

THE ROLT MEMORIAL LECTURE 2012: INDUSTRIAL HERITAGE AT RISK

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This article describes the 2011 English Heritage ‘Industrial Heritage at Risk’ project. Having examined the findings of a public attitudes survey on the industrial heritage, it looks at the key risks and conservation solutions facing industrial sites, and the role the lead organisations play in their rescue. The entries on the Heritage at Risk Register are examined and the top ten industrial heritage at risk sites in England identified. A range of outputs are described together with the media coverage that accompanied the launch of the project.

Progress since 2011 is considered including the separation in April 2015 of English Heritage into two organisations — Historic England and the English Heritage Trust. The important role that volunteers and local groups play in the conservation and management of England’s industrial heritage is acknowledged throughout, and a possible new role for the Association for Industrial Archaeology suggested as part of Heritage 2020.

KEYWORDS: *industrial heritage at risk, Historic England, English Heritage*

INTRODUCTION

The industrial heritage was the theme of the English Heritage 2011 ‘Heritage at Risk’ programme. This article outlines the scope of the project, its key findings, outputs, and how the work is being taken forward within the newly created Historic England as part its 2015–18 Action Plan. References to Historic England are used throughout, but it should be noted that prior to 1 April 2015 the organisation was known as English Heritage.

Tackling ‘Heritage at Risk’ remains a key Historic England priority. The programme began with buildings at risk and then moved on to consider other designated asset types including scheduled monuments and conservation areas. In 2011 industrial heritage was identified as the theme for the research and launch. It was selected for a number of reasons, not least Britain’s unique position as the world’s first industrial nation. Many industrial sites have been lost as a result of economic changes during the later 20th century, and others are redundant or under threat. This has been heightened by the recent economic situation which has led to a significant reduction in both private and public finance. Fewer regeneration schemes were coming forward involving the reuse of former industrial sites and concerns remain over the future of those owned or managed by the public or voluntary sector, especially given the squeeze on local authority budgets.

SCOPE AND DEFINITION

The period definition for ‘Industrial Heritage at Risk’ was 1750 to the present day, with its emphasis from

the ‘Industrial Revolution’ through to the onset of World War I. In terms of scope it included:

- Extractive industries — mining and quarrying
- Processing and manufacture — metal industries, textile mills, glass works, potteries, factories, chemical manufacture, and food and drink production, including wind and watermills
- Power and utilities — gas works, electricity production, and water and sewage works
- Transport — roads, bridges, waterways, canals, railways, ports, docks and harbours

Industrial sites that pre-date 1750 were excluded together with the wider 18th- and 19th-century industrial landscapes of settlement including workers’ housing, recreational and institutional facilities, commercial activities and farms. This was to make the project manageable and its focus was entirely on England.

PUBLIC ATTITUDES

One of the first tasks was to get an understanding of what the general public thought about the industrial heritage and consultants, BDRC Continental, carried out a public attitudes survey in February 2011 based on 2,000 online interviews. Respondents were shown several images which reflected the scope and definition of the project, before being asked a series of questions where they could give a positive or negative reply. In order to ensure the results remained as objective as possible the following statements were included:

‘Industrial heritage sites should be demolished and replaced with modern buildings and structures.’

‘Are they a reminder of the economic decline of the area and of times you would rather forget?’

‘Do you associate the words eyesore or depressing with industrial heritage sites?’

Interestingly, the findings were overwhelmingly positive and demonstrate that the general public clearly values England’s industrial past:

- 64% agreed with the statement that the ‘Industrial Revolution’ is the most important period of British history.
- 85% of those surveyed thought the industrial heritage should be valued and appreciated, and 80% felt it was as important to preserve as castles and country houses.
- Many (44%) would like to get more involved, with 52% expressing an interest in giving their opinion on which sites should be protected.
- A substantial majority (71%) agreed that industrial buildings should be reused for modern-day purposes, whilst making sure their character is retained.
- Only 9% associated local sites with the words ‘eyesore’ or ‘depressing’.
- The value attached to industrial heritage sites was strongest amongst those respondents in the North of England, Yorkshire and the West Midlands.

Not only do the public value the industrial heritage, there is an appetite for greater involvement and a belief that more should be done to secure its future. Only 25% agreed that the sites they cared about were well recorded and protected, and younger people are much less interested than those aged over 55. The following quote provides a useful summary of the findings:

If left un-restored the buildings will become derelict over time and will have to be pulled down. By giving them a renewed sense of purpose they will stay standing for many years, whilst retaining the character that makes them historically interesting. As much as turning buildings into museums is a nice idea, there are only so many mill and factory museums you can have. It is often the look of the building that is important to preserve, what happened inside can be recorded elsewhere, if necessary. Once a building or feature has gone, it’s gone for good.

Further information on the public attitudes survey together with a full detailed analysis of the findings and a breakdown by each English region can be found on the ‘Industrial Heritage at Risk’ website.¹

KEY RISKS FACING THE INDUSTRIAL HERITAGE

The key risk to Britain’s industrial heritage is functional redundancy resulting from the major economic changes that have taken place since World War II. This has led to the loss of entire industrial landscapes, particularly those associated with the traditional industries of coal and metal mining, iron and steel manufacture, heavy engineering, textiles and ship building. The supporting infrastructure of roads, canals, railways and docks has greatly changed, whilst ancillary industries, such as food and drink, have been transformed. Many continue to contract and, having lost their primary function, they soon become abandoned and are prone to decay, vandalism and potential arson. Demolition is often seen as the next logical step, with little or no consideration of possible reuse.

Industrial sites are often concentrated in parts of the country where property values are low because the industries that generated them have ceased or declined. For many developers they are not seen as part of mainstream property development, and the issues of scale, possible contamination, conversion costs and infrastructure requirements can act as a further deterrent. This has been exacerbated by the recent economic climate with difficulties in raising private finance and a significant reduction in public funding for regeneration projects. Of course, there are examples where poor conversions, excessive redevelopment and the loss of internal features and ancillary structures has diminished the significance of a site and its setting. Not all industrial remains are capable of reuse, and options may be limited by the presence of historic machinery, whereas those that survive as monuments or redundant engineering structures can pose particularly difficult conservation challenges.

Improved skills and training are required for those dealing with redundant industrial sites, especially through the planning process, such as local authority historic buildings conservation and archaeological officers, commercial heritage consultants and contractors, together with the enhancement of Historic Environment Records with information on industrial heritage. Organisations responsible for the management of industrial sites, including preserved visitor attractions, also need access to appropriate training and specialist expertise. However, considerable progress has been made in the conservation of England’s industrial heritage over the past 50 years. The loss of the Euston Arch in 1962 followed by the Firestone Factory in 1980 marked important watersheds for both the industrial heritage and the conservation movement in general. The recognition of the value

of this legacy can be seen by the increasing number of sites that are protected, conserved, successfully adapted to new uses and managed for visitor access. As the public attitudes survey clearly demonstrates, such an approach has overwhelming public support.

INDUSTRIAL HERITAGE AT RISK

Using the year 2010 as a baseline, the following analysis considers the number of designated sites that fall within the scope of the project, together with an assessment of those on the Historic England Heritage at Risk Register (illustrated by examples, in brackets, where appropriate). It also examines industrial sites which have been added and successfully removed from the Register between 2010 and 2014. Annually updated, the Heritage at Risk Register contains information on Grade I and II* listed buildings, scheduled monuments, conservation areas, registered parks and gardens, registered battlefields and protected wreck sites, that are assessed as being at risk because of decay, neglect or inappropriate development.²

DESIGNATED SITES

In 2010, approximately 4.4% of the 375,000 entries for listed buildings and 4.4% of the 19,700 scheduled monuments on the National Heritage List for England were defined as industrial for the purposes of the 'Industrial Heritage at Risk' project.³ The South West had the largest number of industrial listed buildings and scheduled monuments, and London the least. Around 3% of the 9,400 conservation areas in England were designated because of their industrial character, with the West Midlands having the highest total and the North East the lowest.⁴

INDUSTRIAL HERITAGE AT RISK 2010

Based on the 2010 statistics, 10.6% of industrial Grade I and II* listed buildings were at risk, making industrial buildings over three times more likely to be at risk than the national average (3%). For industrial scheduled monuments, 10.9% were at risk, which is less than the national average (16.9%), whereas the number of industrial conservation areas at risk (16.8%) was significantly higher than the national average (6.6%). The Register contained 240 entries for industrial Grade I and II* listed buildings and scheduled monuments at risk, but because some had more than one designated asset this gave a total of 222 sites. They represented the full range of industries within the scope of the project and included a number of major international importance, such as Shrewsbury Flaxmill Maltings (also known as Ditherington Flax Mill); Stanley Dock, Liverpool; and the Bowes Railway, Tyne and Wear. These will be discussed in more depth when the top ten industrial heritage at risk sites in England are considered later in the article.

Of the industrial categories on the Register, the largest number were associated with the mining and smelting of lead, tin and copper at 40 sites (16.7%), followed by textiles with 26 (11.7%) and then coal at 23 (10.4%). Those for wind and watermills also totalled 23, and metal production and working came to 21 (9.5%). Their geographical location often reflected those areas where industries were historically concentrated with lead mining and smelting in the upland areas of Yorkshire (Keld Heads Lead Smelt Mill and Mine Complex, Wensley), the North East (Allenheads Lead Ore Works, Northumberland) and North West (Greenside Lead Mine, Ore Works and Smelt Mill, Lake District), and tin and copper in the South West (South Caradon Copper Mine). Similarly, most of the entries for textile mills could be found in the North West (Swan Lane Mill No. 3, Bolton), Yorkshire (Temple Mill, Leeds), East Midlands (Darley Abbey Mills, Derbyshire) and South West (Tone Mills, Somerset). Yorkshire had the highest number of industrial sites on the Register at 39 and London, the lowest, as illustrated in Table 1.

Most of the industrial sites on the Register in the North East survived as monuments, with 54% connected to various forms of mining (Whinfield Coking Ovens, Gateshead), while wind and watermills made up more than half of those in the East of England (Friston Post Mill, Suffolk). The importance of coastal shipping and naval dockyards was apparent in the South East, where maritime entries accounted for 38% of the total (Hammerhead Crane, Isle of Wight).

Other significant categories included the transport sector at 39 sites (17%), but within this group rail had the largest total at 13 (Curzon Street Station, Birmingham). A number of other industries were represented by only one or two entries (Marsden Limekilns, Tyne and Wear; 'Jumbo' Water Tower, Colchester; Lowwood Gunpowder Works, Lake District; Anglo-Bavarian Brewery, Somerset; and the Lion Salt Works, Cheshire).

On examining the findings from 2010 in more detail, 40% of the industrial buildings and structures identified could be converted to other uses, although such

TABLE 1 REGIONAL DISTRIBUTION OF INDUSTRIAL SITES ON THE HISTORIC ENGLAND HERITAGE AT RISK REGISTER.

Yorkshire	39
South West	38
North East	34
North West	31
West Midlands	20
East Midlands	20
East of England	17
South East	13
London	10

options were limited for the remaining 60%, which included monuments, redundant engineering structures or buildings containing important historic machinery (Figure 1). Furthermore, only 10% of industrial buildings at risk were considered economic to repair, which meant that for the other 90% their conservation costs would exceed the final market value. For industrial conservation areas at risk the West Midlands had the highest total at 12 (18.5%), but this may reflect the region having the largest proportion of industrial conservation areas nationally (23%). The lowest numbers were in the South West and North East.

INDUSTRIAL HERITAGE AT RISK 2011–14

Although there has been no significant change in the overall total of industrial sites on the Register since 2010, a number have been removed and others added (Figure 2). The largest fall in a single category was represented by the mining and smelting of lead,

tin and copper, and highest increase linked to various forms of transport, with the South West experiencing the greatest rise. A number of notable new entries have also been included such as the Bedlam Furnaces at Ironbridge, Longdon-on-Tern Aqueduct and Fakenham Gasworks. Given the majority of industrial sites on the Register have limited options for reuse or carry high conservation costs, their future may depend on the availability of public and voluntary support together with grant aid.

Further information on individual entries can be found on the Heritage at Risk Register and heritage at risk case studies involving industrial sites are also considered on the website.⁵

GRADE II LISTED BUILDINGS

With the exception of London, the Register does not contain information on Grade II listed buildings which account for around 92% of all those within



FIG. 1. Not all sites on the Heritage at Risk Register can be saved, as illustrated by the Yorkshire alum works where their eventual destruction by the sea is certain. Research by Historic England, the National Trust, North York Moors National Park and local archaeological societies, at sites such as Kettlewell, has ensured a better understanding of the coastal industry before it is lost. Jecock, M., 'The North Yorkshire Coastal Alum Industry in the Light of Recent Analytical Field Survey by English Heritage', *Industrial Archaeology Review*, XXXI.1 (2009), 54–73.



FIG. 2. Opened in 1894, Newman Brothers Coffin Works in the Birmingham Jewellery Quarter provided coffins for the funerals of Sir Winston Churchill and Neville Chamberlain. First identified and investigated in the course of an Historic England survey of the area, and having been conserved by the Birmingham Conservation Trust, it is now a visitor attraction and contains a number of business units. The site was removed from the Heritage at Risk Register in 2014 <<http://www.coffinworks.org>>
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the scope of the project. Where such registers exist they are maintained by local authorities, but the methodology for compiling these lists may be different and the entries not updated on a regular basis. Having completed a number of pilot and test projects, Historic England is working with local authorities and the voluntary sector on a national strategy to promote the preparation of Grade II buildings at risk registers, through volunteers capturing data on the condition of listed buildings. The intention is for the programme to launch in 2015–16 with key partners helping to deliver training, using a nationally consistent framework produced by Historic England. As the majority of industrial buildings are listed Grade II, this additional information will significantly alter some of the findings described above, especially as most of those capable of adaptive reuse are likely to fall into this category. Here the emphasis

has been on monuments, redundant engineering structures or buildings housing important historic machinery, which are often protected at the very highest level and where such options are limited.

GRANTS

The provision of grants by various public sector agencies has secured the future of many industrial sites on the Heritage at Risk Register using a range of different solutions including those with high conservation costs. However, since the recession these funds have been severely reduced and this is likely to continue for the foreseeable future.

HERITAGE LOTTERY FUND

Established in 1994, the Heritage Lottery Fund is the largest funder of heritage in the United Kingdom and with the reduction of other sources of grants its role has become more important than ever.⁶ Between 1994 and 2010 over £650 million has been awarded to 1,850 projects that relate to industrial, transport and maritime heritage, and, of this, over £460 million was allocated to 1,100 schemes that fall within the definition of the 'Industrial Heritage at Risk' programme. Such a significant level of investment has transformed the condition of much of England's industrial heritage, enabling greater public access and involvement together with a range of educational and training opportunities, including those associated with specialist craft and engineering skills. Grants ranging from a few thousand pounds to several million have been given to major transport and industrial museums, canal restoration projects such as the Kennet and Avon, conservation works on gunpowder, salt and pottery manufacturing sites, as well as pumping stations, collieries, lead mining sites, signal boxes, and wind and watermills. Recent recipients of major awards on the Heritage at Risk Register include Shrewsbury Flaxmill Maltings, Elsecar Engine, South Yorkshire and the Bowes Railway, Tyne and Wear.

In response to the current economic climate a new Heritage Enterprise Scheme was introduced in April 2013 to encourage partnerships between community organisations, such as social enterprises, and developers in disadvantaged areas.⁷ This programme will support the repair, refurbishment and adaptation of historic buildings, especially where they are at risk, and the Heritage Lottery Fund expects to receive many applications involving former industrial sites. Harvey's Foundry, Hayle, is amongst the recent beneficiaries where grants have been given to provide work space for creative industries.⁸

HISTORIC ENGLAND

The national £11.5 million grant repair programme of Historic England (formerly English Heritage)

supports over 150 sites a year with inputs ranging from technical surveys and project development, through to urgent works and full repair programmes.⁹ Its focus is on sites on the Heritage at Risk Register and grants are used where other sources of funding are unavailable, such as protecting buildings while long-term solutions are being developed and supporting private owners. Historic England is rarely able to make substantial grants, but works closely with other funders to ensure its limited resources act as a catalyst for further investment.

Between 2000 and 2010, £25 million was awarded to those projects that fall within the definition of 'Industrial Heritage at Risk'. Experience at the cotton mills in Manchester demonstrates how grants for urgent repairs together with expert advice can help to secure some of the nation's most important industrial heritage. Historic England will also act as the agent of last resort when it is necessary to save sites of major national importance, as demonstrated by the acquisition of the J.W. Evans Silverworks in Birmingham's Jewellery Quarter and Shrewsbury Flaxmill Maltings.

ENVIRONMENTAL STEWARDSHIP

Since 2005 grants have been available from Natural England for conserving and maintaining industrial remains on agricultural land through the Environmental Stewardship Scheme, a part of the Rural Development Programme (England). The measures ranged from scrub clearance to capital works involving the consolidation, repair and restoration of historic buildings and structures. At the scheduled 19th-century Low Slit Lead Mine in Weardale, Environmental Stewardship was used to consolidate the buildings and prevent further flood damage to the ore dressing floor (Figure 3). Environmental Stewardship has now closed, but from summer 2015 a successor scheme, Countryside Stewardship, will begin. The management options for industrial and other forms of historic and archaeological sites are broadly similar to those previously available.¹⁰

Of the other organisations which provide heritage grants, those of particular relevance to industrial sites include the Architectural Heritage Fund, the Association for Independent Museums, Railway



FIG. 3. Conservation works at the Low Slit Lead Mine has improved public access and interpretation, whilst enhancing the flora on this Site of Special Scientific Interest. Having been removed from the Heritage at Risk Register, it was presented with an Historic England Angel Award in 2013, see below. This image shows the repaired and conserved mine smithy.
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Heritage Trust and, of course, the Association for Industrial Archaeology.¹¹ The role of the Architectural Heritage Fund is considered further in the section on building preservation and other charitable trusts.

CONSERVATION SOLUTIONS FOR INDUSTRIAL SITES

There are a number of conservation solutions that can be implemented to address the risks facing the industrial heritage and some of the best combine a number of these on a single site. For the purposes of the 'Industrial Heritage at Risk' project the following five solutions have been identified: adaptive reuse, building preservation and other charitable trusts, monuments, historic industrial sites preserved as visitor attractions and maintaining existing uses.

ADAPTIVE REUSE

Finding an alternative use for functionally redundant industrial buildings is often one of the best opportunities for securing their long-term future, but for this to work well it needs to be underpinned by a full understanding of the significance of the site. Dean Clough Mills, Halifax, and Salts Mill (within the Salt- Aire World Heritage Site), were amongst the first large-scale industrial buildings to demonstrate how the determination of individuals with vision could transform an area. Since then industrial buildings have been converted to a range of new uses including offices, housing, hotels, manufacturing or workshop space, and mixed uses, where the complementary functions feed off each other.

In some circumstances a bold approach is needed to transform the perceptions of a building or area, as seen at Lister Mills, Manningham. Others, such as Cressbrook Mill, Derbyshire, and the Calder and Hebble Navigation Warehouse, Wakefield, stood empty for many years before a solution was put forward and implemented. A change in the surrounding area or a clustering of activities can help to build up a critical mass, whereas some, for example Albert Dock, Liverpool, and Ancoats in Manchester, involved phased development over a long period of time. Where it is difficult to find a sustainable reuse due to current market conditions, low-key uses and/or mothballing may need to be considered, and this strategy was employed at the Weavers' Triangle, Burnley. Michael Stratton's *Industrial Buildings: Conservation and Regeneration* and the influential SAVE publication, *Bright Future: The Re-use of Industrial Buildings*, provide further information on the reuse of industrial buildings together with supporting case studies.¹²

In order to inform the current project, Colliers International was commissioned to undertake further research on the reuse and investment

opportunities for 'Industrial Heritage at Risk'.¹³ The 2011 summary report is of particular relevance, and includes a number of case studies and interviews. It provides a further analysis of the Heritage at Risk Register, considers the challenges and issues in the reuse of former industrial buildings, and puts forward a number of recommendations for addressing heritage at risk in general. The report also highlights a solution where industrial buildings are made weather-tight, structurally sound and aimed at creative industries or specialist retail and leisure use, retaining an industrial character as part of their appeal. The adoption of such a minimalist approach undertaken incrementally often respects the original structure, and has been successfully adopted at the Custard Factory, Birmingham, and the Bristol Paintworks. This site is promoted as 'Bristol's Creative Quarter', and instead of demolishing the unlisted Victorian buildings they now provide workspace for creative businesses and residential accommodation.

As part of its programme, Historic England will continue to champion 'constructive conservation', which is the term it uses to describe the protection and adaptation of historic buildings and areas through the active management of change. This approach seeks to recognise and reinforce the historic significance of places, whilst accommodating the changes necessary to ensure their continued use. The latest volume (2013), *Constructive Conservation: Sustainable Growth for Historic Places*, demonstrates how conservation-led schemes are contributing to the economic recovery with many of the examples focusing on industrial buildings. They include the railway stations at Kings Cross and Tynemouth, Cromford Mill, Jodrell Bank Observatory, and the Centre of Refurbishment Excellence, which is based in a former Victorian pottery at Stoke-on-Trent, and provides teaching on housing refurbishment and retro-fitting.¹⁴ Further information on the reuse of historic buildings together with supporting case studies involving industrial buildings can be found on the Historic England 'Sources of Inspiration' webpage.¹⁵ Also, in response to 'Industrial Heritage at Risk' and the recent economic downturn, guidance has been prepared on *Vacant Historic Buildings: An Owner's Guide to Temporary Uses, Maintenance and Mothballing*.¹⁶ Although this advice is applicable to all historic buildings, many of the case studies are based on industrial sites.

BUILDING PRESERVATION AND OTHER CHARITABLE TRUSTS

Where a commercial solution is unlikely to be forthcoming, building preservation trusts, development trusts, groundwork trusts and civic societies can provide an answer. There are around 250 such charitable organisations across the United Kingdom which might work in partnership with a developer and can



FIG. 4. Portland Works, Sheffield. A community-owned home for traditional crafts and creative arts with over 500 community shareholders who are members of Portland Works Little Sheffield Ltd.
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apply for grants which are not necessarily available to the private sector. Once rescued, some may retain and possibly let out the building, or sell it on and use the funds to tackle other sites. Single project building preservation trusts are often set up in response to concerns over the condition of a much-loved industrial building in their area, and examples include Gayle Mill, North Yorkshire, restored by the North of England Civic Trust, and Dewar's Lane Granary, Berwick-upon-Tweed. Others, such as the Arkwright Society at Cromford, have been successful in tackling a number of industrial buildings within their local area, whereas the Heritage Trust for the North West has completed projects throughout the region including Higherford Mill, Lancashire, successfully converted into studios for local artists.

The Architectural Heritage Fund provides advice, information and financial assistance in the form of grants and loans for projects undertaken by not-for-profit organisations such as building preservation and other charitable trusts.¹⁷ As part of the 'Industrial Heritage at Risk' project, funding was provided for the creation of four Regional Support Officers to facilitate new projects in England. They work with Historic England staff and local authority historic buildings conservation officers to identify buildings on the Heritage at Risk Register and local authority at risk registers, which could be brought back into sustainable use.

An acquisition loan from the Architectural Heritage Fund helped a community benefit society to complete the community buy-out of Sheffield's Grade II* listed

Portland Works by its tenants and supporters (Figure 4). This purpose-built integrated cutlery works dates from the 1870s and was the first site in the world to manufacture stainless steel cutlery in 1913. Manufacturing still continues, and the current tenants include a knife-maker, engraver and forge operator, as well as various other creative and cultural businesses.¹⁸

PRESERVED MONUMENTS

Industrial sites that survive as monuments, especially those with upstanding remains or redundant engineering structures, can present difficult and ongoing conservation challenges. They include mining remains, kilns, furnaces and transport structures, that are often of such importance that opportunities are limited and reuse is often not possible. Grants from the Heritage Lottery Fund, Historic England, Natural England and others have secured a number of sites, especially when they are acquired or managed by public bodies and the voluntary sector. However, because of their very nature, these precious sites often require constant maintenance and repair. Many are protected at the very highest level, reflecting their outstanding national importance, but large numbers appear on the Heritage at Risk Register and they can present some of the most intractable problems.

Within the Cornwall and West Devon Mining Landscape World Heritage Site, Cornwall Council has taken a landscape approach to the conservation



FIG. 5. Wheal Peevor, Cornwall. This is the only surviving site where the once common arrangement of three engine houses for pumping, winding and stamping can still be seen.

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of these iconic monuments. Through a combination of grants from the Heritage Lottery Fund and Historic England, the mining remains at Wheal Peevor have been repaired and displayed for public access (Figure 5). The works were completed in 2008, resulting in the removal of the site from the Heritage at Risk Register, and it now forms part of the Mineral Tramway Trails, a network of public trails and cycle paths, which connect together a number of these preserved monuments.¹⁹

HISTORIC INDUSTRIAL SITES PRESERVED AS VISITOR ATTRACTIONS

There are approximately 600 publicly accessible preserved industrial heritage sites across England. Many are managed by building preservation trusts, voluntary groups or other charitable trusts, whilst some are owned and cared for by local authorities and national park authorities. This resource provides a unique opportunity for understanding both historic industrial processes, and the social and working conditions of those once employed there. Many also preserve and sometimes operate historic machinery. The preservation of these sites was often down to the considerable energy and enthusiasm of local groups during the 1960s and 1970s when their survival was far from assured, and today around 30% of all industrial heritage attractions are wholly or largely cared for by volunteers. They cover mine sites, ironworks, water and steam-powered textile mills, waterworks, breweries, and wind and watermills. For some, such as parts of the transport sector, together with wind and watermills, there are existing well established support networks. However, for others, including textile and mining sites, this is absent, raising concerns

over their long-term sustainability as visitor attractions. These issues were explored in two commissioned reports undertaken in 1998, *Public Access to England's Preserved Industrial Heritage* (PLB Consulting with Ayris, I., I. Dormord & Swift Research Ltd) and then revisited in 2008 by Sir Neil Cossons, *Sustaining England's Industrial Heritage: A Future for Preserved Sites in England*.²⁰

The research highlighted a number of underlying issues around volunteer retention and recruitment, technical skills transfer from an ageing volunteer base, adapting to a radically changing funding and visitor environment, and achieving modern 'best practice' conservation, management and presentation standards. The particular nature of industrial heritage attractions, typically combining extensive sites, large and complex historic buildings, and additional features, such as working machinery, make these challenges especially pressing. For those owned by local authorities, recent financial pressures are creating further difficulties, which is likely to result in their management or ownership being transferred to the voluntary sector if they are to remain open.²¹

An Industrial Heritage Support Officer was created to help address these concerns as part of the 'Industrial Heritage at Risk' project. Funded by Historic England, the post is managed by the Ironbridge Gorge Museum Trust, in partnership with the Association for Independent Museums and the Association for Industrial Archaeology. One of the key tasks is to act as a clearing house to provide help, advice and, where necessary, signpost other organisations and sources of information. Another important area has been to facilitate collaborative regional 'self-help' networks to encourage industrial heritage sites to work together more effectively, with examples



FIG. 6. Facing closure, Middleport Pottery was one of the last working Victorian potteries in the United Kingdom. Approximately half the site has been leased back to Burleigh, which continues to make its famous blue and white pottery, whilst other parts of the building are used as workspaces for local businesses. It is also a visitor attraction and the scheme is acting as the catalyst for the wider regeneration of the area.

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established in Hampshire and North West England. Training has been delivered in a number of key areas working in association with existing partners and programmes, including the European Route of Industrial Heritage, or at specific events such as the one held at Ironbridge in October 2014, which looked at the transfer of industrial sites owned by local authorities to voluntary sector organisations and the issues that need to be considered.²² Improved links with the wider voluntary sector and professional engineering bodies are also being developed. By working with the Institution of Mechanical Engineers it is hoped to build on their existing programme of Heritage Engineering Awards and focus on areas such as skills development.

To encourage more schools to visit these sites and promote interest amongst younger audiences, Historic England has produced a 'Teacher's Kit' primarily aimed at Key Stage 2 and 3 teachers when pupils are aged between seven and 14. It is supported by a number of sub-kits on steam-power, the extractive industries, brick-making, ceramics, forges and foundries, textiles, malting, brewing, wind and watermills, public utilities and transport. The 'Teacher's Kit' contains a number of case studies, activities and other resources, that look at the many ways the industrial

heritage can be used for inspiration across the curriculum.²³

MAINTAINING EXISTING USES

A large number of historic industrial sites continue to fulfil the purpose for which they were originally built, and this is especially true for much of England's existing infrastructure which includes the road, canal and rail network. The Leeds and Liverpool Canal, Great Western Main Line, the London railway termini at St Pancras, Kings Cross and Paddington, and the Tyne Bridges at Newcastle, are outstanding examples of England's working industrial heritage. Similarly, many important industrial sites continue to manufacture the products they were set up to produce, such as the Hook Norton Brewery, Oxfordshire, and Taylors Bell Foundry, Loughborough, which is now the largest bell foundry in the world. One of the most ambitious projects in recent years was the acquisition in 2011 of the Grade II* listed Middleport Pottery in Burslem, Stoke-on-Trent, by The Prince's Regeneration Trust. This project clearly demonstrates that with vision and commitment there are some industrial buildings whose original purpose can be successfully retained (Figure 6).²⁴

TOP TEN INDUSTRIAL HERITAGE AT RISK SITES IN ENGLAND

The solutions described above hold the answer to the rescue of most of the industrial sites on the Heritage at Risk Register. For some, these are already underway or plans are at an advanced stage, but others are likely to remain at risk for the foreseeable future. The following ten sites were identified on the Register as being of outstanding national or international importance and progress since the launch of the 'Industrial Heritage at Risk' project in 2011 is reported, where appropriate. They are listed in no particular order of significance or ranking.

ELSECAR ENGINE, SOUTH YORKSHIRE

Dating to 1795, the Newcomen steam engine at Elsecar is the only example in the world to survive in its original location. Added to the Heritage at Risk Register in 2010, the site has now been fully conserved by Barnsley Heritage and Museum Service with the support of grants from the Heritage Lottery Fund and Historic England. It forms part of the Elsecar Heritage Centre and will be removed from the Register in 2015.²⁵

SHREWSBURY FLAXMILL MALTINGS

Built in 1797, this was the first building in the world to have a fireproof internal iron frame and was subsequently used as a maltings from the late 1890s. Listed Grade I, the main mill and surrounding buildings have stood empty for almost 30 years and were added to the Register in 1999. Having been acquired

by English Heritage (now Historic England) in 2005 a stage one project (which includes converting the office and stables to a visitor centre run by the flourishing 'Friends of the Flaxmill Maltings'), is underway and due to open in 2015 (Figure 7).²⁶

BACKBARROW IRONWORKS, CUMBRIA

Operating for over 150 years, many of the surviving features at the Backbarrow Ironworks cannot be found elsewhere in England. The original water-powered blast furnace was erected in 1711 and the present furnace, with its steam blowing engine, worked until the mid-1960s. Plans to conserve and redevelop the site have stalled due to the current economic climate.

SOHO FOUNDRY, WEST MIDLANDS

Boulton and Watt's Soho Foundry was erected in 1795 as the world's first integrated steam engine factory capable of supplying complete steam engines. Historic England and the local authority have grant-aided the construction of a temporary roof to stabilise the structure, but the current economic situation and its location are making it difficult to find a solution.

BOWES RAILWAY, TYNE AND WEAR

Designed by the pioneering railway engineer George Stephenson in the 1820s, the Bowes Railway is one of the earliest and best preserved rope-hauled railways in England. A substantial element of the track bed and associated buildings survive as a visitor attraction, but, given the scale of the site, maintenance is an



FIG. 7. Supported by the Heritage Lottery Fund, the master-plan for Shrewsbury Flaxmill Maltings is being reviewed to work up a viable scheme for the repair and use of the main mill. A major monograph shedding new light on this internationally important site is also being published by Historic England in November 2015 with contributions from leading experts. © James O. Davies, *Historic England*

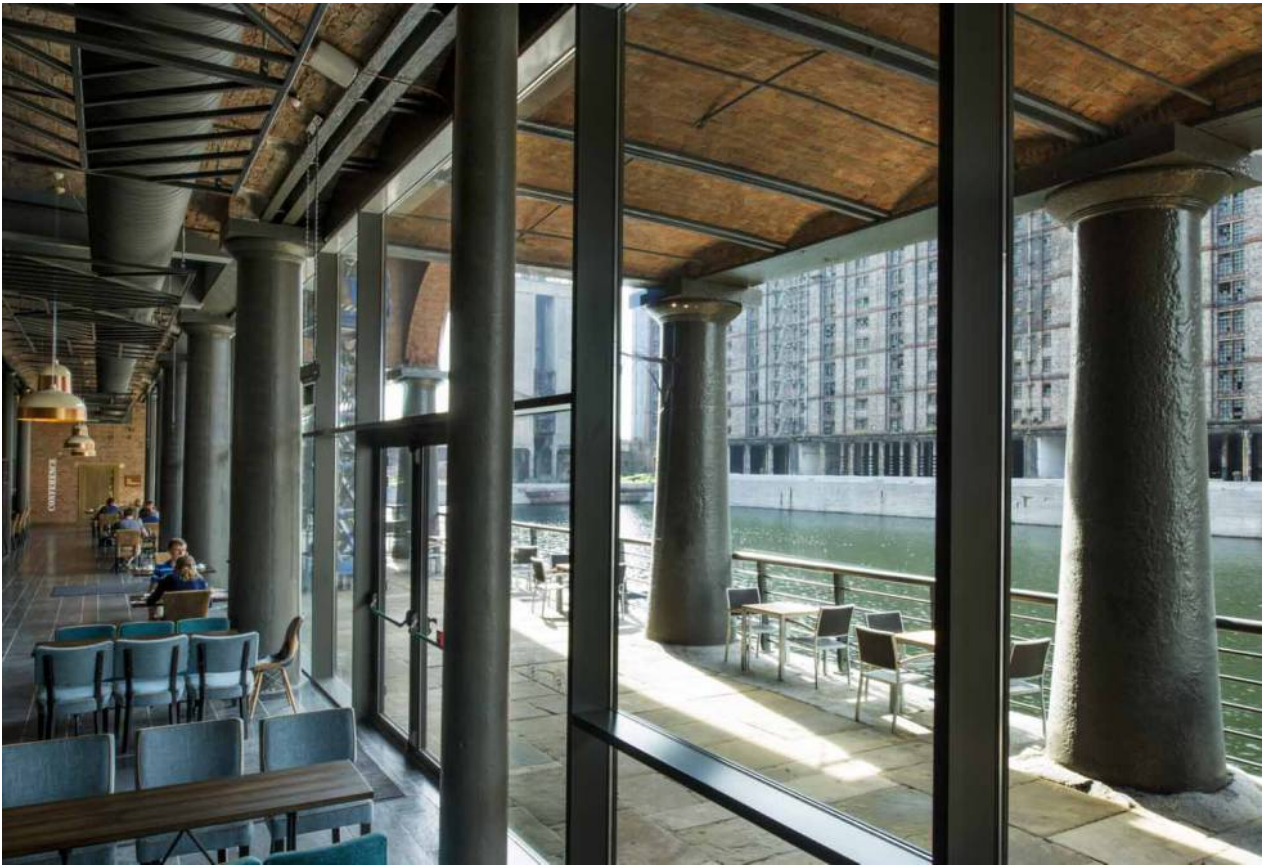


FIG. 8. The Grade II* listed north warehouse at Stanley Dock, Liverpool, has been removed from the Heritage at Risk Register following its successful conversion into a hotel. Investors are now being sought to deliver the approved conversion of the monumental tobacco warehouse as part of a mixed use leisure, exhibition and residential scheme.
© *Alun Bull, Historic England*

ongoing concern, some of the buildings are in a poor condition and it suffers from vandalism. Historic England and the Heritage Lottery Fund are working with the Bowes Railway Company Ltd to secure its future through the provision of grants to support overall governance, repairs, improved presentation, training and apprenticeships in engineering.²⁷

STANLEY MILL, GLOUCESTERSHIRE

Rebuilt as a fireproof mill in 1813, Stanley Mill has the finest internal cast-iron framing in the country and this importance is reflected in its Grade I listing. A mixed use scheme is being implemented involving urgent works to the main mill as an initial phase.

BATTERSEA POWER STATION, LONDON

This iconic London landmark was built in two phases between 1929 and 1955 by the London Power Company. Designed by Theo Halliday and Sir Giles Gilbert Scott, it was London's first power station to rationalise large-scale electricity generation. Listed Grade II in 1980 and subsequently upgraded to II*, its condition has significantly deteriorated since decommissioning in 1983. Works have now started on site

which will result in the reuse of the power station as the centre-piece of a mixed use redevelopment scheme.

SLEAFORD BASS MALTINGS, LINCOLNSHIRE

Built between 1901 and 1907, this is the largest floor malting in Europe. Listed Grade II*, the site ceased malting in 1957 and is now vacant. Permission was granted in 2011 for a mixed use scheme which has yet to be implemented.

STANLEY DOCK, LIVERPOOL

The dock complex is a conservation area and includes the Grade II* and Grade II listed warehouse by Jesse Hartley together with the massive Grade II Stanley Dock Tobacco Warehouse. Built in 1900, this contains 27 million bricks and is believed to be the largest brick building in the world (Figure 8).

CHATTERLEY WHITFIELD COLLIERY, STOKE-ON-TRENT

In 1937 Chatterley Whitfield became Britain's first one million ton coal mine and is the most complete example of a large-scale colliery, dating from the peak years of the industry, to survive in England. After closing in 1977, it temporarily became a

museum; a number of the buildings were restored in 2006 for office use and Stoke-on-Trent City Council has been investing in health and safety works to provide access to the reusable buildings. Chatterley Whitfield epitomises the conservation difficulties faced by large-scale, functionally redundant industrial sites.

MANAGING THE INDUSTRIAL PAST

To help those engaged in addressing 'Industrial Heritage at Risk' and the management of industrial sites, the project produced and supported a number of other publications. These were aimed at local authority historic buildings conservation and archaeological officers involved in the planning process, commercial contractors undertaking work on industrial sites, expert volunteers who comment on development proposals, students studying the subject, and others with a general interest in the industrial heritage.

An 'industrial' themed issue of the *Conservation Bulletin* was produced in autumn 2011, which was distributed to more than 5,000 people in the heritage sector and all members of the Association for Industrial Archaeology.²⁸ It provides a general introduction to the subject and considers the key issues currently facing the industrial heritage, with articles from many of the lead organisations and individuals concerned. Marilyn Palmer wrote a particularly thought-provoking piece on the educational provision of relevant courses within universities and whether they are providing the necessary skill sets for those who will subsequently find employment, especially in local government and the commercial sector.

In response to this and as part of the Heritage Practice Training Courses provided by Historic England, in partnership with the University of Leicester, a specific course is being held on 'Understanding Historic Industrial Assets for their Conservation and Management'.²⁹ Historic England also supported a three-year training programme organised by the Council for British Archaeology and Association for Industrial Archaeology that culminated in the publication in 2012 of *Industrial Archaeology: A Handbook*. This landmark publication provides a valuable guide to the key building types and below-ground archaeological remains associated with the industrialisation of Britain. It contains an extensive reference list and will be of particular relevance to professionals and volunteers involved in planning and development work.³⁰ To complement *Science for Historic Industries: Guidelines for the Investigation of 17th to 19th Century Industries*, which provides guidance on the assessment and recording of below-ground archaeological remains in urban areas and 'brownfield' sites, further technical advice has been produced on glass works, whilst that for archaeological and historic pottery production sites is in preparation.³¹

A wealth of additional information on England's industrial heritage can be found in the Historic England Archive, the national archive of the historic environment.³² The holdings range from original photographs, documents and architectural plans, to research reports and surveys carried out by its own specialist investigation teams. A 400-page guide was produced in 2011 as an introduction to the industrial collections and the reports prepared during the past ten years by research staff are now available on the Historic England website.³³

PROJECT LAUNCH

The 'Industrial Heritage at Risk' project, its findings, outputs and actions, was officially launched on 18 October 2011, and received considerable media and press interest. 'BBC Online in Pictures' contained an image gallery together with the key messages and it is one of the most popular pages on the BBC website.³⁴ Historic England staff also gave press interviews in all parts of the country, on Radio 4 PM and the BBC World Service, with stories appearing in most of the national and regional press including *The Guardian*, *The Telegraph*, *Financial Times* and *Daily Express*.³⁵ There was further coverage in *Country Life*, *The Architect's Journal* and the *Planning Portal*, whilst an article in The Guardian's Local Government Network Blog highlighted the important role local authorities play in conserving the industrial heritage.³⁶

Within the heritage sector the project was reported in the Heritage Alliance Newsletter, *Current Archaeology*, *Context* (the magazine for the Institute of Historic Building Conservation), The Chartered Institute for Archaeologists Buildings Archaeology Group Newsletter, the journal for the Association of Independent Museums and, of course, *Industrial Archaeology News*. In the North of England, Historic England also sponsored a major conference titled *Regeneration and Investment in the North's Industrial Heritage* held at Lister Mills, Manningham, on the day of the launch.

NEXT STEPS

For Historic England, the management of the industrial heritage since 2011 was taken forward as part of the National Heritage Protection Plan (NHPP). Given the challenging economic situation and the significant reductions in public sector funding — including the central government grant to Historic England — the purpose of the NHPP was to concentrate resources on those parts of the heritage that are at greatest risk and which matter to people the most. The Plan ran from 2011–15 and was drawn up following widespread public consultation, with the industrial heritage featuring strongly throughout.



FIG. 9. In 1966 a comprehensive rebranding exercise was carried out for Mobil. The Pegasus redesign included stylish cylindrical pumps with distinctive overlapping circular canopies, and these examples from the early 1970s on the A6 at Red Hill, Birstall, Leicester, were listed in 2012 as the last surviving full set. They are a reminder that the more recent industrial heritage may be just as much at risk as that from the 18th and 19th century, if not more so.
© Historic England Archive, DP070109

Key milestones included the ongoing publication of industrial titles as part of the 'Informed Conservation' series of Historic England books with volumes appearing on *Ancoats: Cradle of Industrialisation* and *The Hat Industry of Luton and its Buildings*.³⁷ Often produced in partnership with the relevant local authority, these popular books aim to raise public awareness of historic areas and buildings, and promote their conservation.³⁸ A further volume describing the results of the first ever national survey of railway goods sheds and warehouses is planned for 2016.³⁹

Carscapes: The Motor Car, Architecture and Landscape in England, published in November 2012, broke important new ground in the understanding of 20th-century industry and the impact of the car on the English landscape (Figure 9).⁴⁰ The following year, the results of a major research project appeared as the *Textiles Mills of South West England* with a chapter on their conservation and reuse.⁴¹ Both volumes resulted in a number of new and revised listings as well as receiving the Peter Neaverson Award for Outstanding Scholarship from the Association for Industrial Archaeology.

Further examples of the work carried out on the industrial heritage within the NHPP can be found in a special edition of *Research News* (now the online magazine of *Historic England Research*), and the following two case studies show how the Plan is being used to tackle industrial sites very much at risk.⁴²

RAILWAY SIGNAL BOXES

In 2011 Network Rail announced plans to concentrate signalling in 12 centres which would lead to

the closure of 800 signal boxes and the end of this building type on the national rail network. The project, undertaken in partnership with Network Rail and the National Railway Museum, assessed the significance of all surviving examples on the rail network, and on heritage railways, museums and for other purposes. A further 51 signal boxes were added to the 73 that are already listed to ensure a representative sample of the best surviving examples are protected. Network Rail subsequently requested a further list of those boxes which did not meet the threshold for statutory protection, but could be offered to heritage railways, museums and community groups to secure their future. A research report has also been produced and the media coverage generated a very positive public response.⁴³

LANCASHIRE TEXTILE MANUFACTURING SITES

In response to the urgent threat facing these structures and the lack of a comparative information base to guide future planning decisions, a rapid assessment was completed in 2010. This found that two-thirds of the 1,661 historic textile manufacturing sites and ancillary works which once existed in Lancashire had been lost.⁴⁴ A more detailed survey of the remaining 540 examples by Oxford Archaeology North is now underway to establish condition and overall rates of occupancy. It will also consider their potential for reuse and provide an assessment of significance with selected sites put forward for statutory protection.

In May 2012 the survey found that, of the 540 complexes identified, 49 contained listed buildings, six included scheduled monuments and 58 stood within



FIG. 10. Built in 1894–5, Queen Street Mill, Burnley, represents the high point of the Lancashire weaving industry and is of major international importance. With its steam engine, boilers and 308 looms, the site is preserved as a visitor attraction, and a popular location for film and television productions.

© Shane Gould, Historic England

conservation areas. The four sites assessed as being of exceptional significance are already protected with a further 104 (19.2%) graded as high importance, 299 (55%) medium and the remaining 133 (24%) low. Around 11% were at risk and a further 17% contained vulnerable buildings.

The results are already helping local authorities in shaping planning policy, responding to development proposals and preparing local lists of historic buildings, with the intention to develop a sub-regional mills strategy to encourage mill owners, developers and others to reuse these buildings. The last surviving steam-powered weaving mill in the world, Queen Street Mill, Burnley, is now listed Grade I, and reuse options are being considered for Kirk Mill, a rare example of a 1785 Arkwright-type spinning mill (Figure 10). Guidance has also been produced on the reuse of weaving sheds together with advice on measures to reduce the risk of arson, which remains an ever-present threat to these structures.⁴⁵

HISTORIC ENGLAND

As explained at the beginning of this article, on 1 April 2015 English Heritage separated into two

organisations: Historic England and the English Heritage Trust. The trust is a new charity which looks after the National Heritage Collection of over 400 historic sites and monuments, including the 1779 Iron Bridge at the Ironbridge Gorge World Heritage Site, Stott Park Bobbin Mill, Cumbria, and J.W. Evans Silverworks in Birmingham's Jewellery Quarter.⁴⁶ Historic England will continue giving advice on statutory protection and planning, tackling heritage at risk, grant-making, undertaking applied research, providing guidance, training and education, and curating the national archive for the historic environment. The Corporate Plan sets out the aims and objectives of the organisation for the next three years, a new website contains a wealth of information and advice, and regular updates can be found in a quarterly newsletter.⁴⁷

The Historic England Action Plan describes how the Corporate Plan will be delivered.⁴⁸ It is also the organisation's contribution to 'Heritage 2020', the successor to the NHPP, which identifies the priorities for England's historic environment as agreed by the sector for 2015–20.⁴⁹ Most of the aims and objectives in the Action Plan are set at a relatively high level, but the majority will also help in managing the industrial



FIG. 11. The widespread adoption of electricity during the 20th century had a major impact on the economy and living standards throughout England with growing demand met by ever larger coal and oil-fired power stations. Many of these huge installations erected in the 1960s are now facing closure, including the recently announced Ferrybridge C, West Yorkshire, and a photographic recording programme is being carried out by Historic England.
© Historic England Archive, 28607_020

heritage such as developing methods to survey Grade II listed buildings at risk, promoting ‘constructive conservation’, and providing support to the voluntary sector. In terms of specifics, a number of projects from the last plan period are drawing to a close including the survey of Lancashire textile manufacturing sites and the ‘Research Framework for the Archaeology of the Extractive Industries in England’, prepared by the National Association of Mining History Organisations.⁵⁰

Other priorities are likely to involve assessments of the nation’s historic infrastructure, especially where major improvements are planned or underway. The railways, for example, are experiencing the largest investment programme since the Victorian era and a report has been commissioned that considers its likely impact. Stratton and Trinder’s landmark publication in 2000 highlighted the importance of 20th-century industry, but many of these sites are now at risk from demolition or redevelopment, and further research is needed to assess their significance and establish guidelines for recording, protection and management (Figure 11).⁵¹ Workers’ housing is another area where the needs of the 21st century present a potential threat to their historic fabric, but

the understanding of the resource remains poorly developed.

As part of the 2015 European Year of Industrial and Technical Heritage, Historic England is working with The Prince’s Regeneration Trust, the Heritage Lottery Fund and with the support from the Association for Industrial Archaeology, on a major event at the end of year aimed at politicians, local authorities and developers on the reuse of industrial sites. It will also contribute to the seminar at the Association for Industrial Archaeology’s annual conference on ‘Valuing and Sustaining Britain’s Industrial Heritage’.

ANGEL AWARDS

Throughout this article the important role that volunteers and local groups play in the protection, conservation and management of England’s industrial heritage has been highlighted, and without their considerable efforts many sites would have been lost. The ‘Historic England Angel Awards’ were founded by Andrew Lloyd Webber, with the support of *The Telegraph* and Historic England (formerly English Heritage), to celebrate the success of local people who



FIG. 12. The Oldland Mill project in West Sussex involved the total dismantling and restoration of the body of this Grade II listed windmill, as well as replacing all four sweeps, which took more than 30 years with over 100,000 hours of volunteer effort. Thanks to the work of the Oldland Mill Trust, it is the oldest working windmill in Sussex, produces flour once more and opens regularly as a local cultural and educational resource. In 2014 it was voted as the people's favourite for an 'Historic England Angel Award'.

© Oldland Mill Trust

have saved historic buildings and places, and ran from 2011–15.

Awards are given in four categories, which include the best rescue of a designated site, area or building; best rescue or repair of a historic place of worship; best craftsmanship employed on a heritage rescue; and best rescue of a historic industrial building or site. In addition, followers of Historic England and readers of *The Telegraph* are invited to vote for their favourite shortlisted project and the winner gets the ‘people’s favourite’ award. The judging panel is chaired by Andrew Lloyd Webber and involves historian Bettany Hughes and TV’s ‘Restoration Man’ George Clarke among others. They are announced at a highly prestigious event at a London theatre where the relevant Secretary of State or Minister is often present.

The award of the best rescue of a historic industrial building or site has been given to the following organisations or individuals:

- 2011 Friends of Pleasley Pit for rescuing Pleasley Colliery, Mansfield
- 2012 Max Sinclair, Droitwich Canals Trust
- 2013 Malcolm and James Nattrass for Low Slit Lead Mine, Bishop Auckland, County Durham
- 2014 Renewable Energy Trust for Howsham Mill, York
- 2015 Tyne and Wear Building Preservation Trust for the Blackfell Hauler House, Bowes Railway

Further details of the winners can be found on the Historic England website (Figure 12).⁵²

CONCLUSION

Britain’s industrial heritage is widely recognised as being of outstanding international importance. It can play an important role in underpinning economic growth, stimulating local pride and identity, and is an educational asset. The public attitudes survey clearly demonstrates that the industrial past is highly valued by the general public who see it ‘as a reminder of what makes this country great’, and the extensive media coverage that accompanied the launch of the ‘Industrial Heritage at Risk’ project also illustrates a high level of interest. The contribution from the voluntary sector remains one of its greatest strengths, but people appear to want to get more involved, while the need to engage younger audiences presents a constant challenge.

Historic England will continue to build on the record of its predecessor organisations by recommending industrial sites for statutory protection, promoting constructive conservation, addressing heritage at risk, undertaking innovative research, preparing guidance and publications, and supporting the voluntary sector.⁵³ However, as a national organisation that works locally, there is a limit to what it can do, and for the vast majority of industrial sites and landscapes, especially those that are not designated, their

future will rest with local authorities responding to proposals through the planning process.

Since the recession local authority budgets remain under severe pressure and this has led to a significant reduction in the number of front line staff providing expert advice on archaeological and historic building conservation. Both Heritage 2020 and the Historic England Action Plan recognise this as a priority area, and support is to be given to local authorities in developing new ways of delivering heritage services so that decisions on the future of archaeological sites, historic buildings and areas are based on independent, skilled professional advice.⁵⁴

The role of the voluntary sector in supporting local authorities, tackling heritage at risk and managing local sites is likely to become ever greater, but as the examples throughout this article have shown, the industrial community has an outstanding record in this field. For bodies like the Association for Industrial Archaeology it also presents important opportunities — Heritage 2020 is encouraging such organisations to prepare a statement of their priorities for 2015–20, and how they link with those in the Heritage 2020 framework with the results drawn together in an annual report on progress.

For further information on the ‘Industrial Heritage at Risk’ project, its research findings and key outputs please refer to the Historic England website.⁵⁵

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