

Heritage Works Buildings Preservation Trust Ltd

**The economics of industrial building conservation projects in
Pennine Lancashire
Final report**

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Executive Summary

- 1.1 This executive summary provides a précis of a study to look at the economics of repairing and converting industrial (mill) buildings in Burnley and Rossendale, in order to bring them into active reuse. It is intended either as a stand alone document or to signpost to information in the main report.

PART 1

Introduction

- 2.1 The project has been undertaken by Heritage Works as lead consultant. It was undertaken for English Heritage (working with Burnley Council and Rossendale Council) and links with the English Heritage Industrial Heritage at Risk theme for 2011.
- 2.2 It is a difficult time for those involved in property development and regeneration with availability of grant funding and bank finance being much reduced. This has increased the need for careful management of the historic built environment in Pennine Lancashire. When brought back into reuse, historic buildings have proven social, cultural and economic benefits, a point which is emphasised in Planning Policy Statement 5 “Planning for the Historic Environment”.
- 2.3 As required by the brief, the study provides elemental repair costs for typical mill building defects and generic conversion costs for end uses. Broad per square metre costs for repairs, depending on general building condition are also provided and were used to inform development appraisals for six case study buildings in Burnley and Rossendale. The broad repair costs have also been used to develop a costs calculator tool.

Study methodology

- 3.1 The study necessarily takes a high level approach providing the means by which mill repair and conversion costs can broadly be estimated and used to inform an assessment of development potential. The six case studies have been used to inform the study findings but are not included in the report due to their broad brush nature.
- 3.2 The study involved two workshops. The first on the 10th August 2011 followed a series of site visits and sought to identify typical defects and repair costs. The second, two weeks later, focused on end uses and recommendations for each of the buildings and was also used to agree study outputs for each.

The impact of economic circumstances on textile mills

- 4.1 Pennine Lancashire was a key driver of the industrial revolution, its industry based on textile manufacturing. Now, despite some economic diversification and the presence of some high value businesses, the area underperforms in economic terms and is subject to weak property markets. This situation has been exacerbated by the economic recession. The physical legacy of the area’s past industrial success includes its stock of industrial heritage, amongst this a substantial portfolio of extant former textile mills. This stock is however subject to a high rate of loss, particularly within Burnley and Rossendale.
- 4.2 The closure of textiles manufacturing businesses often leads to mill buildings being under-maintained. Redundancy frequently leads to vacancy and dereliction but even where occupation does continue, it is often with low value uses with inadequate repairs, maintenance and security leading to fabric decay. Although some building owners may have very limited resources, simple actions such as keeping rainwater goods unblocked, roof

coverings secure and buildings ventilated can be highly effective but are often neglected. When in low grade use, the need to maintain low running costs will prohibit best conservation practice and in such circumstances, local planning authorities should have a flexible approach and acknowledge that low cost repair materials are preferable to leaking gutters etc. and will secure buildings in the medium term. In the absence of ongoing maintenance any building will eventually decay and disintegrate. Keeping buildings in use will generally help to prevent this from happening.

- 4.3 Whilst lack of maintenance is the primary cause, decay can also occur due to poor construction or poor management. Further results of under-use and vacancy include vandalism and theft of building components, accumulation of rubbish and ingress of pigeons and other vermin.
- 4.4 **Clearly, the market context is a primary driver behind textile mill decline and is generally the most important variable in project viability. Building condition will affect development costs but a building's location, and associated demand for a proposed use will determine the end value and will impact on viability to a much greater extent.**
- 4.5 Property markets across Lancashire vary but, particularly within Pennine Lancashire are weak with house prices well below the average for England and Wales and declining, highlighting the challenge of achieving viable residential development in mill buildings, particularly as bank finance for apartment schemes is now extremely difficult to secure. Burnley, for example, is identified by Lancashire County Council research as having the lowest house prices in the country and a residential vacancy rate of 8%. Within the industrial and office markets there is a wide range of accommodation available on the market at competitive rents and capital values suggesting that it will be difficult to provide additional space on a cost effective basis. There may, however, be potential to undertake customised refurbishment for a pre-identified end user/s, as opposed to undertaking development on a speculative basis.
- 4.6 Although these are clearly challenging circumstances in which to bring forward mill conversion projects, the repair and reuse of historic buildings has proven to be a significant factor in the social and economic well-being of towns and cities across Europe and can be a strong driver of regeneration. It is therefore essential that a long term view is taken on the value of any historic building and its place in the local community, and that wider social and economic benefits are not sacrificed to short term convenience and expediency. In cases where there is impetus to deliver a mill conversion project there is, even now, a broad range of resources and mechanisms that can be harnessed (see chapter 9).

Good practice and exemplar

- 5.1 Chapter 5 provides an overview of literature on the adaptive reuse of historic buildings and presents a number of relevant exemplar projects from the sources reviewed. Publications include:
- Latham, Derek (2000), *'Creative Re-use of Buildings'*, Donhead
 - Stratton, Michael ed, (2000) *Industrial Buildings: Conservation and Regeneration*, E & FN Spon
 - Binney, Marcus, Machin, Francis & Powell, Ken eds. (1990), *'Bright Future: The Re-use of Industrial Buildings'*, SAVE Britain's Heritage

- Purcell Miller Tritton LLP (2010), *Northern Lights: Finding a Future for the Weaving Sheds of Pennine Lancashire*, Lancashire County Council
- Eley, Peter & Worthington, John, (1984) *Industrial Rehabilitation: The Use of Redundant Buildings for Small Enterprises*, The Architectural Press Limited

5.2 Both the sources and the exemplars described in them may be of value to those wishing to undertake a mill conversion project. However, the market context is a key factor in determining project viability and different market and economic circumstances require different approaches to project delivery. The economic recession and downturn in the property market since 2007 has made it very difficult to deliver even many new build schemes, even in areas with relatively buoyant property markets. Most of the exemplars in the literature reviewed predate the credit crunch. In view of the challenge of delivering conservation projects, particularly in areas where the market is not strong, we have included two exemplars from the last four years with a particular emphasis on delivery: Shaw Lodge Mill in Halifax and Lob Lane mill in Brierfields near Nelson, Lancashire.

PART 2

Mill typologies and end uses

- 6.1 The first part of chapter 6 provides a brief overview of mill development over time and discusses the effect that changing textile technology and working practices had on the physical form of mill buildings. It culminates in a set of mill typologies developed for the purpose of this study which align with the typologies to be used by Oxford Archaeology North for Phase 2 of the Lancashire Mills Assessment. The second part of the chapter considers potential end uses for mill buildings and how size and form impact on which uses may be most suitable for different buildings.
- 6.2 Textile mills within Pennine Lancashire, fall into two main typologies – single function (spinning, weaving or finishing) and multiple function (integral mills combining different operations on a single site) – and survive in a range of sizes from the very small to the very large. Within these main typologies mills can be found which are single storey or multi-storey, shallow plan (less than 15 metres) or deep plan (more than 15 metres), as single buildings or groups of buildings and with or without adjoining mill yards.
- 6.3 The factors which principally influence the suitability of historic textile mills for re-use are location, condition, size, plan form, structural capacity, and access, potential for car parking and potential for improved energy efficiency. Poor condition, inadequate structural capacity, poor access and low energy efficiency will all increase development costs, whilst poor location, awkward plan form resulting in lower useable space and lack of car parking will reduce development values. In some cases a building's less definable qualities (such as its uniqueness or special interest) may attract end users.
- 6.4 Common new uses for redundant textile mills include managed workshops, office space and residential accommodation. However, mills can accommodate a wide variety of uses such as libraries, hotels, shops and university teaching accommodation. Such uses are more likely to work in locations close to large population centres. In areas with lower population levels small tenancies and simple, flexible mixed use accommodation are likely to be more successful.

Typical defects and repair costs

- 7.1 Chapter 7 is intended to provide an overview of typical mill building defects and a guide to achieving an indicative assessment of mill repair costs. In order to derive an accurate picture of the costs associated with building repair, it will always be necessary to undertake a detailed building condition survey and it will be prudent to use a quantity surveyor to develop a corresponding costs schedule. However, in the very early stages of a project, a very high level, initial estimate of project viability is often required prior to any significant expenditure on surveys and professional fees. A developer will typically undertake a broad brush development appraisal using 'per square metre' costs which will vary depending on the general condition of the building.
- 7.2 Typical defects and costs are identified for the following building elements/items:
- Demolitions
 - Sub structure / ground floor slab
 - Frame (columns and beams)
 - Floors (upper)
 - Roof
 - External walls
 - Exclusions
- 7.3 The broad per square metre repair costs are presented in the table below. These figures were used to develop repair costs for the six case study mills and also inform a costs calculator tool for use by those wishing to carry out an initial mill project appraisal.

Condition	Typical repair costs per sq m
Very bad	Mill £400-650, weaving shed £650-800
Poor	Mill £275-400, weaving shed £500-600
Fair	Mill £150-275, weaving shed £350-500
Good	No repair costs

- 7.2 The criteria for determining the condition of a building are based on those used by English Heritage for assessment of Buildings at Risk and by the Architectural Heritage Fund.

Case study overview

- 8.1 Having investigated at a strategic level the circumstances affecting the re-use of former textile mills, the team visited six mill buildings within the study area. These mills had been selected by the client team, and constituted a range of sizes and conditions. Three were within Burnley, three were within Rossendale and all were within walking distances of town centres.
- 8.2 Potential schemes were developed and appraised for four of the six case studies. In each case the exercise demonstrated a deficit. For one of the buildings this was marginal but for each of the other three there was a substantial deficit. While partly attributable to the costs of building repair and conversion, the gap is largely driven by weak property markets resulting in low end values at the present time.
- 8.3 Two of the buildings were in low grade use and unlikely to attract the necessary deficit funding in the current economic climate. This emphasises the need to support existing uses through maintenance advice and, where possible, financial assistance with cost-effective envelope repair. In addition to their cultural and historic value, many of these buildings

support employment and income generation, playing a vital role in areas with fragile economies. Their survival in the medium term is therefore vital to current employment needs as well as securing their cultural value into the future. Keeping them in occupation will be the best way to ensure their survival.

Funding the gap

- 9.1 The funding context has changed very significantly over the last few years as the recession has impacted on public sector budgets. Policy changes have also shifted the emphasis of public sector funding with job creation and enterprise being regeneration priorities. It is increasingly difficult to secure funding for the conservation repair element of heritage development projects, particularly when buildings are 'only' listed grade 2 (or are not listed at all) as is the case with most mills within Lancashire. It is easier to find funding to support end uses but this is also very competitive.
- 9.2 Chapter 9 provides an overview of a range of different sources of funding and finance and other ways through which local authorities may be able to help encourage the conservation of mill buildings in Lancashire.
- 9.3 Funding bodies can be grouped into 'heritage funders' and 'regeneration or economic development funders'. **Heritage funders** include English Heritage which has a limited budget for building repairs but will generally only do so for buildings that are grade 2* or grade 1. The Heritage Lottery Fund (HLF) offers a range of programmes including the Townscape Heritage Initiative (THI). The THI offers a particular opportunity for funding privately owned buildings which the HLF does not normally do.
- 9.4 **Charitable trusts and foundations** also award grants primarily on account of the activities that a project will support, rather than to repair or convert historic buildings per se. The Pilgrim Trust and the Sainsbury Family Charitable Trusts are amongst those that do prioritise works to buildings of heritage significance (generally grade 2* and grade 1), but, as with Lottery funds, private individuals and for-profit enterprises are not eligible for support. Grants are small, with most charitable trusts awarding grants of less than £20k.
- 9.5 **Regeneration and economic development funders** include the Homes and Communities Agency (HCA) which operates the Affordable Homes Programme 2011-15 and the Property and Regeneration Budget. The Regional Growth Fund is the major funding source for economic development projects and programmes following the demise of the Regional Development Agencies (whose closure will be completed by April 2012) but is significantly over subscribed. Applications include a bid from Regenerate Pennine Lancashire in partnership with the East Lancashire Chamber of Commerce, Lancashire County Developments Ltd, the University of Central Lancashire and Lancaster University; aimed at accelerating business growth across Lancashire. If this bid is successful, an historic building project (e.g. the Weavers' Triangle) may be eligible to apply to the pot for capital for works that sustain or increase employment.
- 9.6 **Other potential sources of raising capital** for a conservation project include the Community Infrastructure Levy, alternative sources of loan finance such as Prudential Borrowing (for local authorities) and the Architectural Heritage Fund. Local Asset Backed Vehicles (LABVs) can provide the opportunity to raise finance against publically owned assets and to capture value uplift flowing from regeneration. Enabling development can be used, in some cases, to cross subsidise conservation repairs. It does however, require the

new build element to generate a surplus which can be difficult to achieve when markets are weak.

- 9.7 There are **other ways in which the public sector can provide support and encourage mill redevelopment**, or at least try and limit on-going decline and facilitate future projects. These include raising awareness of the historic significance of mill buildings and supporting owners and tenants to keep them in use. If necessary a council's statutory powers can be used to encourage repairs (in some cases English Heritage may be able to underwrite unrecoverable costs). Conservation officers can achieve much by effective liaison with non-heritage officers to resolve issues and help develop projects.
- 9.8 Further support and advice to owners may be provided on effective mothballing and could extend to free development advice and expertise. For example, help with preparing development briefs. Where buildings are to be refurbished for re-use by an existing owner or tenant, the local authority may be able to offer reduced-rent space in council-owned property in the short term, and provide support for decant and relocation. Lack of land for parking is a major issue and local authorities may be able to contribute land or facilitate land acquisition of nearby sites in order to provide necessary space.

PART 3

Conclusions

- 10.1 The conclusions are structured under the following headings:

- **The importance of the local context to viability** - the deterioration of mill buildings can be linked to economic, as well as technological, change. There is also a very strong relationship between project viability and local property markets. The Pennine Lancashire context presents a particular challenge in this respect and the case studies demonstrate this with some level of deficit likely for each.
- **The importance of progressing mill conversion projects in Pennine Lancashire** - that industrial building conversion projects in Lancashire will be difficult to deliver does not mean that efforts can not - or should not - be made to progress them. Mills are one of the area's key strengths and have an important role to play in regeneration and economic development. There is however, a clear need for prioritisation, particularly given scarce resources.
- **Approaches to mill prioritisation** - there is scope to develop an overarching mills assessment system that builds on other English Heritage assessment methodologies. It should include consideration of regeneration and economic issues as well as heritage ones.
- **A strategic approach** - a system of prioritising mills would feed into development of a mill strategy for Pennine Lancashire to concentrate efforts and investment and establish a set of principles. Such a strategy would ideally involve all local authority partners.
- **Delivering priority projects** - although resources to deliver mill projects are much diminished, there remain various ways of stimulating development and achieving conservation objectives. Local authorities are urged to be innovative in how they use the limited regeneration tools available to them and to consider the potential for direct action to acquire sites, and where appropriate, undertake mothballing until market conditions improve.

PART 1 INTRODUCTION, METHOD AND CONTEXT

Chapter 2: Introduction

- 2.1 The purpose of this study is to guide and inspire investment by providing increased understanding of the economics of repairing and converting industrial (mill) buildings in Burnley and Rossendale, in order to bring them into active reuse. The commission has been undertaken for English Heritage under the 2011 theme of Industrial Heritage at Risk (iH@R). The study is an integral part of the mill assessment methodology being developed by Ruth Garratt (English Heritage Historic Environment Manager)¹ and sits alongside other English Heritage commissioned/funded research concerned with industrial heritage. These include a survey of Lancashire mills by Oxford Archaeology North² and a report on “*Encouraging Investment in Industrial Heritage at Risk*” (June 2011) by Colliers International.
- 2.2 The study has been undertaken at a difficult time for anyone involved in property development and urban regeneration. The financial crash of 2007 has effectively put a brake on property development, most significantly in areas beyond the affluent south east. The consequential reduction in government spending has reduced the amount of grant monies and development subsidies available for projects which do not have standalone viability. These factors increase the need for careful management of the historic built environment in Pennine Lancashire through both preventative maintenance and planned mothballing so that important historic buildings are kept in good condition in readiness for eventual re-use. They also call for creative co-operation between the various arms and agencies of central and local government and private sector bodies to ensure that even in these difficult times every effort is made to bring historic buildings back into use for the proven social, cultural and economic benefits which they offer.
- 2.3 Planning Policy Statement 5 “Planning for the Historic Environment” (PPS 5) recognises the wider impacts of heritage conservation and emphasises that it is desirable to sustain or enhance heritage assets and use them positively in place shaping, recognising the positive contribution that they make to “the establishment and maintenance of sustainable communities and economic vitality”. These benefits have been explored through research commissioned by the Agencies Co-ordinating Group (including: Architectural Heritage Fund, the Civic Trust, the Institute of Historic Building Conservation, the Association of Preservation Trusts, and the Prince’s Regeneration Trust)³ and the Heritage Lottery Fund⁴.
- 2.4 The brief required that the study should set out typical elemental cost of repair associated with common defects at former textile mill sites and also generic conversion costs associated with a range of end uses. The study was also required to explore the development potential of six case study mill sites within the two local authority areas. Due to the broad brush nature of the case study findings, they have not been included in the main report.

¹ *Trouble at the Mill: New approaches to the re-use of industrial textile mills*

² Oxford Archaeology North (March 2010), *Lancashire Textile Mills A Rapid Assessment Survey*, Lancashire County Council (phase one study available at:

<http://www.lancashire.gov.uk/corporate/web/index.asp?siteid=4398&pageid=34054&e=e> – phase two of this work is planned to commence during 2011).

³ Ela Palmer Heritage (2008) *The Social Impacts of Heritage Led Regeneration*, Architectural Heritage Fund.

⁴ Cox, E. and Shaheen, F. (forthcoming 2011), *Heritage and the local growth agenda*, New Economics Foundation

- 2.5 To give the methodology used in the case studies wider applicability the study has developed a spreadsheet-based costs calculator tool (based on repair and conversion costs per square metre) which can be used by others (e.g. mill owners, local authorities or potential purchasers) to gain an initial estimate of repair and development costs.
- 2.6 The study has also assembled a range of exemplar projects, demonstrating previous successful mill conversions. These include three that have come forward within Lancashire and Yorkshire post 2007 during the current financial climate.
- 2.7 Heritage Works (as lead consultant) has undertaken the project in partnership with a core team comprising Gerald Eve (chartered surveyors), Robinson Building Consulting (structural engineers), Bernard Williams Associates (quantity surveyors) and Mattin MacLean (architects). Nick Johnson and Chris Stalker of Urban Splash (developers) and Ian Miller of Oxford Archaeology North have also taken part in the study in an advisory capacity.
- 2.8 The study has been steered by a panel comprising Darren Ratcliffe and Ruth Garratt (respectively Historic Environment Inspector and Historic Environment Manager with English Heritage), Erika Eden Porter (Principal Planning Officer with Burnley Borough Council), Bill Mercer (Regeneration Officer with Rossendale Borough Council) and Steven Szostak (Head of Investment, Regenerate Pennine Lancashire).

Chapter 3 Study methodology

- 3.1 The study necessarily takes a high level approach to providing the means by which mill repair and conversion costs can broadly be estimated and used to inform an assessment of development potential. With respect to the case study mills, it provides a set of 'broad brush' viability assessments and initial recommendations / actions for each of the sites. To fully understand the development potential of each would require a full options appraisal and feasibility assessment. As such, the case study findings are indicative and could be used to determine whether investment in project development or feasibility work may be worthwhile.
- 3.2 The approach involved two workshops to provide the opportunity for team members to pool, their expertise. The first of these was undertaken on 10th August 2011 and was preceded by site visits to all six case study mill properties. Rapid internal inspections were carried out for three of the mills. The focus of this first workshop was to identify typical defects associated with former textile mills in Burnley and Rossendale and their typical repair costs. The session was also used to determine the broad parameters for data to be used in the appraisals and 'cost calculator'. The workshop agreed that for the purpose of undertaking a broad brush development appraisal, it was appropriate to develop a repair cost per square metre which would vary depending on the broad condition of the building. The condition criteria and categories are based on those used for English Heritage Building at Risk assessments and by the Architectural Heritage Fund (see Appendix 1).
- 3.3 The focus of the second of the two workshops was to determine potential development scenarios for each of the case study sites. It was held at the Globe Centre in Accrington and involved members of the client team in addition to the consultant team. The workshop was informed by information generated from the previous stage of work including:
 - Report on generic repair costs;
 - Table of indicative values for a range of end uses
 - Structural report with a commentary on typical defects and structural overview of each of the case study mills; and
 - Area schedules for each mill site.
- 3.4 The first workshop provided an opportunity to consider the constraints and opportunities associated with each site and, in most cases, for potential development scenarios to be identified. For one mill, the fragmentation and ownership of the site was such that it was felt no development scenario could realistically be identified. Another has a live planning permission for a mixed use development scheme. It was not considered appropriate to develop an alternative scheme; instead the case study provides the team's views on the current development proposals and focuses on recommendations.
- 3.5 The second workshop also agreed what the study outputs for each site would be (i.e. schematic drawings and/or development appraisals).

Chapter 4 The impact of economic circumstances on textile mills

- 4.1 Pennine Lancashire (including the Boroughs of Burnley, Rossendale, Blackburn with Darwen, Pendle and Hyndburn) was a key driver of the industrial revolution with a textile and engineering based economy. Over the last century, the local economy has diversified considerably with aerospace, advanced manufacturing, advanced flexible materials and the digital and creative sectors all contributing to economic output. Overall however the area under performs and its economy is generally based on low value and low skill industry. In relative terms the scale of decline, is demonstrated by the gap between the area's GVA⁵ and the national average, identified within the Integrated Lancashire Economic Strategy (2008) as £2 billion per year.
- 4.2 The physical legacy of the area's past industrial success includes its stock of industrial heritage, amongst this a substantial portfolio of extant former textile mills. The Lancashire *Textile Mills Rapid Assessment Survey (2010) (Oxford Archaeology North)*, identified a total of 1661 textile-manufacturing sites in Lancashire of which 619 mills survive in whole or part (equating to a survival rate of just over 37%). The rate of loss is highest in Burnley and Rossendale and that has been the rationale for the selection of case studies for this assessment from those local authority areas.
- 4.3 Although the closure of textiles manufacturing businesses has often resulted in the continued use of mill buildings, this frequently does not happen in a way that ensures proper conservation and maintenance. Where (and when) there is a reasonably buoyant property market, there is potential to implement a full repair programme and undertake conversion to a new use; when the end value of a scheme exceeds its costs, this delivers the potential for a developer to make a profit (typically around 15%). Where costs are broadly equal to values, there remains is potential for a not for profit scheme; for example, one undertaken by an end user, or by a non for profit organisation such as a building preservation trust, a local authority or development agency. Where economic circumstances do not drive buoyant property markets, there is a lower likelihood that such repair and conversion projects will be initiated. In these cases, buildings may become vacant and will then be particularly prone to decay and ultimate loss. Where mills continue to be occupied, it is often with low value uses, offering cheap rent or low maintenance cost to tenants and owners. Alternatively, buildings may continue to be occupied by owners who need premises for a new venture. In either case, short term cost efficiency is likely to be an important concern and repairs and maintenance may be perfunctory or non existent, leading to fabric decay.

Fabric decay in textile mills

- 4.4 Fabric decay in historic textile mills is the result of a sequence of causes common to all building types. The primary cause is lack of maintenance and security. This usually results from the decline in the economic value of a building or its complete redundancy leading to a lack of justification for expenditure on maintenance. It can also arise through ignorance on the part of building owners and managers. In some cases mill owners may not have resources to invest in the building's upkeep. However, it is commonly accepted that simple periodic maintenance such as keeping rainwater goods unblocked, roof coverings in order and buildings well-ventilated can prevent fabric decay. Historic textile mills constitute a

⁵ GVA (Gross Value Added) is a measure of economic productivity similar to Gross Domestic Product

largely redundant building type due to both the collapse of the UK textile industry from the mid-20th century onwards and the development of new building types to accommodate modern production methods in surviving textile businesses. This redundancy has resulted in four conditions of historic textile mills – comprehensive refurbishment and adaptation to new uses, use in whole or in part as low grade accommodation, vacancy and ultimately demolition.

- 4.5 We are concerned here with the consequences of low grade use and vacancy. Low grade uses include industrial workshops and warehousing where low capital or running costs of a building are essential factors for owners and tenants. In these circumstances maintenance is often limited to the most perfunctory or essential works and best conservation practice is financially out of the question. In these circumstances owners and tenants should receive guidance on simple routine maintenance to prevent unnecessary decay. Where replacement of elements is necessary, most significantly concerning roof coverings and rainwater goods, planning authorities should have a flexible approach to normal conservation standards, acknowledging that low cost materials and components such as sheet metal roofing and plastic rainwater goods are preferable to leaking or incomplete roofs, gutters and downpipes and will secure buildings in the medium term.
- 4.6 In the absence of ongoing maintenance any building will decay and eventually disintegrate. Decay most commonly begins with the blockage of rainwater gutters and downpipes, and the localised failure of roof coverings and flashings. These can individually and together cause the ingress of moisture to the building fabric, most commonly by saturating wall heads and then progressively down wall faces. Similar saturation occurs beneath failed roof valleys. When the moisture content of timber rises above 20% fungal infestation is inevitable and the chances of insect infestation greatly increase. In these conditions damp timber roof truss ends, rafter ends, wall plates, floor beam and floor joist ends will decay and eventually fail causing local deflection and ultimately local collapse. Such deflection and collapse will dislodge masonry or other elements leading to loss of structural integrity. A second consequence of saturated walls is the decay of the masonry itself. In very cold weather there is a cyclical freezing and thawing of moisture in the masonry and mortar causing the spalling and breakdown of the material. Wind will loosen and dislodge weakened elements. The whole cycle is repeated over time leading ultimately to the disintegration of the building.
- 4.7 Whilst lack of maintenance is the primary cause, decay can also occur due to poor construction or poor management, for example in unventilated spaces where fungal growths thrive or through poor ground drainage causing saturation of substructure and moisture wicking at wall bases. Further results of under-use and vacancy are the increased incidence of theft of building components such as flashings, roof coverings and rainwater goods and the deliberate destruction of building fabric through vandalism. This includes breaking of doors and windows, dislodging wall stones and roof slates and starting fires. The resulting opening up of building fabric to wind and water has the same inevitable results. Other problems of under-use and vacancy such as the accumulation of rubbish and the ingress of pigeons and other vermin exacerbate decay but are not in themselves primary causes.

The local market context

- 4.8 **Clearly, the market context is a primary driver behind textile mill decline and is generally the most important variable in project viability. Building condition will affect development costs but a building's location, and associated demand for a**

proposed use will determine the end value and will impact on viability to a much greater extent.

- 4.9 Across the county of Lancashire, Land Registry data shows that local house prices are well below the average for England and Wales and have declined by 5.23% between July 2010 and July 2011. The greatest price discrepancies with the national average are for the maisonette / flat and terraced house property types. As it is apartments and maisonettes that are most likely to be accommodated within mills, this highlights the challenge of achieving viable residential development in these buildings.
- 4.10 The Burnley and Rossendale boroughs, where the case study mills for this projects are located, are ranked 1 and 23 respectively across England and Wales out of 347 where 1 is the cheapest house price and 347 the most expensive⁶. Residential conversion projects in Burnley therefore face a particular challenge. A vacancy rate of 8.01%, against the national average of 3.25%) further indicates the weakness of the residential market in Burnley.
- 4.11 There are, however, wide variations in house prices across Lancashire with the average price in Ribble Valley (at £222,368 in December 2010) being 2.5 times that for Burnley.
- 4.12 Within the industrial and office markets there is a wide range of accommodation available on the market at competitive rents and capital values suggesting that it will be difficult to provide additional space on a cost effective basis. Further commentary on local property markets is provided at Appendix 2.
- 4.13 Speculative development is particularly high risk where viability is marginal (at best) and demand for accommodation likely to be weak. Potential does remain to undertake customised refurbishment for a pre-identified end user/s, particularly if the end use is capable of attracting support to fund repairs or fit out. This is most likely to be the case if the end user is a not for profit organisation.

Conclusions

- 4.14 The chapter has highlighted the link between property markets and the probability of mill buildings falling into disuse and dereliction, with ultimate loss in many cases. It has also highlighted the link between the strength of local property markets and the realistic likelihood that a conversion project can be made to stack up. In Lancashire the loss of a large proportion of textile mill buildings and the failure of many to support conversion projects can be attributed to the economic context and market conditions. A further factor to be taken into account in the current economic climate is the availability of bank finance for development. This is especially difficult to secure for apartment schemes, (where units from early phases are typically sold 'off plan' to finance later stages) but potential buyers may currently struggle to secure a mortgage.
- 4.15 Clearly these are challenging circumstances in which to bring forward mill conversion projects and will require a creative approach to project delivery. While development projects, and particularly those involving historic buildings in need of conservation repair, are difficult to deliver where property markets are weak, these are inevitably the areas in most need of regeneration. The repair and reuse of historic buildings has proven to be a significant factor in the social and economic well-being of towns and cities across Europe.

⁶ *Residential Property Report 2010*, Lancashire County Council (available at: http://www.lancashire.gov.uk/office_of_the_chief_executive/lancashireprofile/main/housemarket_2010b.asp)

Such projects have the potential to increase economic activity and enhance local environments, promoting a sense of identity and well-being in contrast to an environment of dereliction and gloom. They are therefore capable of boosting surrounding property values and contributing to wider regeneration objectives. This point is well articulated within the Power of Place report which observes that:

“The historic environment is an irreplaceable asset representing the investment of centuries of skills and resources. It gives places a unique competitive advantage. It generates jobs. It attracts people to live in an area, businesses to invest and tourists to visit.”⁷

- 4.16 It is therefore essential that a long term view is taken on the value of any historic building and its place in the local community, and that wider social and economic benefits are not sacrificed to short term convenience and expediency.
- 4.17 Heritage conservation projects have considerable potential to increase economic activity with their end uses and also enhance local environments promoting a sense of security and personal safety in contrast to an environment of dereliction and decay. They are therefore capable of boosting property markets and contributing to the achievement of regeneration objectives.
- 4.18 These wider benefits should be taken into account when considering the value of a scheme, particularly where there is the potential to generate a critical mass of activity. In cases where there is impetus to deliver a mill conversion project exists there is, even now, a broad range of resources and mechanisms that can be harnessed. An overview of these is provided within Chapter 9.

⁷ English Heritage (2000), *Power of Place – the future of the historic environment*, page 8

Chapter 5 Good practice and exemplars

- 5.1 There is a substantial body of literature on the conversion of redundant or underused buildings for adaptive reuse, some focusing specifically on reuse of industrial buildings. Many publications provide exemplars of successful conversions projects which can serve as a reference point for those wishing to consider a heritage conservation project (although it should be noted that the exemplars predate the 2007 credit crunch).
- 5.2 The purpose of this chapter is to provide an overview of some of these sources, drawing out relevant case studies. However, as Chapter 4 has emphasised, the market context is a key factor in determining project viability and different market and economic circumstances require different approaches to project delivery. Circumstances may differ across geographical areas and also over time as macro economic changes take place. The economic recession and downturn in the property market since 2007 has made it very difficult to deliver even many new build schemes, even in areas with relatively buoyant property markets. In view of the challenge of delivering conservation projects, particularly in areas where the market is not strong, we have included exemplars from the last four years with a particular emphasis on delivery. Chapter 9 provides further discussion of how a project viability gap may be funded.
- 5.3 The subsequent paragraphs provide a synopsis of some key publications and the following table contains selected case studies summarising conversion of industrial buildings to a range of different uses. The chapter concludes with two, more detailed, case studies of recent conversion projects.

Sources:

Latham, Derek (2000), *Creative Re-use of Buildings*, Donhead

- 5.4 In 'Creative Re-use of Buildings', Derek Latham sets out to create a guide to show how options for 'creative re-use' – that is 'more than just the conversion or rehabilitation of a property for a new, or continued use. It is a process that harnesses the energy and quality of the original building...and combines this with the new energy and activity that the new use brings' – can be identified, using numerous examples and case studies. The book is published as two volumes. The first outlines the principles and practice of creative re-use, including the context for re-use, the means to create a successful re-use project, and post completion elements. Volume two provides an array of selected examples of building types to which creative re-use could be applicable, including industrial buildings, offices, churches and schools, as well as looking at more characteristic elements to consider for re-use, including single or multi storey examples, open or divided sites and urban or rural differences. Latham concludes by stating that 'the creativity is in achieving a solution which appears appropriate, enhances rather than detracts from its original character, is sustainable and still retains the potential for further changes in the future'.

Stratton, Michael ed. (2000) *Industrial Buildings: Conservation and Regeneration*, E & FN Spon, 2000

- 5.5 'Industrial Buildings: Conservation and Regeneration' is designed to outline the full processes of how to make conservation of industrial heritage a success. It begins with an introduction by HRH The Prince of Wales, in which he stresses how the trend of 'wholesale clearance' of 'brownfield' sites needs to be reversed, and that heritage industrial buildings 'need to be used and to be adapted'. To do this, the book emphasises that a key issue in

reversing this trend 'is the relationship between building conservation and the revitalization of run-down urban areas'. The book therefore begins by reviewing industrial buildings and providing an overview of conservation and commercial interests in them, before moving on to outlining the potential of industrial sites and the effect their location has upon the will to regenerate, and uses Stoke-on-Trent as an example of sustainable urban regeneration. The second section considers what efforts are needed in order to create a successful re-use, options for re-use, the role of the entrepreneur in creating opportunities for re-use, and the support for preservation of Britain's industrial heritage and subsequently for industrial museums and heritage centres. The third section looks at international approaches to conservation and heritage, and the fourth section looks to the future of regeneration in the 21st century. Finally, the fifth section provides a wide range of example of regeneration projects from around the country.

Binney, Marcus, Machin, Francis & Powell, Ken eds. (1990), *Bright Future: The Re-use of Industrial Buildings*, SAVE Britain's Heritage

- 5.6 'Bright Future: The Re-use of Industrial Buildings' takes a highly visual approach of highlighting the potential for re-use of Britain's industrial heritage. The introduction and first chapter are similar to other publications described so far, outlining the challenge and possibilities of regenerating industrial heritage, using examples from both Britain and elsewhere, including Lowell in the United States as a prime example of where renovation of industrial heritage has been highly successful. The second chapter lists five potential projects that the authors had, in 1990, highlighted as potential candidates for conversion:
- Hunslet Mill, Leeds,
 - Friargate Warehouse, Derby,
 - Calder and Hebble Navigation Warehouse, Wakefield,
 - Cressbrook Mill, Derbyshire,
 - The Tannery, London.
- 5.7 Each potential project is supported by photographs of the sites and buildings, as well as artist's impressions and architects plans for potential future use. Chapter 3 then goes on to show projects that have already been completed, including the Britannia Hotel in Manchester and New Mills in Wotton-under-Edge. The final chapter ends the book somewhat bleakly in showing the many sites in the country that had at the time no outlook for conversion and were at threat from demolition.

Purcell Miller Tritton LLP (2010) *Northern Lights: Finding a Future for the Weaving Sheds of Pennine Lancashire*, Lancashire County Council

- 5.8 The Northern Lights study is an in-depth report into finding creative re-use for a specific type of industrial heritage building, namely the north light weaving sheds in Pennine Lancashire. The study begins by detailing the historic background of the sheds, and outlines how the way in which the sheds were constructed has led to issues in their re-use in the modern era. The study then goes on to outline these issues, and specifies why they are a potential barrier to re-use. The following section provides possible solutions to these barriers, attempting to demonstrate how many of the unique features of the north light weaving sheds can be incorporated into future re-use. Completed examples of re-use are followed by analysis of different reuse schemes, including residential, workshops, workplaces, educational buildings including nurseries and conference rooms, retail space, cultural re-use such as galleries, storage and community schemes such as libraries or youth centres. The final section of the study outlines technical solutions to address the potential problems outlined earlier in the study, as well as indicative financial costs to adaptive re-use of the

north light weaving sheds. The study concludes by stating that “...with enthusiasm and commitment from those involved in the care of the historic environment, our economic development and our community life and the encouragement and support of their owners this study has concluded that there is no reason why the unique weaving sheds of the Pennines Lancashire should not have a bright and productive future”.

Eley, Peter & Worthington, John (1984) *Industrial Rehabilitation: The Use of Redundant Buildings for Small Enterprises*, The Architectural Press Limited

5.9 Industrial Rehabilitation differs slightly from the works discussed thus far as it provides a more technical overview in supporting the adaptive re-use of industrial buildings. The authors introduce the books as being ‘addressed to all those concerned with the nuts and bolts of improving local employment opportunities: planners, industrial development officers, building professionals, community groups and building owners’. It begins by outlining the main obstacles to creative re-use faced by developers, and then moves on to what opportunities are available if these obstacles can be overcome. The book is then split into three sections. The first presents a typology of firms that can benefit from creative re-use, the redundant buildings available, tenancy arrangements, and agencies for development. Part two provides a step by step approach to the development process, with particular emphasis on the assessment of financial viability. Part three describes twenty-six schemes that had already been completed to show the benefits of emphasis on individual initiative, small innovative firms and the husbanding of existing resources.

5.10 Selected exemplar projects from these sources include:

Textile mill, Wotton-under-Edge	1790, Grade II*	Multi-storey brick building with cast iron windows and slate roof	Converted to Offices . Original structure remains but two-storey spaces formed by cutting away existing floors. New low profile buildings to the rear accommodate later growth	Latham, Derek, ‘Creative Re-use of Buildings’,
Mills, Moor Lane, Lancaster	1825, Grade II	Five-storey ‘L’ shaped three bay deep, brick vaulted, iron columned, mill with canalside weaving sheds linked by tunnel to 1819, six-storey north mill. Circular stone staircase under a later water tower.	Converted to Offices . Purchased by Reebok UJK in 1990 for their headquarters. Demolishing the single-storey sheds provided car park and service space.	Latham, Derek, ‘Creative Re-use of Buildings’,
Spinning Mill, West Mill, Huddersfield	1865, Grade II	Benjamin Lockwood, six storey plus engine house, chimney and single-storey weaving shed. Gritstone, slate roof, jack-arch stone paved floor on cast iron beams and columns.	Converted 1994 to University Buildings (School of Computing and Mathematics) . 7,000 sq m provide 1,000 student places plus lecture theatre, computer laboratories, large teaching rooms, resource centre, common rooms and administration.	Latham, Derek, ‘Creative Re-use of Buildings’,

Mill/slaughterhouse, Kergord, Welsdale, Shetland	1850s, Grade B	Three-storey, limestone rubble, slate roofed, overshot water mill, later extended from the middle floor in mass concrete to form a slaughterhouse.	Converted to a Gallery/Museum . Extension removed, to restore the visual verticality of the original building, and replaced with a glazed café extension overlooking the mill stream. Gallery on well lit top floor; museum of light sensitive fabrics on unlit bottom floor with entrance, meeting, shop and toilets in between.	Latham, Derek, 'Creative Re-use of Buildings',
Hosiery mill, Northampton Square, Leicester	c1800	Brick, five-storey, corner building, previously derelict	Converted to Residential apartments . 44 low cost, rental apartments behind façade restored to original design, but with tilt and turn windows to maximise ventilation and facilitate cleaning.	Latham, Derek, 'Creative Re-use of Buildings',
Murrays' Mills, Ancoats Manchester	Grade 2* listed, built 1798	Brick 4 and 5 storey mill complex. Previously derelict	Shell repaired for conversion to offices (13,000 sq ft). £10 million repair contract completed 2006.	Stratton, Michael ed, 'Industrial Buildings: Conservation and Regeneration
Middle Warehouse/Castle Quay, Castlefield, Manchester	Grade 2, built c1830	Former 5 storey brick cotton warehouse built in 1831 by the Manchester Ship Canal Company	Converted in into forty-four flats, shops , office space, and studios for local radio stations, with a total of 80,000 sq. ft of floor area at a cost of £4.6 million	Stratton, Michael ed, 'Industrial Buildings: Conservation and Regeneration
Templeborough Steel plant (MAGNA), Rotherham, South Yorkshire	Built 1916	Converted to Europe's largest electric arc melting shop between 1962-5, but closed in 1993.	Following a £37 million conversion, the 34,000 sq. ft site is now a scientific visitor attraction and educational resource , attracting around 300,000 visitors per annum.	Stratton, Michael ed, 'Industrial Buildings: Conservation and regeneration
Salts Mill, Saltaire, Bradford	Grade 2* listed, built 1853	Three storey Italianate style sandstone textile mill built by Sir Titus Salt. Closed 1986 with renovation starting the following year	The mill now contains four comprehensive art galleries including the 1853 gallery, with over 400 works by David Hockney. Also includes retail and leisure uses. Within the site, a single storey weaving shed has been converted to form the UK headquarters of Pace Micro	Purcell Miller Tritton, 'Northern Lights: Finding a Future for the Weaving Sheds of Pennine Lancashire'

Isambard Kingdom Brunel's Former GWR Locomotive Works, Swindon	Built from 1841. Closed 1986	Complex of buildings comprising workshops for manufacture and repair of train components.	Now converted to a McArthur Glen Designer Outlet Village . Also includes the headquarters of the National Trust, English Heritage, the National Monuments Record and Steam – the Museum of the Great Western Railway	Purcell Miller Tritton, 'Northern Lights: Finding a Future for the Weaving Sheds of Pennine Lancashire'
Lister Mill, Bradford	Collection of grade 2* Listed mills and warehouse	Sandstone, former silk mills.	Ongoing conversion for residential and commercial use. Will provide 675 new homes in Bradford and 170,000 sq ft of commercial property	Purcell Miller Tritton, 'Northern Lights: Finding a Future for the Weaving Sheds of Pennine Lancashire'
Butt End Mills, Mirfield, Yorkshire	Dated late 1860s	Disused textile mills	Converted in 1977 to 12 100m ² -1600 m ² units for small scale commercial use.	Eley, Peter & Worthington, John, 'Industrial Rehabilitation: The Use of Redundant Buildings for Small Enterprises'
Meadow Mills, Stockport	Circa 1880	Twin six storey brick built mills with ornamental engine house between. Built for T & J Leigh, cotton and wool spinning	Converted in 1963 to 45 commercial units , with over 90% occupied in the mid 1980s.	Eley, Peter & Worthington, John, 'Industrial Rehabilitation: The Use of Redundant Buildings for Small Enterprises'

Recent exemplars

Lob Lane Mill (now called Quaker Heights) (Brierfields, Pendle)

END USE: RESIDENTIAL

Developer: Pearl2 (Joint Venture between Pendle Council and Barnfield Homes)

Architect: IWA Architects, Clitheroe

Date: Main warehouse is 1909

Total Cost: £2.991million (£1,001 per square metre)

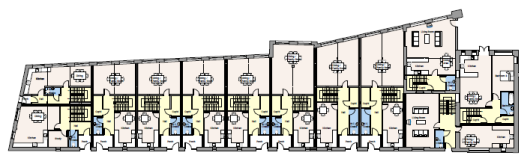
List Status: Unlisted but within a Conservation Area



Before



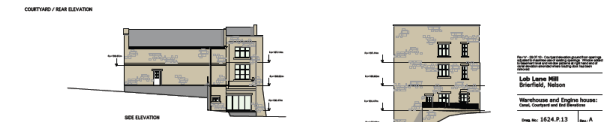
After



0 10 20 30 40 50 M

IWA Architects
Architects
100-102, Clitheroe Road, Clitheroe, Lancashire, PR71 4JL
Tel: 01207 254444
www.iwa-architects.co.uk

Plan views (lower ground and ground floors)



0 10 20 30 40 50 M

IWA Architects
Architects
100-102, Clitheroe Road, Clitheroe, Lancashire, PR71 4JL
Tel: 01207 254444
www.iwa-architects.co.uk

Elevations

Scheme Overview:

Lob Lane Mill is located on Clitheroe Road Brierfield, near Nelson, in Pennine Lancashire. The mill had been unused for over a decade and had become derelict with parts seriously fire damaged and most areas requiring substantial repair. Although a number of schemes had been granted planning permission (one winning an award), none had actually progressed to development, due in large part to low local property values. The current scheme has been undertaken through a Joint Venture between Barnfield, a private developer, and Pendle Borough Council. Pearl2 aimed to revitalise the most valuable heritage features of the disused mill complex and to complement them with new

residential development in line with the Brierfield Canal Corridor (Housing) Planning Brief (2005). The main warehouse and engine house have now been converted into 12 four storey town houses with prices starting from £180,000 as part of a wider scheme involving new build development. The scheme is called Quaker Heights, named after the area's strong Quaker heritage

Scheme Delivery:

This was a challenging scheme to deliver given development costs (partly driven by the condition of the building) and low residential values. A feasibility study undertaken prior to purchase of the site demonstrated a significant development deficit and concluded that no residential scheme would be viable without substantial grant subsidy to cover repair costs and gap funding. This was despite inclusion of developer's profit at only 5%.

Phase 1 of the scheme included the conversion of the mill to provide 12 houses and the construction of 27 new houses. Grant funding was applied across the Phase 1 area. £1.33m of Housing Market Renewal funding was spent on remediation of the Phase 1 area after it was acquired by Pendle Council. This included demolition of some existing buildings on the site (including north light sheds and the mill chimney), land remediation and stabilisation of the mill building. Following transfer of the site to Pearl2 a further £710k of gap funding was approved through Housing Market Renewal for Phase 1. The site is in an area of low demand with low house prices so even new build properties on the site needed some gap funding.

Pearl2 is a Joint Venture between Pendle Borough Council and Nelson based developer Barnfield Investment Properties. It was established in 2009, following an OJEU compliant procurement process, to undertake a variety of regeneration initiatives within Pendle. It is currently developing and delivering a range of housing, commercial and retail developments. All profits are to be re-invested back into the company to fund future regeneration initiatives.

At this stage the full economics of the scheme cannot be established as the fit out work is still underway and the properties had just gone on the market at the time of writing. Until the properties are sold there is still a risk as to whether the scheme has been viable.

Costs breakdown:

The remediation costs to the building amounted to £1.393m or £466 per square metre. The fit out costs were £1.184million or £396 per square metre. Adding in infrastructure works to the mill and fees (worked out as a proportion of overall costs for the site) the overall costs for the mill refurbishment were £2.991million or £1,001 per square metre.

Shaw Lodge Mills (Shaw Lane, Halifax)

End use/s: The first part of the scheme has been completed for commercial office use. The remainder of the site is in a mix of commercial, educational and industrial office uses).

Developer: St James Securities (Shaw Lodge) Ltd

Architect: Various including Building Design Partnership, Horsley Townsend, Normal TM, Purcell Miller Tritton.

Date completed: The first part of the scheme (Shaw Lodge House) completed 2011.

Total Cost: Shaw Lodge House repair and refurbishment costs were less than £400,000 (repair and refurbishment costs)

List Status: Grade 2*



Mill in 1970



1850 Mill



Shaw Lodge House (refurbished)



Artist's impression of final scheme

Scheme Overview:

Shaw Lodge Mill is located to the south west of Halifax town centre. The overall vision is for redevelopment of this mill complex as a new urban village to contribute to the regeneration of Halifax. Planning permission was secured in 2008 for a 50,000 sq m mixed use scheme comprising 300 residential units, approximately 11,500 sq m of business space (including a medical centre), 1,500 sq m general industrial space, a hotel, local shops, restaurants/bars and a gym. The scheme includes refurbishment and conversion of the existing buildings to retain their historic character

together with provision of 10 new buildings. Job creation is a key element of the scheme.

The economic recession and associated downturn in property markets has constrained this development, in particular the apartment market on which delivery was dependent. The situation has necessitated a revised approach resulting, so far, in the refurbishment of Shaw Lodge House as commercial office (370 sq m) and design studio space (350 sq m).

Scheme Delivery:

This is a private scheme being delivered by St James Securities who purchased the complex in 2005. The subsequent changes in the economic climate and property markets meant that the programme for, and approach to delivery had to be seriously reconsidered. The approach is to progress delivery of the **easy bits first**, while using as much of the remainder of the site for **meanwhile uses**. In this case these include use as an art school, a stone carving association, Creative International Adventures (an outdoor pursuits company), offices of Linda Riordan (MP for Halifax), a marketing company and by various industrial type businesses including plumbers. St James Securities are currently working with Creative International Adventures on plans to use the chimney for rock climbing. This will require some investment but generate an income to fund repairs. The weaving shed within the complex will shortly be used to host a large corporate dinner event which will raise the profile of the building and, it is hoped, attract new tenants.

The main rationale for meanwhile uses is that they **generate an income** which helps to support maintenance and immediate repairs to the buildings. Having the surrounding buildings occupied also brings life and activity to the site and is an important factor in letting office space in Shaw Lodge House. Vacant surrounding buildings would make this difficult and, more generally, would leave the buildings prone to vandalism and decay. St James Securities support tenants' businesses by using them to carry out repairs to the buildings where possible and intends to support them to grow so that they remain in place as the site develops.

Decisions about which parts of the scheme to progress first, and how, have been dictated by the market. Speculative development of large office spaces is now considered to be too high risk. Shaw Lodge House (which was previously used as offices) provided the opportunity to develop smaller spaces to accommodate a range of different tenants. This is more intensive to manage but there is a stronger market for smaller spaces on more flexible terms. It is approximately three quarters occupied. While the majority of the scheme was financed by St James Securities, Calderdale Council made a £20,000 contribution through its Business Improvement Grant fund on the basis that the scheme would create jobs and in recognition of its wider strategic value. Some funding was also provided by English Heritage to carry out emergency chimney repairs.

Overall, St James Securities is currently subsidising the Shaw Mill site but it is anticipated that increased occupancy of the mill (if planned deals come to fruition) will allow it to break even in six to nine months. It is envisaged that the rest of the site will be developed over a 15 – 20 year period as market conditions allow. The specific nature of development is likely to vary according to what can realistically be delivered.

Costs breakdown:

Not available

A list of mill developers and contact details is provided at Appendix 3 and may provide useful reference for those researching further projects.

PART 2 ASSESSING THE ECONOMIC POTENTIAL OF MILL BUILDINGS

Chapter 6 Mill typologies and end uses

- 6.1 The first part of this chapter provides a brief overview of mill development over time and discusses the effect that changing textile technology and working practices had on the physical form of mill buildings. It culminates in a set of mill typologies developed for the purpose of this study which align with the typologies to be used by Oxford Archaeology North for Phase 2 of the Lancashire Mills Assessment. The purpose of the two typologies differs with that used for Oxford Archaeology North being concerned with original construction for original purposes. The typologies for this study are concerned with the buildings as surviving and their potential for reuse. Although the two typologies serve different purposes they are similar and comparable.
- 6.2 The second part of the chapter considers potential end uses for mill buildings and how size and form impact on which uses may be most suitable for different buildings.

Mill Typologies

- 6.3 The spinning frame was invented in 1764 and developed over the following years. The first factories were domestic in scale and comprised several frames powered by humans or horses. The water-powered spinning frame, known as the water frame, came into use in 1771 and larger factories were therefore developed by the side of water courses. The application of steam power to spinning mills towards the end of the eighteenth century removed the need for them to be sited by flowing water. Similar developments took place in mechanised weaving and associated finishing processes. Over time machinery became larger and more sophisticated. The market both nationally and globally grew rapidly year on year and the size of textile mills grew in response to both of these factors progressively through to the early twentieth century.
- 6.4 The textile industry was developed by many entrepreneurs whose operations fitted into local and regional economies in accordance with both their capital resources and their commercial success. Some remained effective small businesses whilst others developed into large concerns requiring large production facilities. Some businesses concentrated on either spinning or weaving, whilst others combined these operations on single sites. Small spinning mills tended to be narrow in plan form with load-bearing masonry walls and sometimes a single line of internal columns supporting timber upper floors. Larger and later spinning mills became progressively deeper in plan with framed internal construction supporting timber or brick arched upper floors. Column spacing and ceiling height both increased over time. Weaving mills were sometimes multi-storey buildings not unlike spinning mills, but more commonly were deep plan single storey buildings with saw tooth north light roofs supported on lightweight timber beams and cast iron columns.
- 6.5 From the late eighteenth century onwards mills had associated boiler and engine houses, usually integral to the mill buildings, together with tall masonry chimneys. Most mills had adjoining external yards for access or as a result of the arrangement of individual buildings on a site, but some simply filled a building plot with access directly onto the street.
- 6.6 All of these factors influence the types of mill buildings which survive in Pennine Lancashire today. They fall into two main typologies – single function (spinning, weaving or finishing) and multiple function (integral mills combining different operations on a single site) – and survive in a range of sizes from the very small to the very large. Within these main

typologies mills can be found which are single storey or multi-storey, shallow plan (less than 15 metres) or deep plan (more than 15 metres), as single buildings or groups of buildings and with or without adjoining mill yards.

- 6.7 It should be noted that not all mill types that occur within the historic Lancashire area are represented in the study area. There are, for example, no deep plan steel and concrete frame mills such as those found in Manchester and Bolton.

End uses

- 6.8 The factors which principally influence the suitability of historic textile mills for re-use are location, condition, size, plan form, structural capacity, and access, potential for car parking and potential for improved energy efficiency. Poor condition, inadequate structural capacity, poor access and low energy efficiency will all increase development costs, whilst poor location, awkward plan form resulting in lower useable space and lack of car parking will reduce development values. Conservation repairs to historic fabric together with structural enhancement and the consequences of awkward plan form constitute deficit costs attributable to conservation objectives. In some cases a building’s less definable qualities (such as its uniqueness or special interest) may attract end users.
- 6.9 Common new uses for redundant textile mills include managed workshops, office space and residential accommodation. However, mills can accommodate a wide variety of uses such as libraries, hotels, shops and university teaching accommodation. Such uses are more likely to work in locations close to large population centres. In areas with lower population levels, small tenancies and simple, flexible mixed use accommodation are likely to be more successful. Property surveyors are best placed to give advice on likely uses for specific buildings, especially those with a detailed knowledge of local markets. However, sometimes the most inspiring and innovative ideas can come from local groups and entrepreneurs who may simply need help and guidance in realising their ideas. Guidance on the appropriate repair and adaptation of historic buildings is freely available and there are many precedents which illustrate best practice as we have shown in Chapter 5.
- 6.10 In areas of high commercial activity and value the re-use of historic mill buildings which are in reasonable condition and offer efficient plan forms should be commercially viable. In areas where commercial values are low there is likely to be a deficit between development costs and predicted values of the refurbished building.
- 6.11 While there are many ways to creatively convert and reuse former textile mills, there are some general considerations that relate to the different mill typologies identified above.

Size	While a large building may provide the opportunity for efficient use of space this can depend on plan form (see below). It may also necessitate a mixed use scheme as the local property market may not absorb a large quantity of a single use.
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<p>Single / multi storey</p>	<p>Multi storey mills have generally a relatively low imposed loading capacity. This is due in part to the low unit loading of mill machinery, which, whilst heavy, is spread over large areas. If a building is described as a warehouse the loading capacity is likely to be greater (but note that buildings latterly used as warehouses may have originally been mills). A reasonable assumption for original loading for mills would be in the order of 2.5Kn/m² which would allow new uses such as residential, light office, managed workspaces etc. Care would be required for type and position of partitions between units, generally more significant where there are separate ownerships within the building (e.g. apartments). For other uses with higher load requirement such as storage, heavy industrial, libraries, spaces with heavy partitions etc., then strengthening of structure is likely to be required. In general terms, as most mills are still standing after 150 years then they can be assumed as having have a reasonable loading capacity (in the order of 2.5Kn/m²) which would allow many new uses such as residential, hotel, light industrial, managed workspaces etc. In respect of single storey weaving sheds the capacity would be much higher as the limiting factor would only be the nature of the ground.</p> <p>Poor floor to ceiling heights can restrict development for some uses. Residential development is generally achievable but adequate headroom must be provided and this can be reduced by the floor depth requirements for sound and fire insulation and services. For other uses low floor to ceiling heights can be inadequate for commercial equipment and furniture, especially where exposed services are acceptable.</p>
<p>Plan form</p>	<p>Plan form affects design efficiency and construction cost due to requirements for light and ventilation. To achieve natural cross ventilation, the British Council for Offices guide states a 12-15m wide floor plate is the norm. The general rule regarding a naturally vented floor plate is 5 times height of space for full cross ventilation (i.e. a 15m wide plate requires 3m floor to soffit). For single sided vent 2 or 2.5x ht. of space - generally 2x ht. is a good approach (i.e. a 6m deep office space will require a 3m floor to soffit). The preferred floor to ceiling height is between 2.6 - 2.75m. The BCO also acknowledges that where floor plates increase to 18m and above then 3.0m is preferred. On deep plan space the BCO guide states that a floor plate of up to 21m is the maximum – this also assumes that mechanical ventilation is incorporated. It is likely that a building with a floor plate of more than 15m would require mechanical ventilation.</p> <p>Light requirements in a deep plan building can often be met by incorporating non light sensitive spaces such as bathrooms, kitchens, toilets, light storage etc. in the more central area. Alternatively an atrium design can be used but can further impact on design efficiency.</p>
<p>With/without yard</p>	<p>Lack of external space for parking may serve as a constraint on development. However, the lower ground or basement spaces could be appropriate for car parking spaces, especially associated with residential uses. The parking geometry may not be ideal as the circulation/parking bays would be created to avoid clashes with columns and walls. However as these would be private spaces for residents or regular office users</p>

	<p>then the slightly non-standard layouts would become part of a known routine. A non-standard layout would only be an issue if the car parking was open to the public which may then require compliance with normal standards. Physical protection of structure would be required to prevent impact damage. This can be achieved by high kerbs around column bases. If the number of spaces provided would be low, requirements for petrol interceptors or sprinklers may not apply.</p>
Single building / part of a group	<p>In conservation terms it may be important to protect the integrity and heritage value of the group of buildings. In addition, if a building is part of a group and the nearby buildings will not form part of a scheme, the relationship between new and existing uses must be considered, particularly with regard to noise, pollution, privacy and access. Adjacent buildings not in use, and that will not be part of a scheme, may act as a blight on a development scheme, particularly if derelict or poorly maintained.</p>

Chapter 7 Building defects and repair costs

7.1 This chapter is intended to provide an overview of typical mill building defects and a guide to achieving an indicative assessment of mill repair costs. In order to derive an accurate picture of the costs associated with building repair, it will always be necessary to undertake a detailed building condition survey and it will be prudent to use a quantity surveyor to develop a corresponding costs schedule. However, in the very early stages of a project, a very high level, initial estimate of project viability is often required prior to any significant expenditure on surveys and professional fees. A developer will typically undertake a broad brush development appraisal using 'per square metre' costs which will vary depending on the general condition of the building.

Overview of mill building defects

7.2 The first study workshop identified a set of common defects associated with mill buildings. The sample of mills identified for the study has primarily been of a single basic type: load bearing masonry external walls with timber beam and roof trusses carried on cast iron columns, the weaving sheds have timber or steel roofs supported on cast iron columns and most mills date from the early/mid 1800s. The following assessment is focused mainly on these types, and has been used to inform the generic repair costs described later in the chapter.

7.3 **Foundation/ground slabs** - Typically, the ground floor/basement of mills, unless well maintained will have some damp penetration issues. This is often due to poorly maintained external surface water disposal systems resulting in significant quantities of water entering lower/basement areas. The remedial action in the first instance would be to rectify the drainage systems and remove the source of uncontrolled water ingress.

7.4 Another issue for basement/lower ground spaces is ventilation provision. If this is not adequate then damp areas would be slow to evaporate and growth of possible timber rot would progress more easily than in well ventilated spaces. Remedial work may be as simple as the provision of a small electric powered extract fan.

7.5 Further work to improve the condition of basement spaces would include construction of new slabs incorporating damp proof membranes and insulation; this work would be part of a specific fit out.

7.6 **Main floor beams** - The most common defect in mills having timber beams is that the "built in" ends may have suffered water damage and rot. The remedial work would be to replace the damaged sections. There are several methods of carrying out this work dependent on each specific end condition, however a generic sum as discussed for such repairs would cover most situations. In replacing the defective beam ends consideration of damp prevention and adequate tying to the external walls would be included.

7.7 An assessment of the strength of the beams would be required to determine the allowable load carrying capacity. However, given that most of the mills are over 150 years old and would have been subject to various loadings over this time, it is reasonable to assume that for low loading requirements such as light office or residential uses, the existing structure will be adequate. For the initial remedial work it would be assumed that no allowances be made for strengthening works. If strengthening is required there are many methods of achieving this and the details would be developed to suit each specific requirement.

- 7.8 **Secondary floor beams** - There is often minor damage to secondary beams, i.e. those spanning between main beams. The causes of this would range from water ingress to inappropriate cutting for services fixings etc. or fixing heavy equipment. The remedial work to deal with this defect would be to either replace or to add an additional beam/joist to the side of the defective beam/joist of equal size.
- 7.9 **Floor finishes** - Most of the floors in the study are timber boarding and where water has been allowed to enter the building deterioration will be expected. The solution is a simple like-for-like replacement. It would also be prudent to include mechanical tying of the floor to the external walls to provide additional plate action associated with overall building stability. This could also be further improved if a completely new floor finish is required to suit the proposed new uses and the new finish is similarly tied to the outer wall. Simple BAT straps would be appropriate for this.
- 7.10 **External walls** - There are a number of potential defects to external load bearing masonry walls as explained in paragraph 4.6. These include defective pointing, isolated cracking and movement etc. and some damage exacerbated by uncontrolled water ingress from defective rainwater disposal systems.
- 7.11 The remedial works would be to repoint those areas where pointing is inadequate. Where tying is required to rectify cracking this can be done by inserting stainless steel ties. There are many types of tie which can be inserted in the bed joints whilst the remedial pointing is carried out. The choice of pointing is important to prevent damage. Hard mortars prevent moisture evaporation and severely limit overall temperature movements within the wall. Lime mortars are generally most appropriate for mills with long elevation lengths as they ensure breathability and flexibility.
- 7.12 It may also be prudent to include allowances for tying the corners of the buildings. This may not be required at all levels but at roof and one or two internal floor levels.
- 7.13 **Roofs** - Generally, where a mill is occupied it is reasonable to assume that works have been done to maintain the integrity of the roof. Where buildings have become unused, weather and wind damage may have occurred and been exacerbated by vandalism which normally starts with stealing of lead from the roof followed by removal of roof slates.
- 7.14 Remedial works would be to strip off the existing remaining slates / stone slates and the secondary structure and replace with new insulated panels before re-fixing the original slates, supplemented where necessary with new slates. Where water ingress has occurred, there is likely to be rot present in the roof timbers, especially the rafter feet and wall plates and repairs / replacement elements may be required.
- 7.15 As part of the remedial works an assessment of the roof capacity would be required, as the new roof is likely to be heavier than the original roof finishes. This work would be site and building specific. An allowance for any strengthening is not included in the indicative costs later in the chapter as in many situations it may be determined that the roof has adequate capacity.
- 7.16 Where roof trusses are built into the perimeter walls an allowance should be made for repairing damaged ends. This work would be similar to the works to the main beam ends as noted above. A slightly higher cost allowance for the truss than that for the beams would be appropriate, as the truss ends are likely to be more complex than a simple beam.

- 7.17 Roof repairs would also include replacement of the internal and external guttering systems. Also, if there are low parapets, these should be rebuilt where necessary and include insertion of a damp proof membrane and vertical tying, to allow for horizontal thermal movements.
- 7.18 **Windows** - It is reasonable to assume that where a mill is in poor condition replacing windows will address the many issues such as aesthetic qualities, thermal and acoustic requirements as well as water and wind resistance. This would be undertaken as part of the conversion, rather than the repair, phase of the project as properties required depend on end use.
- 7.19 If there are situations where the windows are in good condition it may be only necessary to consider repainting and weather sealing. In a basic 'holding repair' scheme, temporary reglazing or boarding up with ventilation provision may be appropriate. For these reasons, window costs are excluded in the tables below.
- 7.20 **Building stability** - Overall and local stability for typical mills is provided by a range of internal elements. As the buildings are over 150 years old and still standing, it could be assumed that overall stability is adequate. However there will be situations where water ingress and vandalism, fires etc. have resulted in certain parts of the building becoming unstable. Careful safe access would be required together with properly designed internal propping. Once this is in place then remedial tying, stitching, pinning etc. can be carried out to provide the appropriate stability requirements.

Identified typical defects, solutions and repair costs

- 7.21 The following tables set out typical defects, solutions and associated repair costs. It is based on discussion in the second study workshop which led to the assessment narrative above. It involved all study team members, including senior consultants with considerable experience of historic building repair and conversion projects. It can therefore be used to help inform an assessment of repair costs in conjunction with a condition survey.
- 7.22 The following costs are derived from the BCIS cost analysis framework. It should be noted that the solutions listed below are permanent repairs that in some cases involve betterment as part of an intended re-use. Temporary mitigation of many common defects can be achieved by replacing slipped or missing areas of roof covering, providing temporary rainwater disposal, propping failed structural members, ensuring good natural ventilation and securing openings against thieves, vandals and pigeons.

DEMOLITIONS	
Solution	Indicative cost
Demolitions	£50-£75 psm of built area
Soft strip (includes partition removal, ceiling finishes, services)	£20-£25 psm of interior (excludes dealing with asbestos, guano or contamination)

SUB STRUCTURE / GROUND FLOOR SLAB		
Common defect	Solution	Indicative cost
Cracked / incomplete / substandard floor slab	Replace ground floor slab (including insulation and waterproofing but excluding any ground contamination removal)	£40 - £60 psm
Damp at wall base (typically caused by water ingress from damaged /missing rainwater goods)	Injecting DPC Tanking (replacement of rainwater goods covered in roof repairs below) Works should also include connecting rainwater goods into a drainage system, re-grading or making permeable a zone around the building to ensure surface water flows away from the building and preventing water puddling.	£20 - £30 per linear metre of walling £80 - £90 psm of walling (excluding finishes)

FRAME (columns and beams)		
Common defect	Solution	Indicative cost
Rotten timber beam ends – usually due to water ingress leading to fungal/insect infestation.	Replace beam ends	£1,000 - £1,500 per beam end
Rusted iron beams and columns	Blast clean and prime	£15 - £20/m of column or beam (excluding intumescent protection or finishes)

FLOORS (upper)		
Common defect	Solution	Indicative cost
Missing / weak floor timbers and rotten boards	Replace joists Replace floorboards	£15 - £20 per linear metre £30 - £40 psm

ROOF		
Common defect	Solution	Indicative cost
Slate / stone slate Deteriorated roof covering due to fixing failure or theft of slates and flashings leading to water ingress and consequent rot in roof timbers	Remove roof covering and battens and replace incorporating insulation and vapour barrier	Blue slate: £100 - £125 psm (plan area), assuming 60% slate re-use. Includes felt, ridge tiles etc Stone slate: £200 - £250 psm (plan area), assuming 60% slate re-use. Includes felt, ridge tiles etc Profiled metal sheet:

		(temporary solution for unoccupied buildings): Allow £5 to £10 psm for removal of existing covering plus £40 - £50 psm for replacement powder-coated profiled metal sheeting (uninsulated)
Rot in roof timbers due to water ingress		£150-250 psm (plan area) to include wall plate repairs, truss end repairs, 20% purlin replacement, 25% rafter replacement eave and valley gutters, rainwater downpipes, leadwork, some roof glazing
North light Failed valley gutters, leading to rotten structure; defective roof finishes and broken glazing	Complete repair/replacement as above to include double-glazed north lights.	£300 - £400 psm plan area

EXTERNAL WALLS		
Common defect	Solution	Indicative cost
Loose masonry at wallheads due to weathering/lack of maintenance and rainwater ingress	Localised rebuilding plus grouting of rubble masonry cores (typically 10% of wall to be grouted)	£50 psm grouting £100 p/m rebuilding say 500mm high wall heads locally
Open-jointed masonry and weathered pointing allowing rainwater ingress (especially behind failed rainwater goods); hard cement mortar repointing causing internal dampness and accelerated masonry decay	Localised cutting out and re-pointing in lime mortar	£30 - £40 psm
Cracked or severely weathered areas of masonry	Replace individual stones	£25 - £50 per stone (excluding ashlar stones)
Severely deteriorated / bulging external wall	Localised re-building or use of parrass plates and internal ties or stiffening members	£200 -£300 psm for localised rebuilding
Upper floors not tied into walls, leading to bulging masonry	Floor stiffening where required following by tying in of floors to walls, typically by stainless steel straps Corner ties to external walls	£20 - £30 each strap £200 - £300 each tie

Wall cracking	Stitch using stainless steel joint reinforcement followed by repointing	£50 per linear metre
Cracked external stone lintels / sills	Pin or replace	£300 - £400 per lintel for replacement
Rotten internal timber lintels	Replace with timber or concrete	£150 - £200 per lintel (may need 2 or more per opening depending on wall thickness)

PRELIMINARIES (includes scaffolding)

Indicative cost

10-25% of contract cost (range depends on scaffolding requirement – height, self-supporting, façade retaining etc)

EXCLUSIONS

Costs provided are indicative construction costs, excluding VAT, design team fees, statutory fees and surveys (measured surveys, timber infestation, asbestos, drains CCTV etc)

Abnormal costs, e.g. contamination removal/remediation, dry rot treatment, underpinning are also excluded as they would be site-specific.

Indicative chimney repair costs are not provided as the evidence collected for the study shows that they vary significantly depending on specific circumstances such as the size of the chimney, nature of repairs and the type/location of the chimney (e.g. free standing or based within a building). The scaffolding solution required has a particular impact on costs. Each case would need proper assessment by an experienced steeplejack. Examples identified through this study include:

- Lob Lane Mill, Briercliffe where repair of the 38 m tall chimney was estimated at £62,000 + VAT with subsequent inspection cost of £750 + VAT per year (based on unhindered access to the base of the chimney)
- Slater Terrace, Weavers' Triangle, 40 metre chimney cost £24,640 to repair.
- Victoria Mill, Weavers' Triangle, chimney 'stump' cost £19,200.
- Oak Mount, Weavers' Triangle cost £8280 for less extensive repairs.

Window repair / replacement costs are also excluded as the cost may vary from as little at £50 each for simple boarding to £2,000 for like for like replacement, and specifications depend on proposed end use.

A contingency allowance of at least 10% of the overall contract sum should also be provided.

Typical repair costs per square metre

- 7.23 As the elemental cost analysis above is complex and requires professional input, the team's quantity surveyor has developed a set of per square metre costs which have been used to inform the development appraisals carried out for the case study mills, and are also embedded within the cost assessment tool that accompanies this report. These relate to building condition categories based on those used in the English Heritage's Buildings at

Risk assessments and by the Architectural Heritage Fund (Appendix 1). When making even an initial assessment of building condition, it will be desirable for a rapid internal, as well as external, assessment to be undertaken by a person/s with a reasonable knowledge of building construction and preferably with an understanding of historic buildings.

Condition	Typical repair costs per sq m
Very bad - means a building where there has been structural failure or where there are clear signs of structural instability; (where applicable) there has been loss of significant areas of the roof covering, leading to major deterioration of the interior; or where there has been a major fire or other disaster affecting most of the building. Bulging walls; joists rotten; severe wet and dry rot; uninhabitable / incapable of occupation.	Mill £400 - £650 Weaving shed £650 - £800
Poor - means a building or structure with deteriorating masonry and/or a leaking roof and/or defective rainwater goods, usually accompanied by rot outbreaks within and general deterioration of most elements of the building fabric, including external joinery; or where there has been a fire or other disaster which has affected part of the building.	Mill £275 - £400 Weaving shed £500-600
Fair - means a building which is structurally sound, but in need of minor repair or showing signs of a lack of general maintenance – external joinery decayed, pointing partly eroded.	Mill £150 - £275 Weaving shed £350 - £500
Good - means structurally sound, weathertight and with no significant repairs needed.	No repair costs

- 7.24 Typical costs have also been developed for external repairs (£100 - £150 per sq m) and for conversion (£125-£200 per sq m). Fit out costs will vary depending on the end use and indicative costs are presented in the table below.

Use	Typical costs per sq m
Office	£550 - £650
Residential	£550 - £750
Retail - leisure	£50 - £100
Car Parking within buildings	£200 - £250
Light industrial	£225 - £275
Managed workspace	£600 - £700
Craft	£400 - £500

- 7.24 Appendix 4 provides the quantity surveyors report including a full explanation and details exclusions.
- 7.25 As part of this study a costs calculator tool has been developed to aid cost calculations using the approach and per square metre costs set out here. This is available in Excel spreadsheet format on request from the English Heritage (North West) Office. Please see Appendix 5 for a brief overview.

Chapter 8 Case study overview

- 8.1 Having investigated at a strategic level the circumstances affecting the re-use of former textile mills, the team visited six mill buildings within the study area, three in Burnley and three in Rossendale. These mills had been selected by the client team, and constituted a range of sizes and conditions as follows.
- 8.2 Example A was a large multi-storey deep plan mill with no adjoining yard, vacant and in poor condition. Example B was a small multi-storey shallow plan mill with attached single storey weaving shed and small adjoining yard, in use but in poor condition. Example C was a large multi-storey deep plan mill with attached single-storey weaving shed with a small adjoining yard, occupied and in good condition. Example D was a small two-storey shallow plan mill with adjoining yard, occupied and in fair condition. Example E was a medium sized multi-storey deep plan mill with no adjoining yard, vacant and in very bad condition. Example F was a medium sized multi-storey shallow plan mill, part of a larger group of buildings with adjoining yards, partially occupied and in fair condition. All buildings were within walking distance of town centres.
- 8.3 The team set out to assess the condition of each building, potential new uses and the amount of accommodation which could be provided, indicative costs of repair and conversion, anticipated commercial values of the converted buildings and the probability and scale of any resulting deficits. The exercise could not be completed for examples A and F due to access restrictions, lack of essential information and problems of ownership. Of the remaining buildings example D indicated a negligible deficit – this was a small, characterful building which could be converted to attractive accommodation in a relatively straightforward manner. Examples B, C and E suggested that large deficits would result from repair and conversion, due in part to building condition but more significantly to low property values.
- 8.4 The fact that examples B and C were in low grade use combined with the unlikelihood of substantial deficit funding being made available in the current economic climate emphasises the need to support existing uses through maintenance advice and, where possible, financial assistance with cost-effective envelope repair. In addition to their cultural and historic value, many of these buildings support employment and income generation, playing a vital role in areas with fragile economies. Their survival in the medium term is therefore vital to current employment needs as well as securing their cultural value into the future.

Chapter 9 Funding the gap

- 9.1 The funding context has changed very significantly over the last few years as the recession has impacted on public sector budgets. Policy changes have also shifted the emphasis of public sector funding with job creation and enterprise being regeneration priorities. It is increasingly difficult to secure funding for the conservation repair element of heritage development projects, particularly when buildings are 'only' listed grade 2 or are not listed at all as is the case with most mills within Lancashire. It is easier to find funding to support end uses but this is also very competitive.
- 9.2 Development occurs when the end value of the building or accommodation created exceeds development costs by a margin sufficient to represent a worthwhile profit. Complex regeneration projects in areas where the market is untested demand a greater profit margin than, for example, straightforward new build residential development in popular areas, on account of the developer's risk. Long-term owners of historic buildings, who have perhaps used the buildings for their own business purposes for many years, often do not factor in the value of the site when considering development. Developers who acquire a property in order to undertake a regeneration project do of course have to include the cost of acquisition in their development appraisals. Similarly, owner-developers tend to require less of a developer's profit than the 'professional' developers, and often undertake development in a piecemeal and phased fashion over many years, which can reduce the overall investment required. This approach is currently being taken at Shaw Lodge Mill, Halifax (see Chapter 5).
- 9.3 In addition to having the financial confidence that a development will be profitable, a developer needs to have access to funding and finance. For the purpose of this report, we are defining 'funding' as being the money needed to cover the costs of creating the development, whereas 'finance' is the borrowing or 'cash flow' money required to pay for creating the development as work progresses. The finance (e.g. bank loan or overdraft) is repaid from income received when the development is sold. Banks will only ever lend a proportion of the potential end value - perhaps 60 or 70% - and the developer must therefore have his own funds (reserves from previous projects, or a loan from a partner investor) to contribute the remaining 30 or 40% of end value until such time as the development is sold. (Where the developer retains the asset, for example in order to rent out office space, the working capital loan for the construction phase is generally converted to a mortgage once the development is completed. The mortgage premiums / monthly repayments are met from rental income.)
- 9.4 As we have discussed, many of the historic mill projects in Lancashire demonstrate a deficit – the costs of undertaking the development exceeds the potential end value. A developer will seek to secure grant funding to meet this gap. Lob Lane Mill, for example, was gap funded (see Chapter 5) In the current economic climate, where the coalition government has instigated major reductions in public budgets, the availability of public 'gap funding' is extremely limited, although, as will be explained below, grant sources such as Lottery funds actually have increased funds at present.
- 9.5 Funding bodies that may be able to provide gap funding for historic mill projects can be grouped into two categories:
- Heritage funders
 - Regeneration or economic development funders

Heritage Funding Sources

- 9.6 **English Heritage (EH)** is the government's advisory agency on the historic environment. As a public body, it has recently suffered a significant reduction in its budgets but still offers some grant support to owners of historic buildings through its Historic Buildings, Monuments and Designed Landscapes grant programme. Although EH requires a level of public access in most cases, the organisation can fund private owners and projects involving private sector, for-profit, development. EH focuses on the most significant historic buildings and generally awards grants only to those designated grade 1 or 2* (which constitute approximately 6% of all listed buildings), with priority given to those on the EH Heritage at Risk register. Urgent works or emergency repairs are also prioritised, in an initiative to reduce the numbers of buildings registered as being 'at risk'. In October 2011 EH will launch its year of 'Industrial Heritage at Risk' which will draw attention to the importance and funding needs of this sector. It is conceivable that industrial buildings that are designated only grade 2 might be considered for EH grant support during this year. Grant awards are small however, with £250k over a number of years being an exceptional award; £20k to £50k per project is more likely (with perhaps half a dozen projects per year being funded in any one EH region.) Requests for grants towards urgent / emergency works or the costs of condition surveys and feasibility studies are most likely to be supported.
- 9.7 The Heritage Lottery Fund (HLF) is the most significant grant source in the sector, with a budget of over £200m a year. As one of the National Lottery's 'good causes' the HLF has benefitted from recession-driven increased spending on Lottery tickets. The organisation is also anticipating a further increased annual budget after the Olympic Games, when Lottery shares will no longer be side-lined to fund the Games. The HLF operates a range of grant programmes, with historic buildings being eligible for grants up to £1m (assessed regionally) or up to £5m, (grants assessed by national Trustees) under the Major Grants Programme, at leverage rates of up to 90% of total project costs.
- 9.8 The HLF generally does not award grants to private individuals or for-profit organisations with the main exception being the **Townscape Heritage Initiative (THI)**. This programme supports regeneration within Conservation Areas and funds repairs and other works to historic buildings, structures or spaces within THI areas. Importantly, grants are available for private owners – for example to carry out shop front repairs and potential exists to channel funding into commercial and residential schemes. In addition to public funding to match the HLF grant and make up the THI 'pot', individual projects must provide match funding (currently 10%). The Heritage Lottery Fund is currently undertaking a review of its programmes and, while it is likely to continue the THI it may be restructured. There have been other very exceptional circumstances where the HLF has funded private owners including Oxford Jail, which was converted to a Malmaison Hotel in a partnership project involving Oxford Building Preservation Trust and the Trevor Osborne Group.
- 9.9 Although the conservation of historic buildings is a key priority for the HLF, projects must also provide opportunities for people to learn about, enjoy and make decisions about their heritage. In practical terms this means that historic building projects must provide long term physical and intellectual access to the asset, and that the project must encompass an education / training and community engagement programme. This does limit the type of project which would realistically qualify for HLF. A commercial office scheme would be unlikely to meet the necessary criteria and residential development is not generally eligible for HLF.

- 9.10 **Charitable trusts and foundations** also award grants primarily on account of the activities that a project will support, rather than to repair or convert historic buildings per se. Examples include the upgrading of a former village school to create a community centre, or a hospital to provide an equestrian centre for children with learning difficulties or disabilities. The Pilgrim Trust and the Sainsbury Family Charitable Trusts are amongst those that do prioritise works to buildings of heritage significance (generally grade 2* and grade 1), but, as with Lottery funds, private individuals and for-profit enterprises are not eligible for support. Grants are small, with most charitable trusts awarding grants of less than £20k.

Regeneration or economic development funders

- 9.11 The Homes and Communities Agency (HCA) is the national housing and regeneration agency for England, and has a capital investment budget of nearly £7bn per annum. The HCA aims to contribute to economic growth by helping communities to realise their aspirations for prosperity and to deliver high-quality housing that people can afford.
- 9.12 The HCA provides investment for new affordable housing and to improve existing social housing, as well as for regenerating land. It also offers advice and expertise to provide support partners, with a number of 'toolkits' being available on its website.
- 9.13 Up until end March 2011, the HCA operated the National Affordable Homes Programme, providing gap funding grants to enable developers (particularly Registered Social Landlords) to provide new homes to be rented out at a 'social rent' of 60% of local market levels.
- 9.14 From April 2011 this programme has been replaced by the **Affordable Homes Programme 2011-15** (AHP), which aims to increase the supply of new affordable homes in England. The HCA plans to invest £4.4bn through this programme (and outstanding commitments from the previous National Affordable Homes Programme) over the four year period. The AHP supports projects that offer homes at Affordable Rent levels, being 80% of local market rent, by providing gap funding to make affordable homes projects viable. The intention is to allow revenue to be generated to fund the cost of building new homes.
- 9.15 Unfortunately the bidding round for AHP funding has now closed and the HCA hopes to conclude negotiations with applicants in the very near future. Announcements regarding projects that will receive HCA support over the next four years will be made shortly. The Agency does not expect that there will be any further bidding rounds for this programme.
- 9.16 The HCA also operates a **Property and Regeneration Budget** programme aimed at providing gap funding for major regeneration schemes, such as multi £million town centre mixed use redevelopment schemes. The HCA support is intended to help fill the gap resulting from 'abnormals' in redevelopment schemes, such as extensive public realm or infrastructure works. HCA support could, for example, be explored in relation to the Weavers' Triangle in Burnley.
- 9.17 The **Regional Growth Fund (RGF)** is a £1.4bn fund operating across England from 2011 to 2014. It supports projects and programmes that lever private sector investment, creating economic growth and sustainable employment. It aims particularly to help those areas and communities currently dependent on the public sector to make the transition to sustainable private sector-led growth and prosperity. The RGF is the major funding source for economic development projects and programmes following the demise of the Regional Development Agencies (whose closure will be completed by April 2012).

- 9.18 Bids submitted to the Department for Business Innovation and Skills for RGF have been sought in two rounds, with a possible third round dependent upon monies being unallocated due to projects failing due diligence tests. Bids submitted by the round two dead line on 01 July 2011 are being considered currently, with announcements on grant decisions expected in the autumn. Both rounds 1 and 2 of the RGF have been significantly over-subscribed, with the total of all bids received in the second round exceeding £3.3bn, suggesting fierce competition.
- 9.19 Applications submitted in round 2 include a bid from Regenerate Pennine Lancashire in partnership with the East Lancashire Chamber of Commerce, Lancashire County Developments Ltd, the University of Central Lancashire and Lancaster University; aimed at accelerating business growth across Lancashire. The £7.5m Programme bid will provide a pot of funding for local distribution in the form of small business grants, to support employment creation and the retention of jobs. If this bid is successful, an historic building project (e.g. the Weavers' Triangle) may be eligible to apply to the pot for capital for works that sustain or increase employment.

Enabling development

- 9.20 Development that would not normally be permitted under planning policy (for example, the Green Belt or within the curtilage of a listed building) can sometimes be allowed if it provides a financial cross-subsidy to support the regeneration of a heritage asset. Such development, which generally involves residential properties as the most likely to provide surplus profit, tends to be controversial in the community and must be subject to strict financial scrutiny and planning conditions (such as completion of emergency repair works to the historic asset prior to any occupation of the new dwellings). English Heritage provides extensive guidance in its publication 'Enabling Development and the Conservation of Significant Places' (Sept 2008).
- 9.21 It is important that planning and conservation officers take time to understand thoroughly the final development appraisals put forward by developers, and adopt a positive attitude to enabling development.
- 9.22 One issue with enabling development within historic settings is that the cost of providing new development of sufficient quality for the location means that profit margins are low, and the quantum of development therefore has to be considerable to provide any meaningful subsidy. This is particularly the case in historic mill settings in East Lancashire where the indigenous materials are natural stone with stone flag or Welsh slate roofs and house prices are relatively low.
- 9.23 It may be possible for local authorities to identify less sensitive sites for enabling development elsewhere in the Borough, including land owned by the Authority which can be made available to the developer at below market price. Employment land may be suitable, as in the current climate, business park development may be easier for the developer to fund than residential development.

Loan finance

- 9.24 Securing loan finance does not usually bridge a viability deficit as the loan will need to be repaid. It is however, often necessary to secure loan finance ensure adequate cash flow to undertake the development. If a loan is available at a low rate, for example, a non commercial loan, it can help to reduce the size of a gap. The **Architectural Heritage Fund**

(AHF) offer loans at low rates to organisations with charitable status. To be eligible, the building(s) must be listed, scheduled as an ancient monument or in a Conservation Area (if in a Conservation Area, it must be of acknowledged historic or architectural importance). The project must involve a change of ownership and/or a change of use. It should also be noted that in the current borrowing climate there is little difference between commercial rates and those offered by the AHF. Since 2003, local authorities have been able to secure loan finance through **Prudential Borrowing** which allows a much greater degree of flexibility than was previously available.

Local Asset Backed Vehicles

- 9.25 A Local Asset Backed Vehicle (LABV) is a specific type of joint venture between a public and a private sector partner. It brings together local authority land and private sector funds and expertise into a commercial relationship in a joint venture/ corporate entity which shares both risk and returns. The entity will use the value of assets owned by the local authority to raise finance to undertake investment, often for regeneration purposes. It is an approach that could be used to resource the repair of historic buildings if land assets can be brought into the arrangement. Usually the arrangement is a 50:50 deadlock mechanism with the value of public sector land being matched by the private sector partner.
- 9.26 There are three main types of LABV:
- **Investment only** – typically for a single site and involves a cash match. The vehicle itself does not undertake development.
 - **Value capture** – where the vehicle acts as the master developer (with separately tendered building contracts) and the local authority shares in the planning uplift. This typically involves a number of sites to deliver regenerative impacts.
 - **Fully integrated** – where the vehicle also acts as the developer but the arrangement is configured so that the local authority shares in all of the risks (planning, development, construction and sales) with greater potential for return.

Community Infrastructure Levy

- 9.27 A further potential option open to local authorities is to access funding secured through a Community Infrastructure Levy (CIL). The CIL was introduced by the planning Act (2008) and came into force in April 2010. It is a way of applying a systematic planning gain tariff to new development, as opposed to individually negotiated Section 106 agreements. The approach is one that local authorities can – but do not have to – employ. The CIL introduces a tariff that varies depending on the nature and scale of the agreement and can be used to fund infrastructure that is needed as a result of development. For example, education, leisure and health facilities. If a historic building were being redeveloped to accommodate such a use, it may be possible to use CIL resources to help meet development costs.

Other ways in which the public sector can provide support and encourage mill redevelopment

- 9.28 Although the economic position appears bleak, there are several ways in which English Heritage and local authorities can support mill regeneration, or at least try and limit on-going decline and facilitate future projects.
- 9.29 There is a need to **raise awareness** of the historic significance of listed and undesignated mill buildings, and of their potential, using this report as well as related studies such as the 'Northern Lights Pennine Lancashire Northlight Weaving Shed' study and the on-going work of Oxford Archaeology North.

- 9.30 The public sector must support owners and tenants in order to **keep buildings in use**. As soon as historic buildings become vacant, they become vulnerable to vandalism and rainwater ingress, and without users to patch holes in the roof or put buckets under them, they rapidly decline. This may mean, for example, accepting ad hoc repairs in non-traditional materials - any rainwater goods are better than none. **Meanwhile uses** should be encouraged, albeit that care must be taken to ensure that temporary uses do not secure legitimacy or tenant rights by default.
- 9.31 Conservation officers can facilitate coordination with different local authority departments and **communicate the issues to officers with non-heritage remits**. For example, environmental health officers may be called to inspect noisy premises or businesses suspected of working in substandard conditions - they should be discouraged from closing down businesses, for the sake of the buildings as well as the jobs. Rating officers inspecting underused properties can inadvertently encourage owners to move remaining tenants out, as listed empty commercial properties are exempt from business rates.
- 9.32 Provide advice to owners on the **responsible mothballing** of vacant buildings, to protect their assets. Guidance on this subject is to be issued by English Heritage in the autumn.
- 9.33 Sometimes a 'stick approach' is necessary and local authorities are to be encouraged to use **statutory powers** to cajole an owner into undertaking emergency repairs of redundant listed mills. In certain circumstances, English Heritage can underwrite an authority's unrecoverable costs in serving urgent works and repairs notices, where there is a reasonable prospect of a long term solution. Although such action very rarely results in the authority implementing compulsory purchase, a change of ownership is sometimes required. The heritage sector has a mantra: 'there's no such thing as a difficult building, only a difficult owner'.
- 9.34 The 'carrot approach' is also needed and in the absence of financial assistance, the public sector may be able to offer **free development advice and expertise**. This requires officers with a good knowledge of conservation and regeneration issues, an understanding of private sector development and the local market.
- 9.35 Development advice may take the form of the preparation of inspirational development scenarios, based on the case studies and exemplars in this report, and the issue of **development briefs** for specific buildings or sites, to supplement formal planning guidance.
- 9.36 A lack of land for car-parking is a major issue for the redevelopment of redundant mills. The local authority may be able to **facilitate land acquisition** close to the mill site, or purchase adjacent buildings with the intention that they are demolished for car-parking. A 'land swap' with local authority land elsewhere may be necessary to encourage neighbours to relocate. Alternatively local authority land assets may be provided at reduced or nil cost, reducing the costs of a scheme, on the basis that the investment will help to achieve wider regeneration benefits. Where this takes place a formal public-private partnership vehicle (Joint Venture) can be set up to spread project risk (and profits).
- 9.37 Where buildings are to be refurbished for re-use by an existing owner or tenant, the local authority may be able to offer reduced-rent space in council-owned property in the short term, and **provide support for decant and relocation**.

- 9.38 The public sector is to be encouraged to support and help build the capacity of building preservation trusts, community development trusts and other not-for-profit organisations that may be able to take ownership of and access funds for redundant mill buildings. Social enterprises are the most likely organisational type to be able to secure both heritage and regeneration funding in the present economic climate, in the form of capital for projects that take place within historic structures. English Heritage continues to operate a Regional Capacity Building programme that may be used for this purpose; local authorities may be able to provide support in cash or in kind (in the form of free professional advice and expertise).

PART 3 STUDY CONCLUSIONS

Chapter 10 Conclusions

The importance of the local context to viability

- 10.1 The study has emphasised the link between the economic context and local property markets and the current condition of many mill buildings and, also, the potential to involve them in economically viable development schemes.
- 10.2 Pennine Lancashire has, in recent decades, underperformed in economic terms in comparison to other parts of the North West. The GVA gap with the national average was measured at £2 billion in 2008. The related underperformance of the residential property market is reflected in the area's designation as one of the Housing Market Renewal Pathfinders in 2003. The wider economic recession and downturn in the property market has made it extremely difficult to effect positive change. Continuing housing market weakness is highlighted in Chapter 4 and the market information provided within Appendix 2. There is a plentiful supply of low cost commercial office and industrial accommodation and retail property values remain cheap too.
- 10.3 The case studies demonstrate the impact of the local economic context on the conversion potential of historic buildings. The term conservation deficit is often used to describe the gap between costs and value when applied to a project involving a historic building. However, while the repair costs were inevitably quite high for each of the case studies these costs comprise only a portion of the overall gap. The deficit is driven to a much greater extent by low end-values.
- 10.4 In Chapter 9 the study has identified some potential funding sources and delivery solutions and provides a discussion of ways in which a viability gap may be funded. Creative solutions will certainly help but in reality availability of public sector and private finance for development is very limited and likely to be so in the short term at least.

The importance of progressing mill conversion projects in Lancashire

- 10.5 That industrial building conversion projects in Lancashire will be difficult to deliver does not mean that efforts can not – or should not- be made to develop and progress them. Industrial heritage is highlighted as the current theme for English Heritage and, within Lancashire, former textile mills are perhaps the most important element of the area's economic and social heritage. Importantly, they can have very significant regenerative benefits, creating quality of place to attract people and businesses to invest in an area. The contribution that the historic environment can play in economic development is reflected in the Lancashire Integrated Economic strategy which identifies Lancashire's built heritage as one of the area's key strengths. It is important that a long term view is taken when making decisions about the future of mill buildings and that wider social and economic benefits are not sacrificed to short term convenience and expediency.
- 10.6 It is suggested here that there will be a need to prioritise those mills which are most worthy of being saved and have the greatest potential (or fewest impediments) for delivery and those that have the greatest regenerative impact. It is not possible at this stage to provide an estimate of the conservation deficit associated with former textile mills across Lancashire. However, if it were assumed that fifty percent of the 619 extant textile mills in

Lancashire had an average repair cost of £1.4 million⁸ that would suggest a total repair bill of c £425 million, a figure that it would be difficult to secure even in more affluent times. It is our view that, to prioritise efforts effectively, would require a comprehensive assessment framework.

Approaches to mill prioritisation

- 10.7 The English Heritage Buildings at Risk assessment methodology includes a prioritisation exercise based on condition, occupancy, potential for beneficial reuse and vulnerability. In addition a mills assessment methodology is being developed by Ruth Garratt (Historic Environment Manager with English Heritage), into which this study slots. This seeks to evaluate and redesign the BAR assessment process to ensure a greater level of robustness and also to provide an approach for taking into account stakeholder and community views of specific mill buildings. We suggest that a wider assessment framework is developed around this. The mills assessment matrix developed for the Bolton Mills Action Framework (Bolton Council) provides a useful starting/reference point and incorporates a set of assessment criteria as follows:

Heritage Issues	Regeneration Issues	Local Economy Issues
Social and heritage Significance	Catalytic effect	Current contribution
Rarity / importance	Condition / risk	Potential contribution
Listed status	Viability	
Townscape	Physical adaptability	

- 10.8 Using the assessment matrix a mill is awarded a score of between -2 and +2 to aid prioritisation (allowing a neutral score of 0). Total scores do not necessarily need to be added up and mills ranked accordingly as this can provide a crude basis for decision making. It could be that certain criteria are identified as critical and a building that receives a score of +2 on (for example) two of these is automatically prioritised. Alternatively, the process and scores could be used in a more informal way to understand the potential of a particular building.
- 10.9 Other criteria that could be incorporated include building availability (ownership), the potential for enabling development (whether on an adjacent site or not), potential availability of grant funding, developer and end user interest and, the appetite/capacity of the local authority/other agencies to support a project. The latter of these is however likely to be strongly based on the performance of a building against the other criteria identified here.

A strategic approach

- 10.10 Effective prioritisation of mills would inform a strategic approach to investment. It is recommended here that a Lancashire mills strategy is produced, informed by both this study and the Phase 2 Oxford Archaeology North survey work. Ideally it would involve all Lancashire local authorities as partners and, in addition to identifying which mills warrant concentrated efforts and investment, such a strategy would provide the opportunity to establish a set of principles for supporting mill conservation across the county. For example:
- Keeping mill buildings in active use as far as possible;
 - Mothballing where genuinely appropriate;
 - Undertaking feasibility studies to assess economic potential; and

⁸ Assuming medium sized mills (5,000 m2) in fair to poor condition

- Ensuring the potential for mills to accommodate public services is fully explored by relevant partners. In many cases new build schools and health centres sit next to derelict mill buildings.

Delivering priority projects

- 10.11 Chapter 9 has outlined a number of different approaches to funding a viability gap and enabling a project be delivered. Grant funding is – and will be – very limited but potential sources include: **English Heritage** which tends to focus on grade 1 and 2* heritage; the **Heritage Lottery Fund** - which will have increased resources in the future although competition will be steep and funders requirements limit eligibility and will usually increase project costs; **charitable trusts and foundations** who can provide support to other charitable organisations, **regeneration or economic development funders** such as the HCA (which operates the Affordable Homes Programme and Property and Regeneration budget) and the **Regional Growth Fund**.
- 10.12 There are other ways that a deficit may be bridged including **enabling development** – (where new build values produce a profit which can be used to cross subsidise conservation repairs) and **partnership (joint venture) arrangements** through which local authorities, for example, may contribute land assets to reduce the cost of development and spread some of the risk.
- 10.13 Much can also be achieved by local authorities and English Heritage working with mill owners to raise awareness of heritage value, keep buildings in use (as vacancy is the main factor underlying vulnerability), and to provide advice on responsible repairs and mothballing. Both carrot and stick approaches can be effective and relatively cheap including use (or threat) of statutory action (stick) and free development advice and expertise, such as support with preparing development briefs and support for decant and relocation (carrot). Local authorities are urged to be innovative in how they use the limited regeneration tools available to them and to consider the potential for direct action to acquire sites, and where appropriate, undertake mothballing until market conditions improve.
- 10.14 Local authorities may find it difficult to play this role effectively as many have suffered reductions in staff capacity. Genuinely enabling this type of project also requires the right skills, attributes and knowledge and there is a case for supporting the employment of people with a specific brief to develop projects and bring the necessary people, agencies and resources together to deliver them.
- 10.15 Finally, the public sector is to be encouraged to support and help build the capacity of not-for-profit organisations, particularly social enterprises as they are likely to have access to a wider range of funding (both for heritage conservation and regeneration). Support may be available through the English Heritage Regional Capacity Building programme.

Appendices

Appendix 1 - Building condition criteria

Appendix 2 - Market commentary

Appendix 3 - List of industrial building developers

Appendix 4 - Quantity surveyors report

Appendix 5 - Cost calculator overview