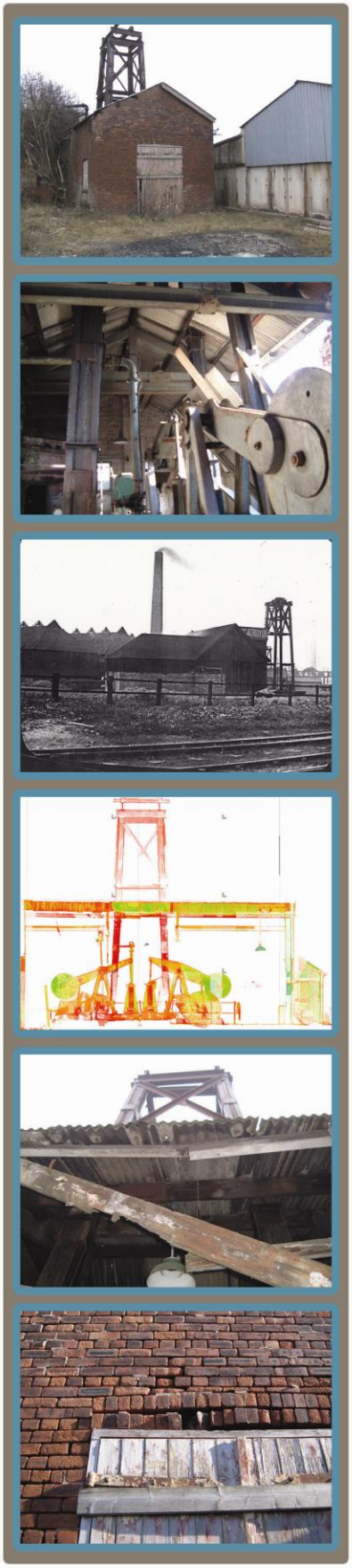


Murgatroyd's Brine Pump Number 1

Conservation Management Plan and Options Study

Executive Summary

August 2011

Heritage Works

Buildings Preservation Trust Ltd

with:

Gifford
Oxford Archaeology North
Cass Associates
Appleyard & Trew Cost Consultants
Malcolm Hughes Land Surveyors

MIDDLEWICH TOWN COUNCIL

ENGLISH HERITAGE

1. Introduction

1.1 This executive summary provides a précis of a Conservation Management Plan (CMP) for Murgatroyd's No 1 Brine Pump, Middlewich, Cheshire. The CMP was undertaken between November 2010 and July 2011 by a team of consultants led by Heritage Works and including Cass Associates, Oxford Archeology North, Gifford (engineers), Appleyard and Trew (quantity surveyors), Malcolm Hughes Land Surveyors and Solum Environmental Limited. On the client side it has been managed by a steering group including representatives from Middlewich Town Council, Cheshire East Council, and English Heritage (who funded the study).

1.2 This summary is structured under the following headings:

- Purpose of the Conservation Management Plan
- Background and significance of the brine pump
- Current condition
- Options for the site
- Funding opportunities
- Implementation and review

1.3 The full version of the report is available from the Middlewich Town Council Heritage Development Officer.

2. Purpose of the Conservation Management Plan

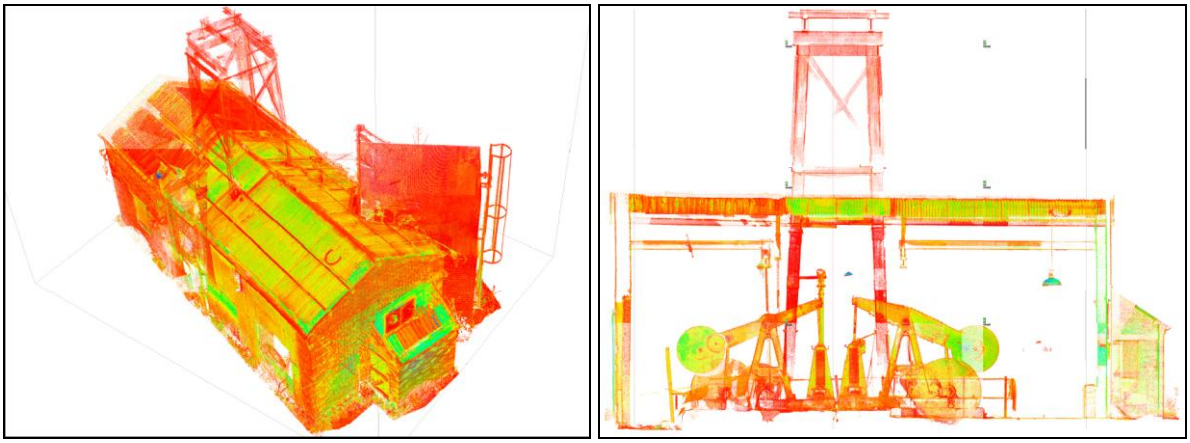
2.1 A Conservation Management Plan is a tool that provides an understanding of a heritage asset and identifies what will be important considerations for its future conservation and management. Although Middlewich Town Council does not own the site, the brine pump has the potential to contribute to the Council's regeneration and heritage objectives and there is a strong desire to ensure that it is developed in a way that achieves maximum benefit, both in terms of heritage and also in response to wider aspirations for the town.

2.2 To ensure that the Conservation Management Plan was developed on robust information, the study involved extensive professional survey work:

- Archaeological building survey;
- Assessment of significance;
- Building survey and mechanical and electrical surveys;
- Topographical survey;
- Laser 'point cloud' survey; and
- Ecological survey.

2.3 The brief required that the study "identify opportunities for varying levels of development [for the brine pump site] as an educational resource and visitor attraction". This Conservation Management Plan therefore goes a little further than usual as it includes a number of options for the repair and future use of the site. A range of different information sources was used when developing the potential options including the professional surveys. It was also important to take account of other factors such as the master plan for Middlewich and the location of other salt industry attractions nearby. Members of the study steering group (including representatives from Middlewich Town Council, English Heritage and Cheshire East Council) were involved throughout to help make sure that the options developed were

realistic and would meet the needs of the site and those with an interest in it. The options were developed with Cass Associates (architects and landscape planners) and Appleyard and Trew (quantity surveyors). They were subject to public consultation in June 2011 at the Middlewich Folk and Boat festival.



Point cloud images: Aerial view of pump house; longitudinal section through pump house, showing machinery

3. Background and significance of the brine pump

3.1 Salt is an essential and prized commodity, used as an important dietary supplement and as a principal method of food preservation before the Industrial Revolution. In Britain, most salt is from rock salt as opposed to sea salt, with the largest area of rock salt beds lying beneath Cheshire. Salt production was an important local industry in Roman times and continued in the area following the Roman's departure. Interest in the Cheshire salt beds exploded with the advancement of the Industrial Revolution, with demand being created by population growth, the needs of the rapidly developing chemical industry in Britain, and by increased exports. Britain became one of the largest salt producers in the world and Cheshire was the principal centre for the industry.

3.2 George Lomas Murgatroyd began his first salt operation on the site in 1889 and the first salt lumps were produced on New Year's Eve of 1890. Wild brine occurs when salt dissolves naturally in underground spring water and wild brine pumping is distinct from other extraction methods such as controlled pumping and direct mining. The brine stream that Murgatroyd had discovered was a particularly abundant source of very high quality brine, described as being 'one of the finest and most valuable salt properties known'. This was a cause of great celebration for local townspeople and Murgatroyd's Salt Works subsequently expanded to become one of Middlewich's most important employers. The open pan salt works closed in 1966 although the brine pump continued to operate until 1977, when it came into the ownership of Congleton Borough Council. The site is now owned by Cheshire East Council.

3.3 Brine pumping on the site was initially carried out by steam-powered pumps that ran from 1890 to 1953. The pump was gradually modernised throughout its history, with its shaft being augmented by a borehole and four electric pumps introduced gradually from 1932 to 1966. The hand-dug No 1 shaft, in-situ electric pumps and 1890 gantry remain as the only surviving example of a once widespread technology.

3.4 The current pump house, which accommodates the electric pumps, is not the original 1890s building but a replacement, constructed in the 1930s and heavily remodelled at various stages since. The current building overlaps the line of the original building and a small part of the existing wall. The timber gantry, which stood separately from the original building now projects through the roof of the current pump house. The brine pump site has developed in four main stages shown in Figure A. Figure B shows the flow of brine from the shaft to the pump and out to the processing plant at Elworth.

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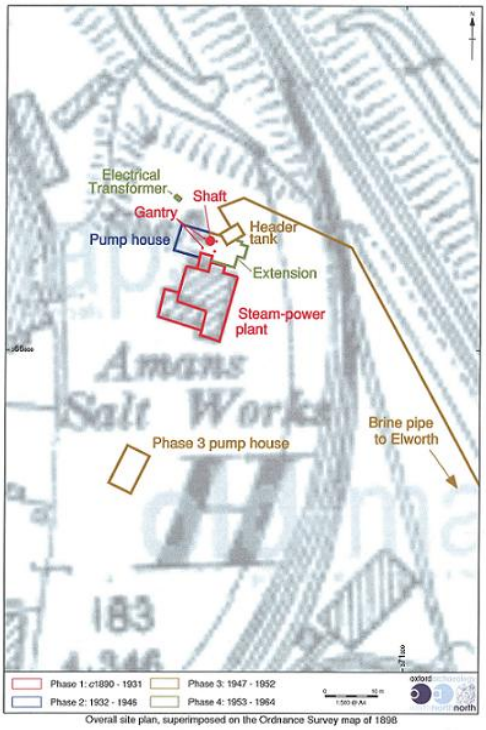


Figure A: Development of the brine pump site

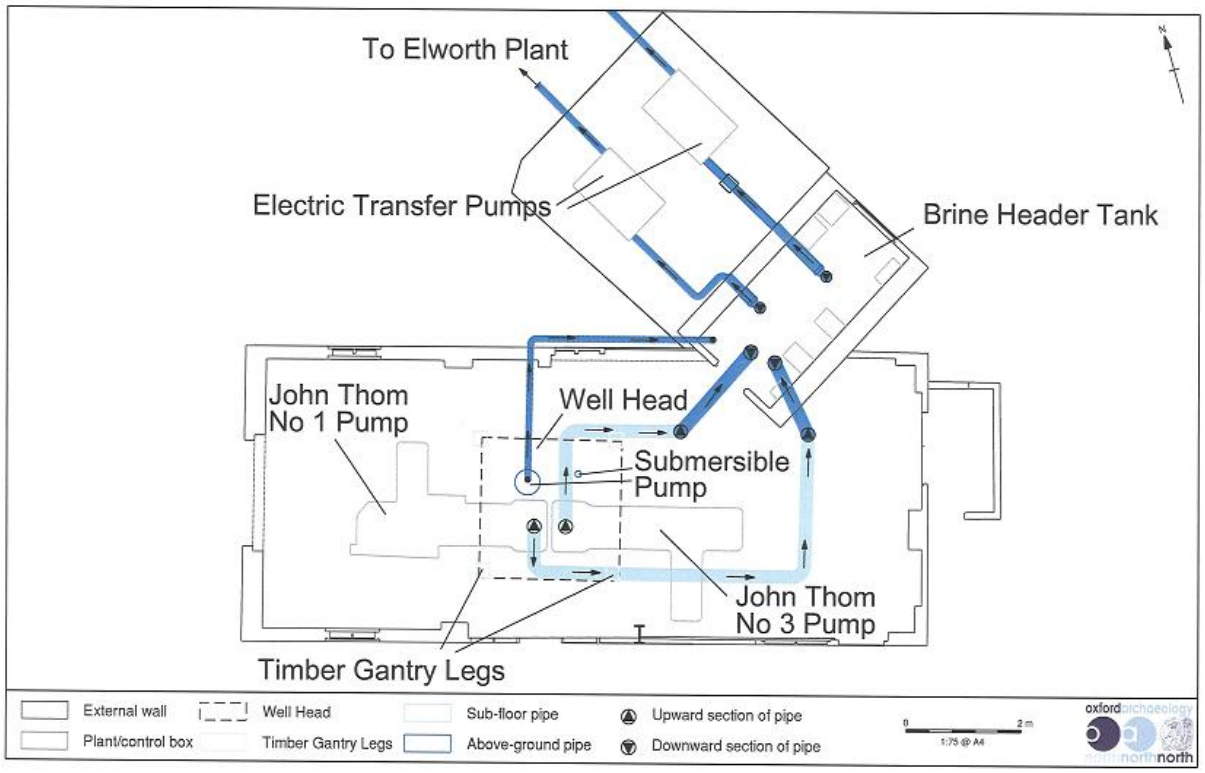
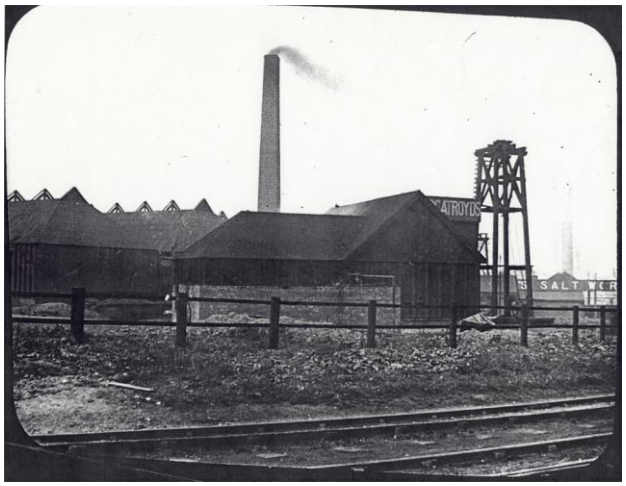


Figure B: Plan illustration of the flow of brine

3.5 Murgatroyd's brine pump has significant heritage merit, as demonstrated by its national status as a Scheduled Monument. The archaeological survey undertaken for this study was based on English Heritage criteria for the Management of Archaeological Projects and adopts a numerical grading system with the highest priority awarded to elements of outstanding significance and the lowest priority to negative elements. The assessment identifies the well head as having outstanding significance followed by the brine shaft, three internal brine pumps and the timber gantry which are all of great significance. The brine header tank, external electrical transfer pumps and the transformer pole have some significance with the pump house building itself being of lesser significance. OAN emphasise that just because a feature is not in the highest category does not mean that it is dispensable.

3.6 An assessment was also carried out using the conservation principles developed by English Heritage. These identify the site's 'evidential', 'historical', 'aesthetic' and 'communal' value. In brief, the site represents a historical record of the last shaft of its kind to be sunk by the traditional method – dug out by hand and timber lined – and is now the only surviving wild brine extraction shaft. The aesthetic value of the site is limited to the timber head gantry, which may evoke nostalgia for a lost industrial heritage, perhaps enhanced by the derelict nature of the site and sense of wilderness that this brings. The brine pump also has considerable communal value due to the social and economic impact of Murgatroyd's salt works on the town. Many current and former residents have a strong interest in, and attachment to, the site as demonstrated through the public consultation exercise in June 2011.



1889

1966

4. Current condition

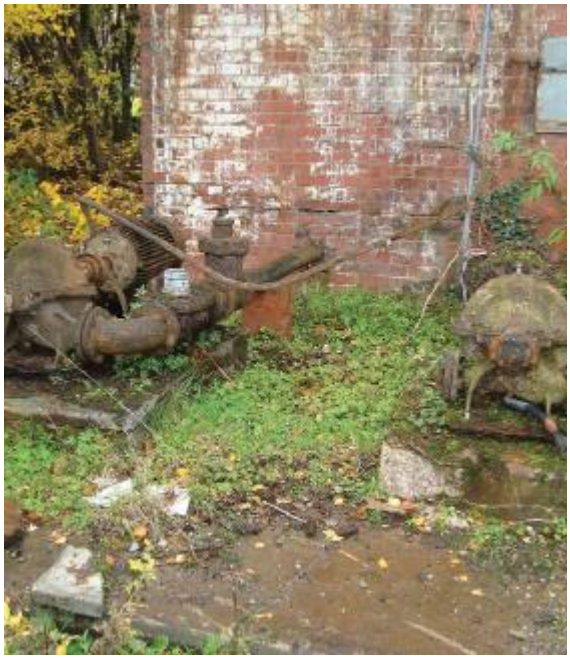
4.1 The site is within the Brooks Lane Industrial Estate and is not currently accessible to visitors. It can only be reached across land owned by another party and this is by arrangement only. Visitors cannot go inside the pump house for health and safety reasons including the presence of asbestos. The remainder of the site is unmaintained scrub and also poses risks as the ground is uneven and there is a razor wire fence at the western boundary. Although the condition of the pump house building is fair, the building is not weatherproof and would require extensive repair if it were to perform the function of housing and protecting the shaft

and machinery effectively. None of the machinery is in working order but the internal pumps are quite well preserved. There are also two external pump motors that have been exposed to the elements and are corroded. The condition of the shaft itself is unknown but it is assumed to be good due to the preserving quality of salt. However, if the shaft lining has deteriorated there could be a risk of collapse and Cheshire East Council plan to carry out a sonar survey to get a more accurate assessment of the shaft's condition.

Timber head gantry

Timber lined shaft

Pumping machinery



External pump motors

5. Options for the site

5.1 As well as options for the physical development of the site, the consultant team also considered potential approaches to interpretation given the constraints of the site. The pump house building can not realistically be adapted for visitor access given its size and the presence of machinery as well as the shaft itself. The likely target audiences are visitors to Middlewich, salt/industrial heritage enthusiasts and professionals, and school/college students. Evidence from other similar attractions within the UK suggests that the brine pump is unlikely to attract more than around 1,500 visitors per year and that guided tours, rather than independent visits, will work best.

5.2 It is most likely that the majority of interpretation would be off site, potentially at Town Wharf (if development aspirations for this site come to fruition) or another Middlewich venue such as Victoria Building (the current home of Middlewich Town Council). Although it is perhaps unrealistic to expect other salt attractions across Cheshire to provide substantial interpretation, efforts should be made to ensure that the brine pump is at least signposted from venues such as the Northwich Museum (formerly Weaver Hall) and the Lion Salt Works.

5.3 When telling the story of the brine pump, the main areas of focus will be:

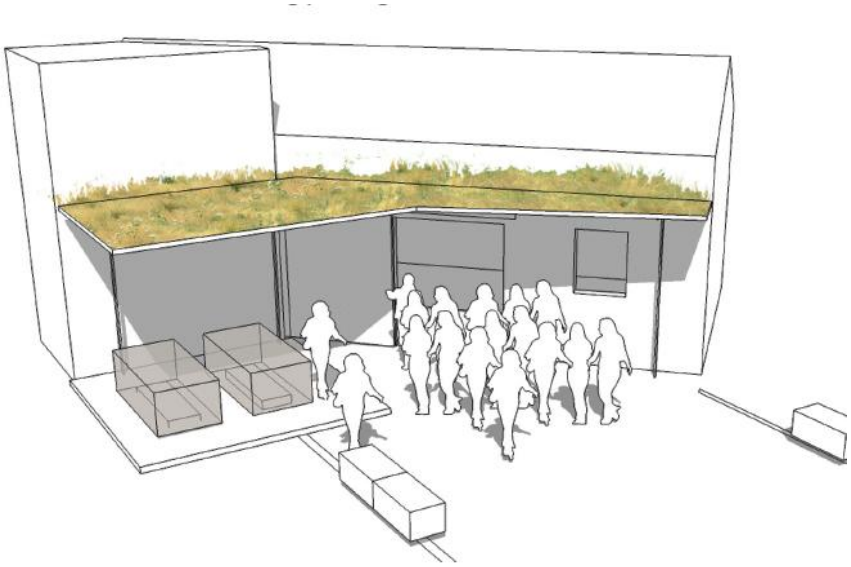
- The pump and machinery itself;
- Development of Murgatroyd's and its economic and social impact on Middlewich; and
- Development of the Cheshire salt industry and its links to the wider chemical industry.

Design options

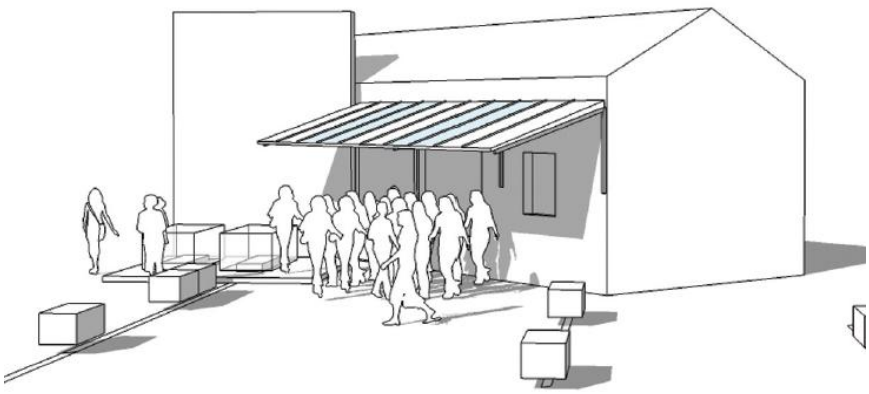
5.4 The study team and steering group have considered a wide range of design options for the brine pump site, with indicative construction costs being prepared for each.

Option Number	Option Description	Development cost
1	**Mothballing repairs**	£64,100
1a	**Basic protection for external pumps**	£126,500
2	**Full conservation repair**	£237,860
2a	**Basic protection for external pumps (+ external structure)**	£254,060
3	**Full conservation repair with facilities**	£331,060
3a & 3b	**Full conservation repair with canopy**	£370,260 & £362,060
4	**Replacement building on a like-for-like basis**	£86,400
5	**Replacement building in a contemporary form**	£235,800

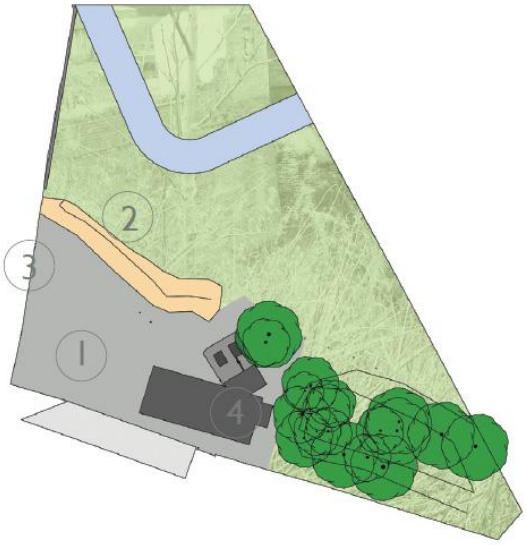
Although mothballing appears to be the cheapest option, it would not make the site accessible and could only be seen as a short term holding solution. Replacement buildings, options 4 and 5, also seem cost effective but as the brine pump and pump house constitute a Scheduled Monument, options 4 and 5 would not be acceptable to English Heritage. The options most likely to secure significant grant funding investment, on account of being appropriate for the 'needs' of the asset and 'viable' in terms of the likely audience, which have therefore been developed in some detail, are options 2 and 3. The short list of options which were subject to public consultation is as follows:



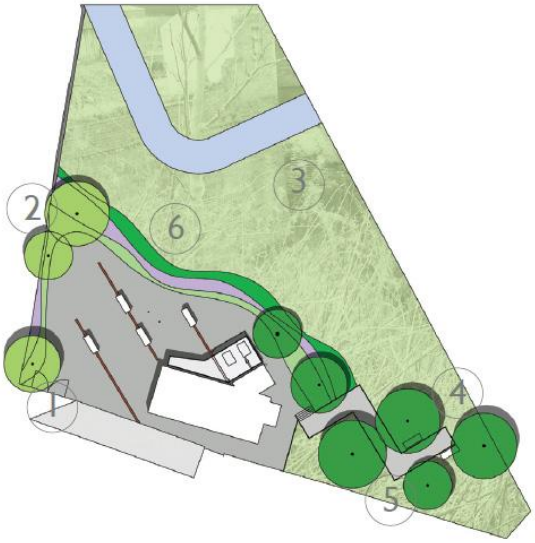
Option 3a with grass roof canopy



Option 3b with glass roof canopy



Option 2 Conservation repair only



Option 3 with viewing window and canopy

Public consultation findings

5.5 Public consultation was conducted during the Middlewich Folk and Boat Festival on 18 and 19 June. The study team produced a series of exhibition boards and leaflets which explained the purpose of the CMP, provided some historic background to the brine pump and presented the shortlist of options. The boards were complemented by an extensive exhibition on the history of the brine pump, collated by the Middlewich Heritage Development Officer, and which included film footage of the brine pump in operation. Leaflets summarising the information on the boards were also provided for visitors. Members of the study team and the Middlewich Heritage Development Officer were on hand to provide further information and to answer questions. A questionnaire survey was also conducted with visitors and achieved a total of 99 responses.

5.6 The main findings from the survey were that:

- Most consultees were already aware of the brine pump with only 37% not being aware of it before the event.
- Most did assign value to the brine pump with only 2% responding that it was not important to them. The most common reasons for attaching importance to it were that "it has local historical value and helps me to understand how this area developed" (53%) and "it has personal/sentimental value because I or friends/relatives used to work there" (26%).
- Just under 100% think that it is important to conserve the brine pump and also that people should be able to visit and learn about it.

- Three quarters of respondents said they would definitely visit the brine pump themselves and a quarter would possibly visit.
- The option most favoured by consultees was for conservation repair with (more substantial) landscaping, incorporating a pitched glass canopy and viewing window.

6. Funding opportunities

6.1 The brine pump would require between £64,100 and £370,260 for development costs and between £4,300 and £6,770 per year to cover revenue costs. The most likely large scale funding source for the project is the Heritage Lottery Fund, although some match funding would also be required.

6.2 Middlewich Town Council has had positive feedback from the Heritage Lottery Fund at the pre-application stage and plans to submit a stage 1 application in December 2011 for consideration at the March 2012 committee meeting.

6.3 Smaller funding sources may provide a 'match' for Heritage Lottery Fund and include operators of the Landfill Tax Grants scheme, specifically Waste Recycling Environmental Limited (WREN) or the Veolia Trust. The Association for Industrial Action (AIA) may provide funding for a specific part of the project (such as restoration of the machinery) and there are also a number of charitable trusts that may provide resources for conservation repairs, interpretation and/or site landscaping. Establishing a management organisation for the brine pump that has charitable status may allow access to a greater range of funding sources than if management is carried out by the public sector.

6.4 Revenue funding sources will most likely come from three broad sources: income generated by operation of the facility, grant awards and, possibly, mainstream public sector funding.

7. Recommendations and next steps

7.1 The Conservation Management Plan has been based on a very robust set of surveys and assessments and provides a strong basis for future development of the bring pump site. This is a significant heritage asset and there is clear public support for conserving the brine pump and for developing it as a visitor attraction and educational resource. Initial feedback from funders suggests that there is a good potential to secure the necessary resources and Middlewich Town Council intends to submit an application for Heritage Lottery Funding.

7.2 The main areas for action are as follows:

1. Disseminate information regarding the significance of the site;
2. Resolve remaining ownership and access issues;
3. Develop a business plan;
4. Progress Heritage Lottery Fund application;
5. Pursue and secure match funding;
6. Investigate revenue support opportunities;
7. Undertake consultation and partnership development; and
8. Recruit volunteers for appropriate restoration work and to give guided tours.

7.3 In addition, an annual review of the CMP is recommended to ensure changes relating to the site and surrounding area, as well as the wider political, policy and funding contexts, are not overlooked and the CMP remains a relevant management tool.