/10/05	Bldg 32	After demolition	SE	-	DWE
3	26/10/05	Bldg 30	After demolition	S	-	DWE
4	26/10/05	Bldgs 23 & 25	Exposed walls and trusses	N	2m	DWE
5	26/10/05	Bldg 25	Exposed walls	NE	2m	DWE
6	26/10/05	Bldg 20	Exposed trusses	S	2m	DWE

7	26/10/05	Bldgs 3, 6-8 & 12-13	Demolished	W	-	DWE
8	26/10/05	Bldg 12	Remains of wall	W	2m	DWE
9	26/10/05	Bldg 17	Demolished	NW	2m	DWE
11	26/10/05	Bldg 21	Damage to N end	S	2m	DWE
12	26/10/05	Bldg 11	General shot	SE	-	DWE
13	26/10/05	Track	General shot	W	1 x 1m	DWE
14	26/10/05	Bldgs 35-36 & 38	General view	SW	-	DWE
15	26/10/05	Bldg 34	General view	SE	-	DWE
16	26/10/05	Bldgs 26-27	Engine bases	W	2m	DWE
17	26/10/05	Bldgs 24-25	General shot	SE	-	DWE
18	26/10/05	Bldgs 22 & 24	Junction of buildings	NE	2m	DWE
19	26/10/05	Bldgs 2 & 16	General shot	W	-	DWE
20	26/10/05	Bldgs 4 & 11	General shot	SW	-	DWE
21	26/10/05	Bldg 4	Trusses	S	-	DWE
22	26/10/05	Bldg 11	Columns	S	-	DWE
23	26/10/05	Bldgs 19 & 21	General shot	SE	-	DWE
24	26/10/05	Bldg 31	General shot	W	-	DWE
25	26/10/05	Bldgs 27 & 29	General shot	E	-	DWE
26	26/10/05	Bldgs 35-36	General shot	SW	-	DWE