



GRIMSBY DOCKS, ICE FACTORY Conservation Statement

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Grimsby Docks Ice Factory - Conservation Statement

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Conservation Statement

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EXECUTIVE SUMMARY

This Conservation Statement examines the Grimsby Docks Ice Factory, a Grade II* Listed Factory built on the coastal Dockland area of Grimsby by the Grimsby Ice Company in 1901. The Factory produced large quantities of ice; essential support for the burgeoning fishing trade as ice facilitated its growth and with it the economic fortunes of the town. It is therefore unsurprising that there were later extensions to the Ice Factory, notably the 1910 building to the north and the slightly later Compressor House to the west which was probably built between c.1917 and c.1925. In c.1950 a further New Compressor Room was erected to the south. These extensions, combined with the conversion from steam power to electricity in 1931, increased the efficiency and output of the Factory enabling it to continue to serve the needs of the growing fishing trade as Grimsby became one of the largest and most successful fishing ports in the world.

The Ice Factory continued to provide ice to the local fishing industry until 1990 when production ceased. Following the termination of the tenancies of the land on which it stands, the ownership of the Ice Factory reverted to Associated British Ports. The buildings have remained vacant since 1990 and they have fallen into increasing dereliction. Placed on the Heritage at Risk Register in November 1992 by English Heritage, the Ice Factory faces an uncertain future.

The primary aim of this report is to understand the significances of the Ice Factory, in particular its remaining in-situ ice making machinery. Overall this report finds that the Ice Factory buildings have a generally high significance and the ice making machinery an exceptional significance, on the basis that the Ice Factory is a very rare building type to survive, is substantially complete, and contains Britain's last surviving examples of in-situ early to mid 20th century refrigeration equipment. The four J & E Hall ammonia compressors installed in the Compressor House in 1931 are probably the oldest, and the largest, to survive in the UK and possibly also Europe. They are considered to be of international interest. The Ice Factory is also considered to be an important symbol of Grimsby's leading role as a fishing centre in the early-mid 20th century and of the history of refrigeration.

Looking forwards to the future, the Grimsby Docks Ice Factory faces a series of challenges. It is located within Port Operational Land, the buildings and (to a lesser extent) the machinery within, are in a poor and deteriorating condition requiring considerable funding to repair and conserve, and future uses of the site would need to respect its industrial, architectural, historic and other significances. In October 2010 the site was again placed under a national spotlight when the Victorian Society included it on a list of ten buildings drawn up using nomination from members of the public that it considers to be the ten most threatened Victorian / Edwardian buildings in England and Wales.

Despite the challenges ahead, given the unique nature of the Ice Factory and its important significance, this Conservation Statement recommends that every effort should be made to try and secure its long term future. The large size of the available floor area provides the potential to repair and redevelop the Ice Factory for a range of possible uses. Sustainable reuse could bring to life a major element of Grimsby's heritage as part of a flagship project. It is therefore the intention of this Conservation Statement that it be used to guide and inform the future of the Ice Factory and be a vehicle for planning and managing positive change.

SELECT GLOSSARY

Due to the nature of the site, and its operation as an ice making factory, the use of technical specialist terms is unavoidable. This section provides a select glossary of commonly used terms:

Ancillary Machinery and Ice Making Machinery: the ancillary machinery includes machines and plant that supported the operation of the ice making machinery and process. In comparison, the ice making machinery played a pivotal role in ice production.

Atmospheric Condenser: an array of steel tubes exposed to fresh air which are fed with ammonia gas under pressure and which have cold water pumped over the outer surface. This causes the water to evaporate, cooling the gas and causing it to condense. Atmospheric condensers were used extensively from 1880 – 1930 but were gradually superseded by evaporative condensers which used a fan to force air across the cooling coil and so were smaller, cheaper and more efficient.

Block Ice: ice made in large blocks, typically weighing 100kg – 150kg.

Can and cell ice tanks: in can ice tanks the ice is formed in separate vessels (or cans) immersed in brine, the vessels afterwards being transferred to a warm bath for a short period in order to release the ice. In comparison in cell ice, the ice is formed in a number of fixed cells in the walls of which brine was circulated. The ice was released by replacing the brine flow with warm water with each block being separately handled.

Coefficient of Performance (CoP): the ratio of refrigerating effect to power input, both measured in kW.

Compressors: An ammonia compressor is a mechanical device that creates refrigeration by removing heat from objects or spaces. A compressor compresses the ammonia gas, which heats up as it is pressurized. It refrigerates by changing the refrigerant, in this instance ammonia, from a liquid state to a gaseous state and back to liquid. Ammonia is commonly used in cold-storage plants, ice rinks, and other commercial applications.

Electrolyte: a liquid which conducts electricity, typically salt solution or acid.

Fabric: the building fabric.

Flake ice: ice made on the surface of a refrigerated metal cylinder then broken off by a series of metal blades. The flakes are typically about 1mm thick and are about the size of a 50p piece.

Shell and tube condenser: a cylindrical pressure vessel containing an array of tubes. Water passes through the tubes and refrigerant condenses on the outside of the tubes, inside the shell of the vessel.

Site: the building fabric and its contents.

Slip ring motor: an electric motor fed with alternating current where the windings are on the rotating shaft and are connected to the power supply through a set of carbon contacts which run on smooth metal rings.

Superheated: gas which is heated above its condensing temperature.

Window Light: refers to a glass pane, several of which may be used to construct the final window. The terms single light, two light etc refer to the number of these glass panes in a window. Note that the lights in a window sash are divided horizontally and vertically by narrow strips of wood or metal called muntins. More substantial load bearing or structural vertical dividers are called mullions, with the corresponding horizontal dividers referred to as transoms.



The site (note that this image was produced prior to changes to the road layout in the immediate vicinity of the Ice Factory)

1 INTRODUCTION

1.1 Reasons for the Conservation Statement

This Conservation Statement examines the Grimsby Docks Ice Factory located within Grimsby in close proximity to Fish Dock No.2. The Ice Factory is Grade II* Listed, a recognition that it is of national interest. English Heritage defines Grade II* Listed buildings as '*particularly important buildings of more than special interest*'. The Ice Factory was built in 1900-1901 with four main later extensions occurring between c.1907 and c.1950. These extensions are the consequence of decisions to improve efficiency or expand production / capacity by purchasing new refrigeration machinery. Within the Ice Factory survives refrigeration equipment installed in the early-mid 20th century, a number of which were produced by J & E Hall of Dartford. No original ice making machinery survives *in-situ*.

The factory continued to provide ice to the local fishing industry until 1990 when production ceased. Since then it has remained vacant and the condition of the building fabric and machinery have deteriorated. The site has also suffered from theft and vandalism despite the security measures in place. As a consequence, the Ice Factory has been placed on the *Heritage at Risk Register* by English Heritage where its condition has been described as '*very bad*' and its priority assessed as A which is the highest priority for action.

The Ice Factory has been owned by Associated British Ports (ABP) since its closure in 1990. North East Lincolnshire Council (NELC) has been working alongside ABP to investigate the potential for the development of the Ice Factory buildings. Following a detailed measured survey of the buildings by Hodson Architects (2009), Alan Baxter & Associates produced an *Appraisal of the Existing Structure* (2010). Through the production of this appraisal, it became apparent that further information on the significance of the buildings and their contents was required. It is possible that any future development of the buildings may require the removal of some of the *in-situ* ice making machinery and the ancillary plant and machinery. Before the feasibility of this can be considered, the significance of the buildings and the machinery must be assessed to ensure this understanding informs the process in order to minimise any loss of significance to the heritage assets.

The aims of this Conservation Statement are thus to guide and inform any alterations, development, management, repair and future uses of the buildings. It will provide the conservation context and a reference for decision making. It is intended that this report will be a vehicle for planning and managing positive change, which will identify opportunities to develop and enhance the overall management of the Ice Factory and its historic assets, in addition to setting out the constraints within which the Ice Factory operates. Key objectives are:

- ◇ To provide accurate information regarding the Ice Factory's design, construction, function, evolution, context and contents.
- ◇ Assess the architectural and historic importance of the buildings and the remaining plant and machinery within them.
- ◇ Establish the community and cultural importance of the Ice Factory.

In order to achieve these objectives the Conservation Statement will:

- ◇ Provide a Statement of Significance for the Ice Factory buildings.
- ◇ Provide a comprehensive Statement of Significance for the ice making machinery and the ancillary plant and machinery contained within the buildings.
- ◇ Develop a Vision Statement and summary of overall aims for the management of the Ice Factory, including a set of high level policies.
- ◇ Establish appropriate management objectives related to the delivery of the policies.

1.2 Authorship

The production of this Conservation Statement was commissioned by NELC, in consultation with ABP. This report has been prepared by Liz Humble (Heritage Consultant, Purcell Miller Trittton) on behalf of NELC. Andy Pearson, (Managing Director, Star Refrigeration's Contracts Group and an Associate with Star Technical Solutions, the consultancy arm of Star Refrigeration Ltd), provided invaluable technical advice on the refrigeration equipment and plant within the Ice Factory. A number of individuals and organisations have also made useful contributions to the Plan and these are listed in Section 1.5. Whilst a number of individuals have been consulted as part of the production of this report, the opinions expressed are ultimately those of the author and specialist consultant Andy Pearson.

1.3 Adoption and Review

The first draft of this Conservation Statement was distributed to NELC, ABP, and English Heritage for consultation in September 2010. The Conservation Statement was then updated to reflect any comments and a final report produced in November 2010. Following the completion of consultation and the submission of the final report, it will be the remit of NELC to hold copies of the document and to distribute these upon request to necessary parties for use after final adoption.

1.4 Scope of the Study

The scope of the study area (sometimes referred to as 'the site') covers the buildings and their contents that form the Grimsby Docks Ice Factory under the ownership and management of ABP.

1.5 Gaps in Knowledge

Access to the interior spaces of the buildings was limited for reasons of health and safety. The floors were considered to be unsafe in places where the woodwork has rotted. Although this prevented a full inspection, the site visits undertaken are considered to have informed an objective, sufficiently robust understanding of the building for the purposes of this Conservation Statement.

The Brief to Consultants for the preparation of the Conservation Statement supplied by NELC specified that no detailed historic research would be required. Thus various archives were only briefly examined as part of this commission, although two historic floor plans and various historic maps have been consulted.

Finally, none of the tools, for example ice picks, routinely used in the ice making process, were seen in any of the parts of the buildings.

1.6 Acknowledgements and List of Consultees

Throughout the process of researching and writing this Conservation Statement it has been both necessary and beneficial to consult with various groups, organisations and individuals. Particular thanks are due to Gill Osgerby, Urban Renaissance Project Officer (NELC), who has provided much appreciated co-ordination from the client team and has also provided advice and information. Thanks are also due to:

- ◇ Liz Milner, Marketing/Communications Writer, International Institute of Ammonia Refrigeration.
- ◇ Lynn Finn, Senior Public Services Assistant, Centre for Kentish Studies, Maidstone.
- ◇ Michael Carter, Centre for Kentish Studies, Maidstone.
- ◇ Neil Everitt, Editor of Air Conditioning and Refrigeration News.
- ◇ Pauline Lee, Secretary, Cleethorpes and Grimsby Civic Society.
- ◇ Vicky Ellis, Heritage Protection Team, English Heritage, York.
- ◇ Vicky Hartung, Chairman, Great Grimsby Ice Factory Trust.
- ◇ Andrew Findlay, Senior Estate Surveyor, Grimsby & Immingham, Associated British Ports.
- ◇ Andy Pearson, Managing Director, Star Refrigeration's Contracts Group and Associate, Star Technical Solutions.
- ◇ Catherine Dewar, Historic Areas Advisor, English Heritage.
- ◇ Chris Lester, Society for Lincolnshire History and Archaeology.
- ◇ David Blackhurst, Director, Star Technical Solutions.
- ◇ Elaine Pearce, DCMS.
- ◇ Graeme Bassett, Secretary, Great Grimsby Ice Factory Trust.
- ◇ Graeme Deacon & Clare Broomfield, Enquiry & Research Services, National Monuments Record.
- ◇ Hugh Winfield, Archaeologist, Regeneration Department, North East Lincolnshire Council.
- ◇ John Wilson, Archivist, North East Lincolnshire Archives.
- ◇ Liz Mayle, Conservation Officer, North East Lincolnshire Council.

1.6 The Conservation Statement Methodology

In order to make the Conservation Statement a functional and manageable document, it has been arranged into a number of chapters:

Introduction

This is a summary of basic information including the reasons for the report, the author, scope of study, existing information, and methodology.

Understanding the Grimsby Docks Ice Factory

Within this chapter is an outline description of the site including location, archaeology, statutory designations and national planning context. Also included is a chronological summary of the historic development of the Ice Factory, highlighting key historic dates and events. This is followed by a description of the site, its uses and management, and a comparative analysis of other ice factories. This chapter concludes with the results of a semi-public consultation.

Statement of Significance

This chapter sets out an overview of the cultural heritage significance of the buildings with more detailed assessment of the significance of the machinery. This is set out thematically based upon characteristics such as architecture, history and social context.

Issues, Constraints, Vulnerabilities and Opportunities

This chapter addresses conflicts and vulnerabilities existing within the site with regards to its cultural significance. The main categories cover ownership, location and use, condition, potential for development and funding sources, and conflicts of significance.

Conservation Management Policies

A vision statement is supported by a series of high level policies and recommendations framed to guide future use, development, repair, management and maintenance of the site. The intention of these is to protect and enhance the heritage and significance of the site and to provide a framework for sustainable managed change.

Bibliography

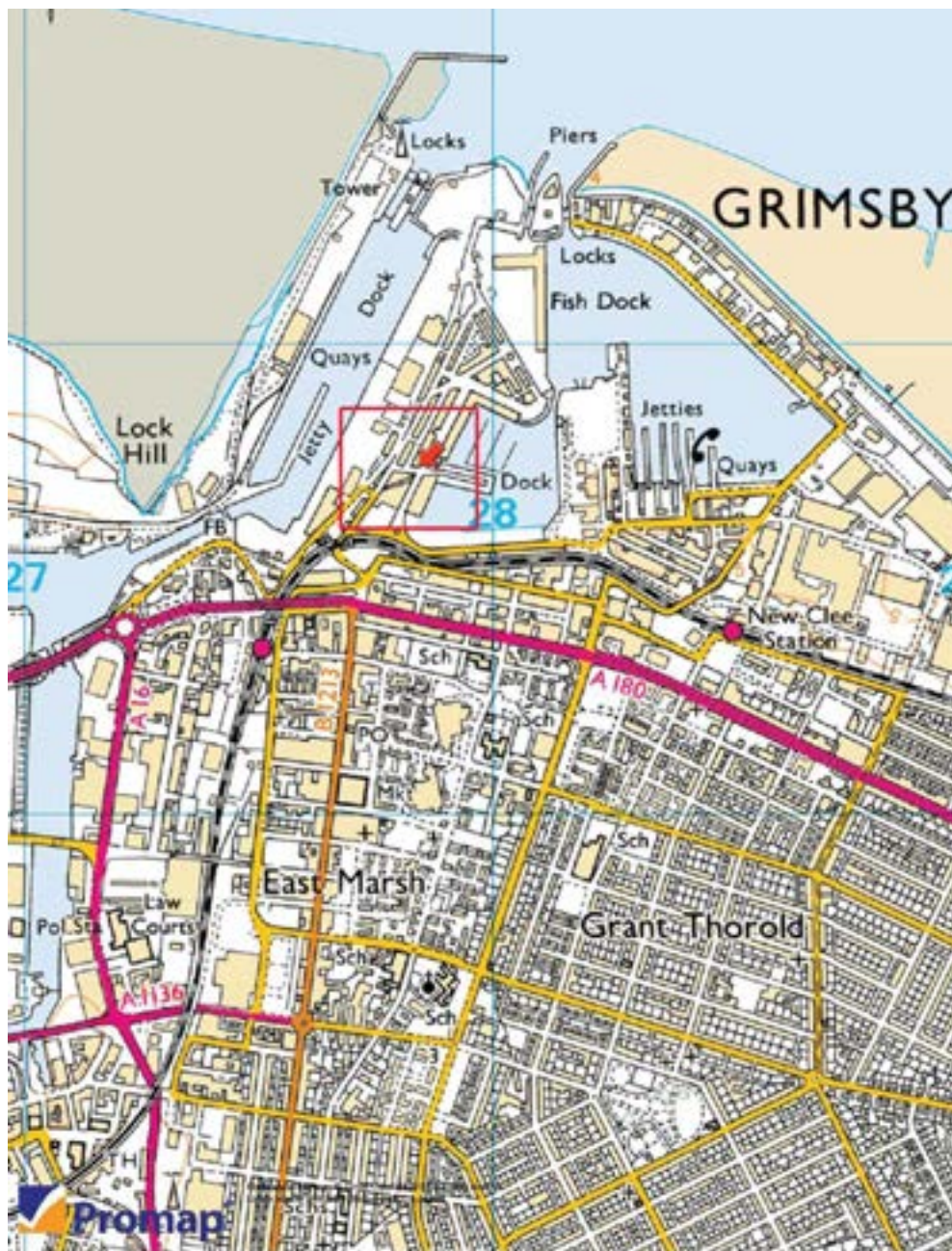
A full bibliography for the Conservation Statement, including primary and secondary sources, archives visited, and any other relevant information which has been referenced, is provided here.

Appendices

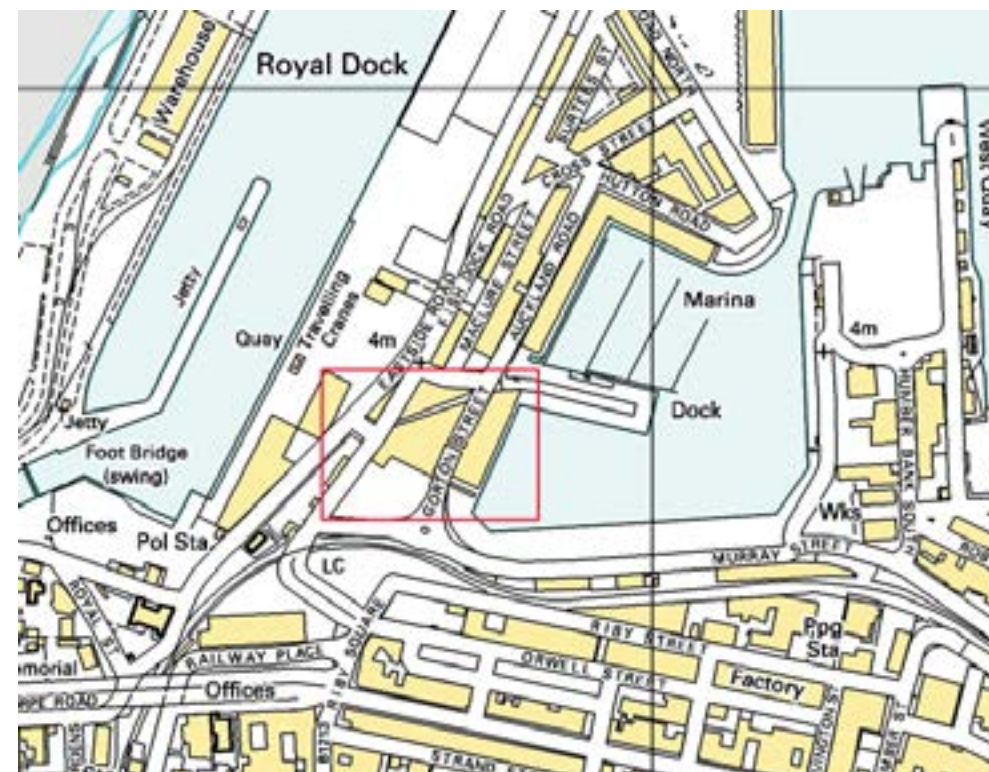
The appendices cover important additional information which would prove unwieldy if included in the main body of the text. This includes the listing description, photographic and drawn archives with supplementary descriptive text and evidence from historic maps and HER data.

1.7 Existing Reports and Reference Information

This report summarises and further develops the architectural investigation report produced by English Heritage (2001), the measured survey by Hodson Architects (2009) and Appraisal of the Existing Structure by Alan Baxter & Associates (2010). It will avoid, wherever possible, simply repeating well known existing information. A full bibliography of the sources consulted is included in Chapter 6 of this report.



The location of Grimsby Docks Ice Factory in its wider setting (note the former road layout). Site located within the box (for indication purposes only).



The location of Grimsby Docks Ice Factory in its immediate setting (note the former road layout). Site located within the box (for indication purposes only).

2 HISTORY & CONTEXT: UNDERSTANDING THE GRIMSBY DOCKS ICE FACTORY

2.1 Site Overview

2.1.1 Site Location

Grimsby Docks Ice Factory is located in the coastal dockland area of Grimsby, North East Lincolnshire at NGR TA 2780 1007. Grimsby is a seaport on the Humber Estuary with a population of over 85,000. It is physically linked to the adjoining town of Cleethorpes and important fishing, food production and storage industries are found in both towns. The Ice Factory is situated within an industrial dockland landscape where it is adjacent to No.2 Fish Dock and east of the Royal Dock. This Docks area has a strongly distinctive character due to its association with the fishing trade and there is a concentration of fish smokehouses, shops, warehouses, commercial and social facilities, marketing spaces and transport systems associated with this trade.

The site is part of the Operational Port area owned and managed by ABP and lying within a fenced compound. The area comprised several vacant sites which have been transformed into a cargo handling area as ABP altered the Port entrance and connecting road layout. The east elevation is the only one that currently faces out onto a road, namely Gorton Street. Most of the other elevations historically fronted roads – the west elevation faced Fish Dock Road, the north elevation Stuart Wortley Street, and the south elevation Fox Street which led to Murray Street via William Street. Furthermore a former railway line separated the original 1901 building from a slightly later extension added by 1910. The railway was dismantled in the c.1960s and the resultant passage between the buildings became used as a road known as Parker Street. This is no longer a through road and is simply a passage. With the exception of Gorton Street, the other roads that previously bounded the Ice Factory now form part of the secure compound around the perimeter of the site; part of Fish Dock Road remains to the north and south of the site. Despite this change to the former road layout, to aid identification of the elevations, and to be consistent with previous reports, the names of these former roads are referred to within this report and on accompanying plans.

2.1.2 Site Ownership, Management and Use

Grimsby Docks Ice Factory has remained disused from the date of its closure in 1990. It is owned by ABP who inherited it when the tenancies of the land upon which it was built were terminated. The Ice Factory was built by the Grimsby Ice Company (who later transferred their ownership in the buildings to a sister company, the Grimsby Exchange Limited, in the late 1970s) on the land they held on various tenancies from the Railway Company that owned the Port in the early 1900s¹. These tenancies were all terminated at the end of August 1990 after ice production ceased in July. The area immediately around the south west and north of the site has been closed to through traffic in recent months and forms part of the secure Port Operational Land that is in use for cargo handling at the Port.

ABP is the UK's largest and leading port group with 21 ports, together with other transport related businesses forming part of the ABP Group, providing a UK-wide network capable of handling every conceivable type of cargo. The Group's activities cover transport, haulage and terminal operations, ship's agency, dredging and marine consultancy. Further details can be found online at <http://www.abports.co.uk>.



Aerial view of the Grimsby Docks Ice Factory (note the former road layout)

2.1.3 National Planning Context and Legislative Framework

There are a range of statutory policies in place at a regional and national level. This section briefly considers the statutory designations and national legislative background.

Statutory Designations

Grimsby Docks Ice Factory was first Listed Grade II on 12 September 1990. This was revised and upgraded to Grade II* on 12 August 1993. A Revised List of Buildings of Special Architectural or Historic interest dated 30 June 1999 was prepared for the whole of Grimsby and this 1999 Listing (Appendix A) supersedes the earlier versions. The Listing includes the Factory's contents and external fixtures. Consequently the Gantry Conveyors extending from the east elevation of the Ice Factory across Gorton Street to the dockside are, by reason of their attachment to the Listed building, are also affected by the Grade II* Listing status as are the railings along Gorton Street and the footbridge across the passage (formerly Parker Street) linking the 1901 and 1910 buildings. All the ice making machinery and ancillary plant and machinery within the factory are also Grade II* Listed. A List description is for identification purposes only and the Listing gives protection to the whole Ice Factory whether or not items are covered by the List description. Therefore items or fabric that are omitted are nevertheless covered by Listing.

¹ The Grimsby Ice Company Limited and the Grimsby Exchange Limited along with other Companies that were owned by the Grimsby Fishing Vessel Owners Association were transferred to the Grimsby Exchange Limited as part of a consolidation exercise.

National Planning Policy

The Government has set out its approach for the historic environment in national planning policy supported by English Heritage guidance. Planning Policy Statement 5 (PPS 5) sets out Government policy on how the historic environment should be integrated into, and considered during, the planning process. In summary, PPS 5 brings in a new, integrated approach to the historic environment and heritage assets, removing the distinction between buildings, archaeological remains and landscapes. It provides a unified approach to planning permission and Listed building consent applications.

PPS 5 maintains the same level of protection to the historic environment as the planning policy guidance notes (PPG15 and 16) that it replaced in 2010. Heritage conservation is recognised as being integral to the overriding aim of planning. PPS 5 states that the Government's overarching aim is that the historic environment and its heritage assets should be conserved and enjoyed for the quality of life they bring to this and future generations (PPS 5 para 7). It articulates the Government's policy principle that there should be a presumption in favour of the conservation of designated heritage assets and that the more significant the asset the greater the presumption in favour of its conservation (PPS 5 HE9.1). PPS 5 also emphasises the importance of continued viability and the change needed from time to time to facilitate that. By focusing on what matters about a heritage asset – its significance – it frees up opportunities to keep these assets in use and manage informed, appropriate sustainable change.

PPS 5 also recognises that considerable alteration or demolition, whether partial or total, may sometimes be necessary. Policy HE9.2 states that:

'Where the application will lead to substantial harm to or total loss of significance local planning authorities should refuse consent unless it can be demonstrated that:

- (i) the substantial harm to or loss of significance is necessary in order to deliver substantial public benefits that outweigh that harm or loss; or*
- (ii) (a) the nature of the heritage asset prevents all reasonable uses of the site; and*
(b) no viable use of the heritage asset itself can be found in the medium term that will enable its conservation; and
(c) conservation through grant-funding or some form of charitable or public ownership is not possible; and
(d) the harm to or loss of the heritage asset is outweighed by the benefits of bringing the site back into use'.

Policy HE9.3 states that:

'To be confident that no appropriate and viable use of the heritage asset can be found under policy HE9.2(ii) local planning authorities should require the applicant to provide evidence that other potential owners or users of the site have been sought through appropriate marketing and that reasonable endeavours have been made to seek grant funding for the heritage asset's conservation and to find charitable or public authorities willing to take on the heritage asset'.

Policy HE12 makes it a requirement that local planning authorities ensure that developers *'record and advance the understanding of the significance of the heritage asset'* if its loss or damage is justified. This includes the publication of the evidence.

Planning Permission

Planning permission covers statutory planning. It is almost always required under *Section 55* of the *Town and Country Planning Act 1990* for any development of land. Development is defined as:

- ◇ The carrying out of building, engineering, mining or other operations in, on, over or under the land.
- ◇ The making of any material change in the use of any buildings or other land.

Planning permission only is required for development affecting the setting of Listed buildings. Listed building consent is required for works affecting the special character of the Listed building (fabric, interior and exterior) or any fixture of curtilage (built before 1948) associated with the original building where its use was ancillary or subsidiary to the principle building.

ABP is a Statutory Undertaker and therefore has Permitted Development Rights as contained at Part 17 Class B of Schedule 2 of the *Town and Country Planning (General Permitted Development) Order 1995*. ABP have permitted development rights to carry out development on operational land in respect of any dock, pier, harbour, water transport, or canal or inland navigation undertakings so long as they are required for the purposes of shipping or in connection with the embarking, disembarking, loading, discharging or transport of passengers, livestock or goods at a dock, pier of harbour, or with the movement of traffic by canal or inland navigation or by any railway forming part of the undertaking. Any development not related directly to the above would require planning permission.

Listed Building Consent

Works to Listed buildings fall under the *Planning (Listed Buildings and Conservation Areas) Act 1990*. *Section 5* of this Act sets out that Listed building consent must be obtained from the local planning authority. Listed building consent would be needed for:

- ◇ Works that alter or affect the character or appearance of the building/structure and thus affect its special value for Listing purposes. This will almost certainly be necessary for any major works, but may also be necessary for minor alterations and possibly some repairs and maintenance that are not like for like.
- ◇ Works such as re-pointing and even repainting can give rise to the need for a Listed building consent, even if planning permission is not necessary. Replacement windows and doors are common areas of controversy and strict control.
- ◇ Brick / stone cleaning will also require Listed building consent, particularly for large areas of masonry. Most methods of cleaning masonry (be it stone or brick) are controlled by consent because they not only remove the patina of age but many (such as sandblasting) cause very serious and often irreparable damage to masonry.
- ◇ Consent will be needed for works of demolition or removal to any part of a Listed building/structure.

Identical repairs in matching materials may not require consent, but it is always advisable to check with English Heritage and the Local Planning Authority before undertaking any work on Listed buildings.

2.1.4 Geology

The Ice Factory occupies an area near the quayside of No.2 Fish Dock that, in common with the majority of the docks area, is land reclaimed from the River Humber and was built on landslip over alluvium over soft silt, peat and clay with some thin layers of sand, over chalk (for further details please refer to the appraisal by Alan Baxter & Associates 2010, 5-6).

2.1.5 Archaeology

The archaeological potential within the Port area forming the setting of the Ice Factory is largely concerned with the series of docks, mainly created to serve the timber trade, the fishing trade, and later food production. No Scheduled Monuments or other archaeological sites or finds within 100m of the Ice Factory are held at the National Monument Archaeological Records. The closest and most relevant known features of archaeological interest, as provided by the Historic Environment Record, are reproduced in Appendix E.



Fish Dock Road, a busy prosperous scene of activity with a number of fish processing related industries, including the Ice Factory along its full length

It is likely that pre-existing archaeological deposits in this area were destroyed during the construction of the docks and the Victorian and 20th century industrial developments that were largely linked to the development of the Port. It is, however, possible that pre-existing marine archaeology or very early dock building activity survives.

2.2 Grimsby Docks Ice Factory: Principle of Operation

Before examining the historical development of the Ice Factory it seems timely to briefly consider how the freezing process operated from its modernisation from 1930 until its closure in 1990.

Liquid ammonia at high pressure was fed to the pumping stations in the Tank House and expanded to low pressure, which reduced its boiling point to about -20°C. The cold ammonia liquid (ammonia being the refrigerant) was pumped to cooling coils submerged in tanks of

calcium chloride brine solution in the Tank House. Some of the ammonia evaporated, making the brine colder. The mixture of gas and liquid returned to the pumping station where the gas was separated from the liquid and fed back to the Compressor House.

The low pressure ammonia gas was compressed to high pressure, which raised its condensing temperature. The hot gas from the compressors was used to heat water which fed the defrost tanks towards the east end of the Tank House at the end of the ice making process. Brine was continually circulated from the lower to the upper tanks through four pumps in the Compressor House. This ensured good heat transfer between the ammonia coils and the brine and gave even temperatures throughout the tanks. The brine was chilled to about -13°C in this way.

The “cans” suspended in the brine tank on a rack system in the Tank House were key to the process as this is where the ice was manufactured. The cans were pushed along the length of the tank by a set of hydraulic rams. Towards the beginning of the process the cans would be filled from a series of nozzles at the west end of the Tank House. These fed from a fresh water storage tank with the water drawn from three boreholes and pumped into the storage tank by fresh water pumps in the Compressor House. Evaporator coils within the tanks would circulate brine which would absorb the heat from the water in the cans and turn it to blocks of ice. When the ice reached the far end of the brine tank, the frame containing the cans was hoisted out of the cold brine tank by the travelling crane and immersed in a warm water thawing tank for a few minutes. Once the bond between the wall of the can and the ice had melted, the ice blocks floated to the surface. With all the blocks released in this way the frames were lifted out of the water tank by travelling cranes and tipped over, sliding the ice blocks over a distribution platform / draining board at the end of each production lane and moved onto a rubber conveyor to be either fed into a crusher or placed in the Ice Store until required. The empty cans in their frames were then moved via travelling cranes running the length of the tank to the filling end of the Tank House for the process (which lasted about 27 hours) to begin again when once filled with water they were pushed along the tanks via hydraulic rams connected to screwed shafts driven by electric motors.



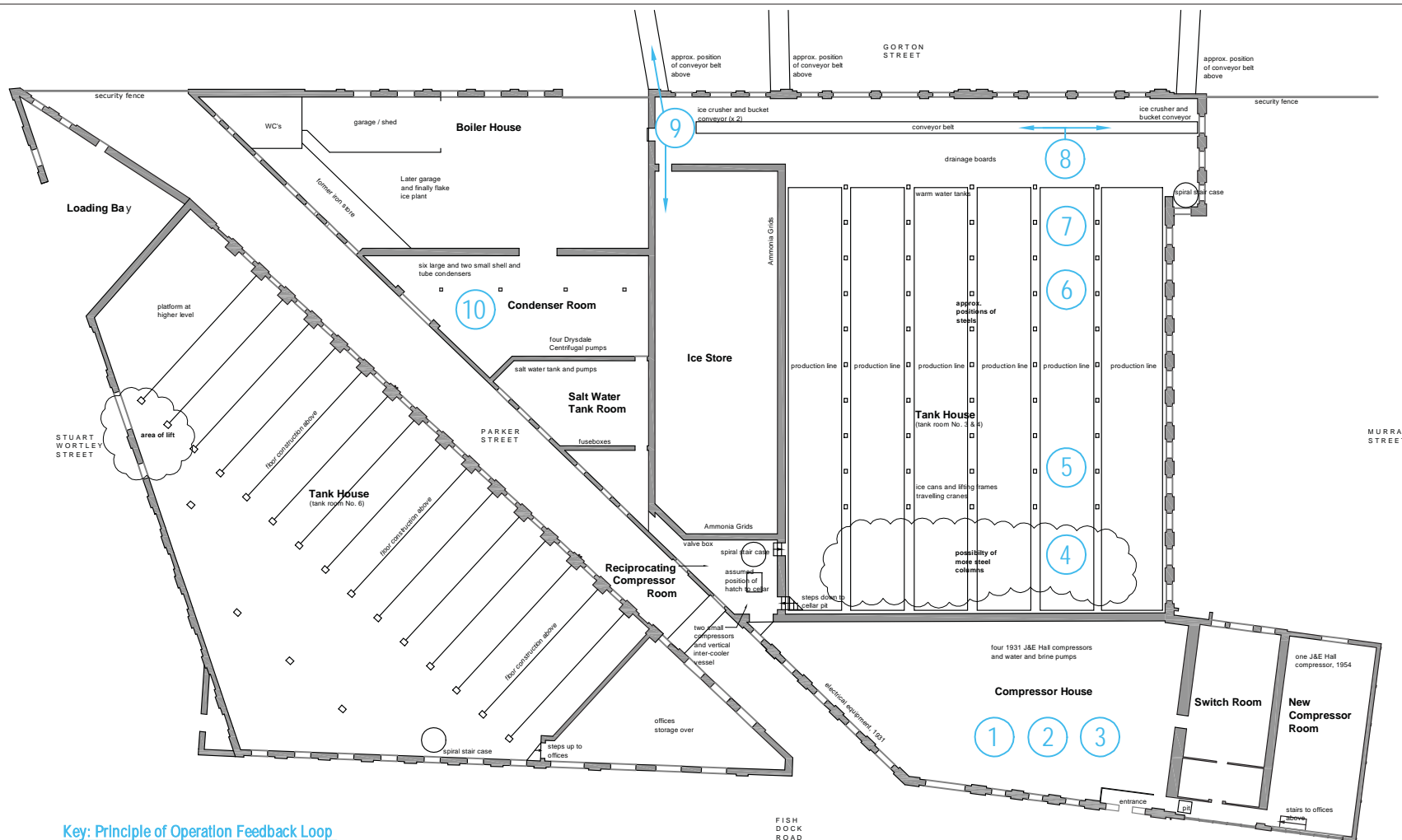
View westwards along a production lane in the Tank House, the filling nozzles are in the background (courtesy of Grimsby Reference Library)

The crushed ice was lifted via bucket conveyors up to the top of the building to be fed down distribution chutes either to the high level Gantry Conveyors, which bridge Gorton Street to the east of the Factory to deliver ice to the fish market shed or to trawlers prior to their fishing trips, or to deliver ice to road vehicles. English Heritage (2001, 5) report that a large majority of the ice manufactured was used by the fishing fleet but that some of the ice was used for the inland transport of fish and for other purposes.

The water supply for the shell and tube condensers in the Condenser Room was taken from the dock and pumped up to the roof level by four Drysdale centrifugal pumps located in a pit in the Condenser Room. On the inlet of the pump there is a large vertical cylindrical strainer, which would have prevented any debris from the dock damaging the pump. The water flowed down through the condensers under gravity, draining back into the dock via pipes running below Gorton Street.



Released ice blocks were removed from the cans, slid over a distribution platform and moved onto a rubber conveyor (courtesy of Grimsby Reference Library)



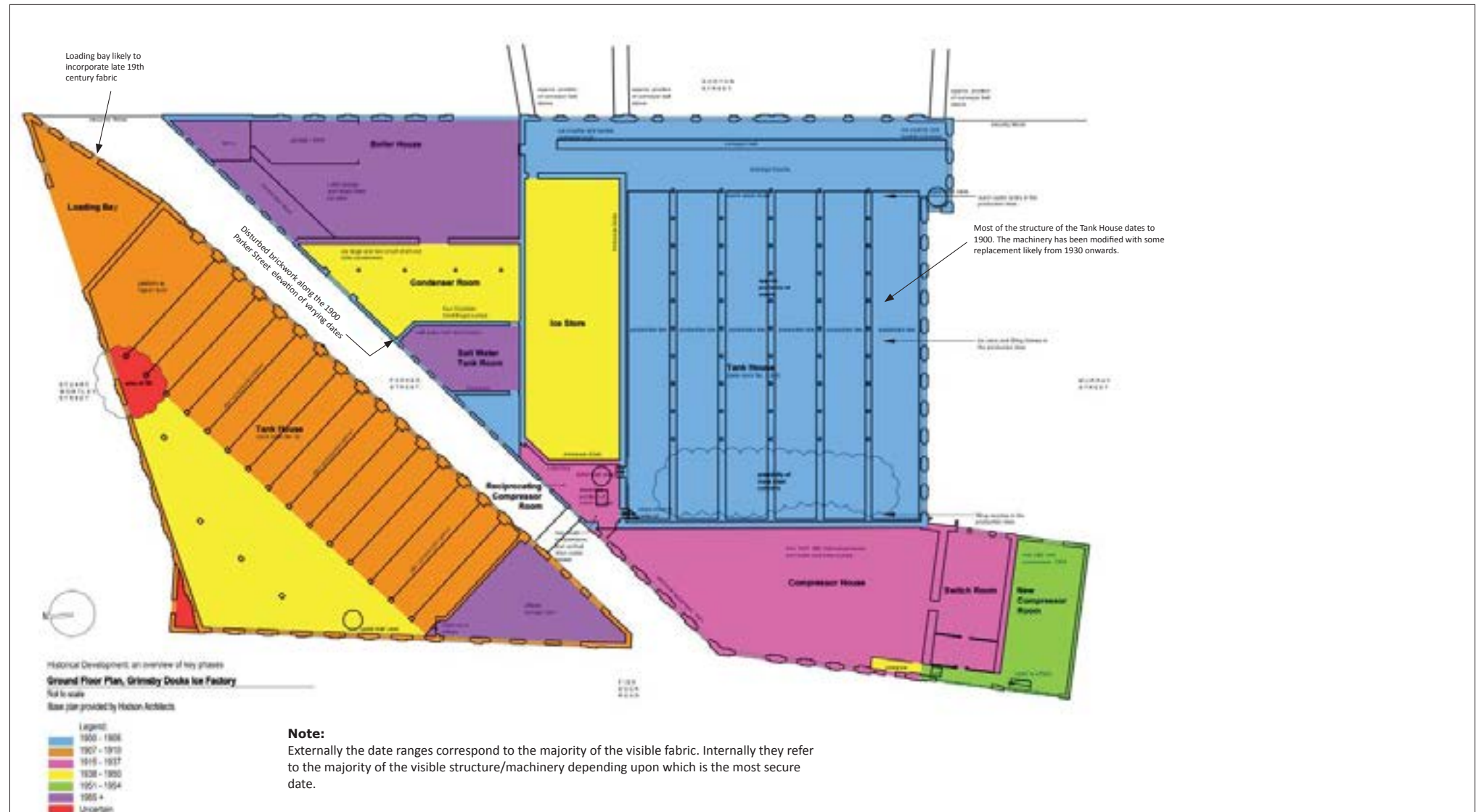
Key: Principle of Operation Feedback Loop

1. Low pressure ammonia gas was compressed to high pressure.
2. Brine was continually circulated from the lower to the upper tanks in the Tank House through four pumps.
3. Fresh water pumps pumped water into the storage tank.
4. Cold ammonia liquid was pumped to cooling coils submerged in tanks of calcium chloride brine solution. Some of the ammonia evaporated making the brine colder.
5. Ice was manufactured in "cans" suspended in the brine tank. The cans were filled from a series of nozzles feeding from the fresh water storage tank on the roof.
6. The cans were pushed along the length of the tanks by a set of hydraulic rams. Evaporator coils within the tanks would circulate brine which would absorb heat from the water in the cans turning it to blocks of ice.
7. When the ice reached the far end of the brine tank, the frame containing the cans was hoisted out by the traveling crane and immersed in a warm water tank until the ice block floated to the surface.
8. The freed ice blocks in the frame were tipped, sliding the ice over a draining board and onto a conveyor.
9. The conveyor either fed the ice blocks into a crusher to be lifted in a bucket conveyor and fed as crushed ice down distribution chutes to waiting trawlers or transported the blocks into the Ice Store.
10. Water pumps distributed dock water and supplied the condensers which changed the refrigerant from gas to liquid to supply the system.

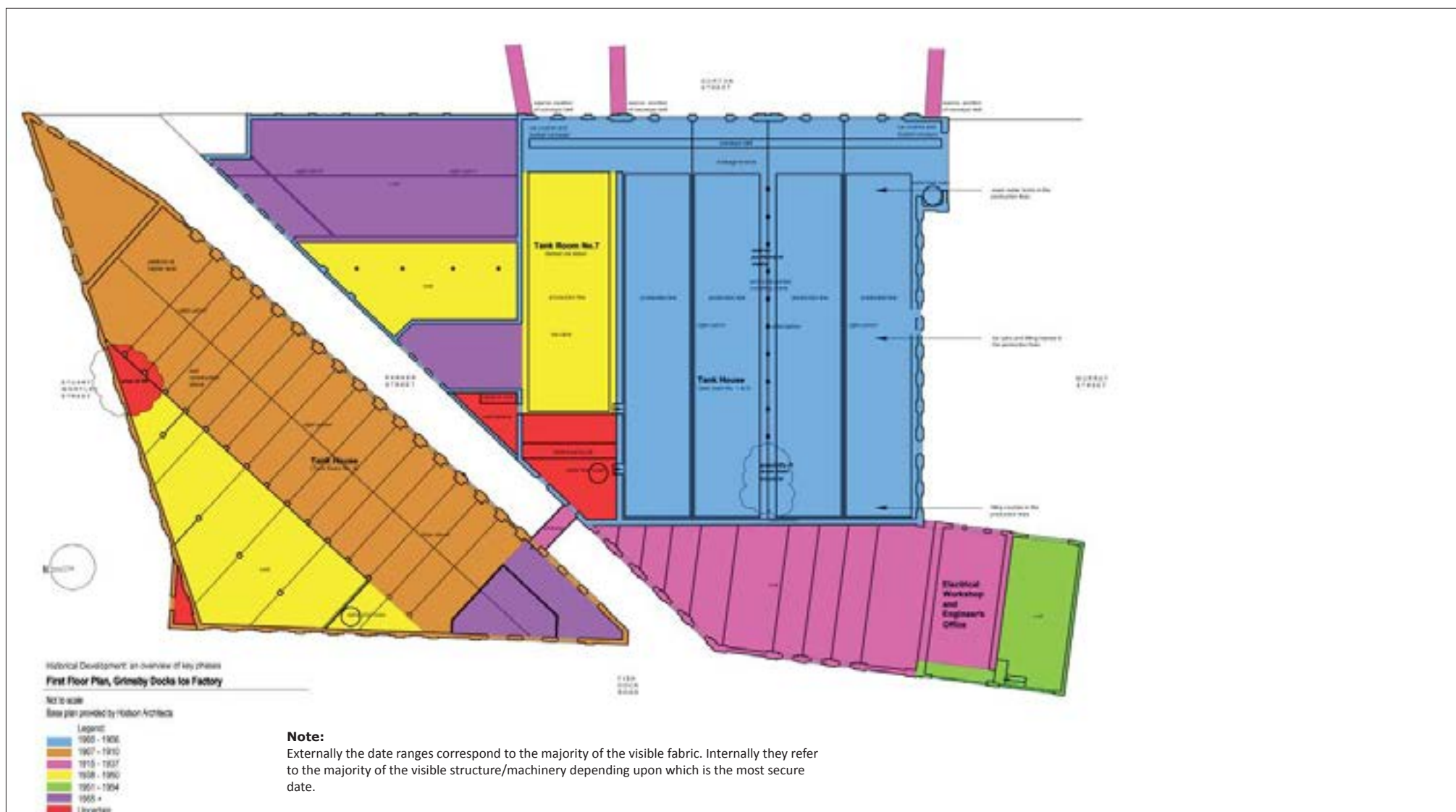
Principle of Operation: Feedback Loop
Ground Floor Plan, Grimsby Docks Ice Factory
Not to scale
Plans provided by Hodson Architects

2.3 Outline Descriptive Historical Assessment

The information below provides an outline historical assessment of the development of the Ice Factory with particular reference to changes observable in the building fabric and machinery. The plans below illustrating the historical development of the site provide a guide to the phasing.



Ground Floor Plan: Historical Development of the Grimsby Docks Ice Factory - An Overview of the Key Phases



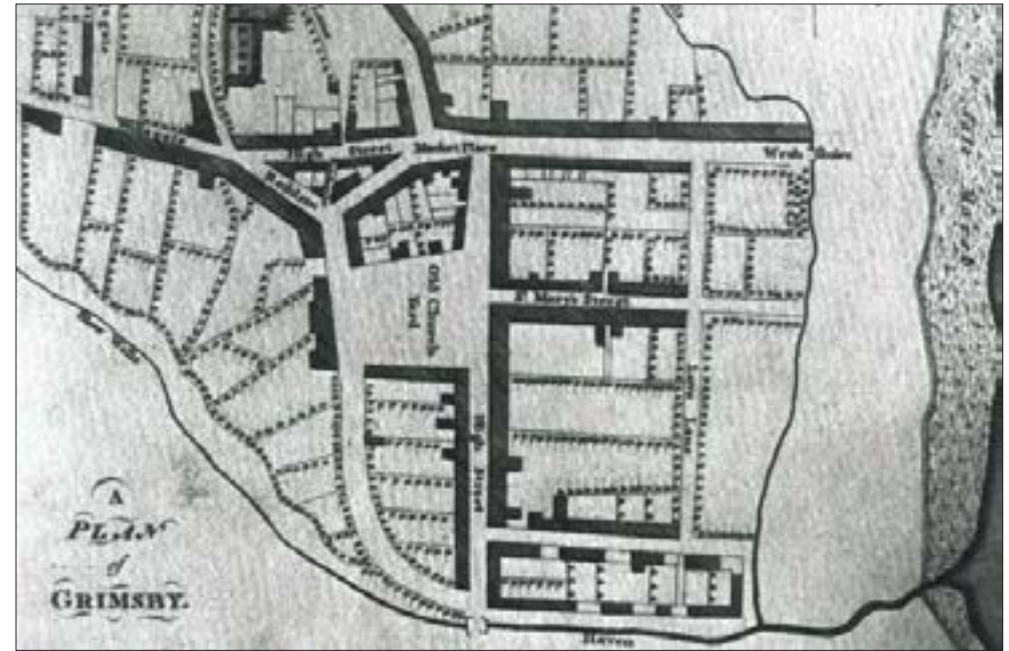
First Floor Plan: Historical Development of the Grimsby Docks Ice Factory - An Overview of the Key Phases

2.3.1 Phase 1: The mid-late 19th Century Origins of Grimsby Docks

Grimsby expanded rapidly from the early 19th century following the late 18th century formation of the Great Grimsby Haven Company by Act of Parliament in May 1796 (the Grimsby Haven Act). This was formed for the purpose of widening, deepening, enlarging and improving the Haven of the town and Port. Following these improvements Grimsby's Port boomed and imports included iron, timber, wheat, hemp and flax.

As detailed in reports by English Heritage (2009) and Kathryn Sather & Associates (2002) new docks were necessary to cope with the expansion. The Grimsby Docks Act of 1845 allowed a rapid expansion and the Grimsby Docks Company was formed with the intention of further developing the existing Grimsby Haven (south arm of Alexandra Dock) and developing a new dock (Royal Dock) on land reclaimed from the River Humber. In 1846 the Grimsby Docks Company became part of the Manchester, Sheffield & Lincolnshire Railway Company (MS&LR). The Dock Tower was erected in 1851-1852, followed by the completion of the Royal Dock in 1852. This included the land which now forms the site of the Ice Factory. The Fish Docks were built to the east of the Royal Dock between 1855 and the 1930s. No.1 Fish Dock was completed in 1857 and extended in 1860 and 1878 with No.2 Fish Dock completed in 1877 and extended in 1880 and 1900. The West Arm of the Alexandra Dock and Union Dock followed in 1879 with No.3 Fish Dock completed in 1934. During this period the fishing fleet was greatly expanded. The arrival of the railway (1848) facilitated this expansion by making it far easier to transport goods to and from the Port.

Ice production was a major factor in the success of the fishing industry in Grimsby. The growth of this industry was facilitated and complemented by the growth of the ice trade which provided the ice used to preserve fish at sea and during transportation. Originally local sources of ice from still water sources such as ponds were stored in local dockside ice houses. As demand for ice increased from the burgeoning fish trade, local stocks were insufficient to meet this and thus in March 1857 the first regular cargoes of Norwegian ice arrived in the Port. The Grimsby Ice Company was founded in 1863 by local fishing smack owners to import ice from Norway. A number of factories manufacturing ice were later erected in Grimsby to meet demand.



Stylised map of Grimsby prior to the extensive docks and railway; note its small, compact medieval form, part of the Armstrong Survey of 1789



The pontoon close to the Ice Factory was a hub of activity for fish merchants and trawler owners



Large quantities of fish were caught for sale

2.3.2 Phase 2: The Early 20th century Origins of Grimsby Docks Ice Factory (1900-1906)

The largest of the Grimsby ice factories was the Grimsby Docks Ice Factory forming the subject of this study. This was built in 1900-1901 by the Grimsby Ice Company, an amalgamation of the Great Grimsby Ice Company and the Grimsby Co-operative Ice Company. It was bounded by Fish Dock Road to the west and Gorton Street to the east close to No.2 Fish Dock which had been constructed in 1876-1877 and extended in 1880 and 1900. The Ice Factory does not appear on the 1887 Ordnance Survey (OS) map; instead a number of smaller buildings are shown in this location.



OS map, 1887; note the presence of the railway and that the Ice Factory replaced a number of smaller buildings depicted on this map



Goad plan, 1899

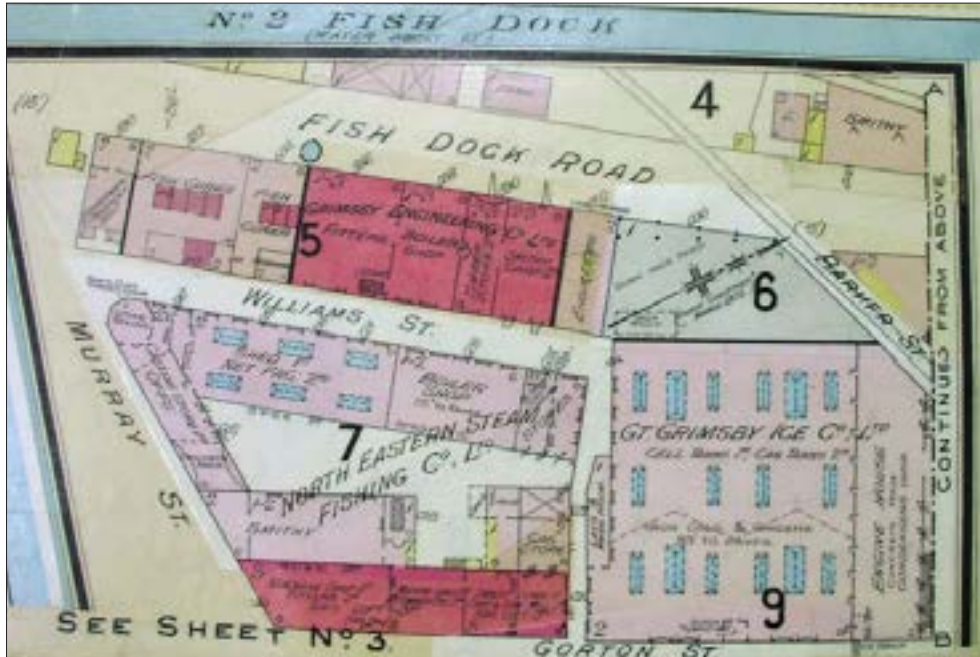
The excavations for the Ice Factory are shown on the Goad insurance plan for 1899². To the south were a series of ranges with buildings occupied by the North Eastern Steam Fishing Co Ltd including a 'smithy' and 'machine shops'. West of this were the Grimsby Engineering Co Ltd 'boiler shop', 'fitters' and 'smithy' with a building marked 'engineers' occupying the site of the later 'Switch Room' built by the Ice Factory. There were also fish curers to the south of this range.

The original 1901 Ice Factory building housed the ice making machinery in a trapezoidal block of land at the north end of this complex opposite the No.2 Fish Dock. This is first depicted cartographically on the 1905 Goad plan and 1906 OS map. The consulting engineer was W. F. Cott (referred to in Engineering News 16 June 1933, 647)³. The original refrigeration equipment, none of which survives, was installed in 1901 by Pontifex and Wood of London according to a description written in 1933 (anon 1933, 647-650) and reproduced in the English Heritage report (2001, 4). The original building had plant with an output of 300 tons of ice per day (Fleming 1932, 3). The Ice Factory opened for production on 9 October 1901.

² A series of Goad plans from 1899, 1905, 1917, 1928, 1937 and 1955 are illustrated within this report as they provide the only evidence for the changing internal layout of the Ice Factory prior to 1955. They should, however, be treated with caution. The purpose of Goad plans was to provide the ownership / tenancy and use of buildings, together with some structural features, as these were fire insurance plans. They should not therefore be regarded as completely accurate surveys of a building's interior arrangement, although they do provide a useful guide.

³ This source has not been consulted.

The 1905 Goad plan shows the Tank House in its current location with cell and can ice tanks under a double pile pitched roof. Attached to the south elevation (now demolished) was a room marked '*lavs & mess room*'. The east elevation by Gorton Street contained the clock tower which still survives and an '*ice shoot*', presumably intended to convey ice to waiting lorries below or in the manner of the current Gantry Conveyors to the trawlers in Fish Dock No.2. To the west (now the Compressor House) was an '*iron shed*' marked as '*under construction*'. To the north, the current Ice Store was an '*engine house*' with '*concrete roof condensers over*'. Further north the current Condenser Room formed part of the boiler house whilst the Salt Water Tank Room was the '*pump house*'.



Goad plan, 1905

During the site survey on 15 June 2010, a fragment of a drawing dated 1914, signed by the engineer W.F. Cott and stamped as "Property of the Linde British Refrigeration Co" was found among the debris in the former Engineer's Office on the first floor of the Ice Factory. This drawing was in very poor condition and was difficult to read, but it revealed that in 1914 the original factory did not extend all the way to Fish Dock Road, but stopped at the line of what is now the rear (east) wall of the Compressor House. The refrigeration equipment, including steam engines, was installed down the north side of the Tank House, in the location now occupied by the Ice Store, and at the west end of the Tank House were two chambers marked '*Refrigerator*'. It is not clear whether these were ice storage rooms, or were brine coolers (shell and tube evaporators used instead of ammonia coils submerged in the brine tank). This does, however, conflict with the slightly later Goad plan of 1917 which shows a building in the location of the Compressor House marked as an '*engine house*' with a '*concrete roof condensers over*'. This occupies the footprint of the current Compressor House. This map does not show an ice store.

Despite some uncertainty, during this period the original 1900-1901 building included:

- ◇ Two storey Tank House with four ice tanks (two for can ice and two for cell ice) and a probable Ice Store of uncertain location.
- ◇ Buildings which contained the engine houses (Pontifex horizontal double-acting ammonia compressors) to the north. and possibly west, with condensers on the roofs above these.
- ◇ The atmospheric condensers on the roof utilised dock water for circulation.
- ◇ There were six Lancashire boilers generating steam in the boiler house in the northeast corner with an adjacent pump house.
- ◇ Towards the south, the area currently partially occupied by the Switch Room and New Compressor Room was formerly a longer linear late 19th century engineering works (Grimsby Engineering Co Ltd) fronting Fish Dock Road. No visible evidence of this building currently survives above ground. Part of the Switch Room may be late 19th century, i.e. adapted for use within the Ice Factory, but due to later alterations concealing any earlier fabric this cannot be determined at present.
- ◇ Ancillary buildings to the south of the Ice Factory included a growing range of offices, stores, sheds, workshops, and a casting store and stables belonging to the North Eastern Steam Fishing Co Ltd.

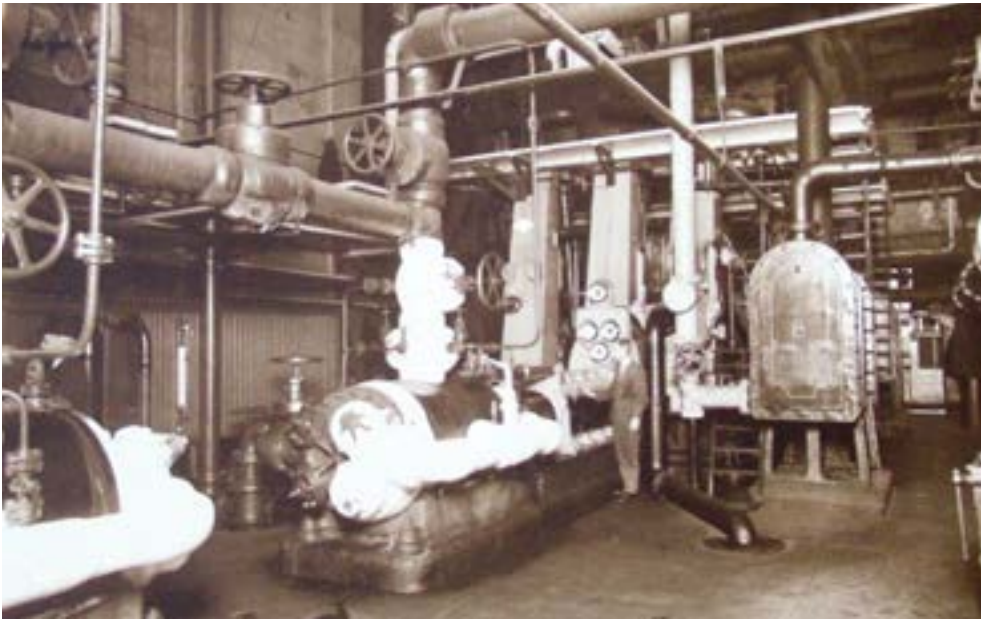
In the early 1900s the original Port Owners, the Manchester, Sheffield & Lincolnshire Railway Company, merged into the Great Central Railway (GCR) which in turn later merged into the London and North Eastern Railway Company (LNER). This did not affect the tenancies of the Ice Factory beyond making the later Railway Companies Landlords to the Grimsby Ice Company.



Goad plan, 1917



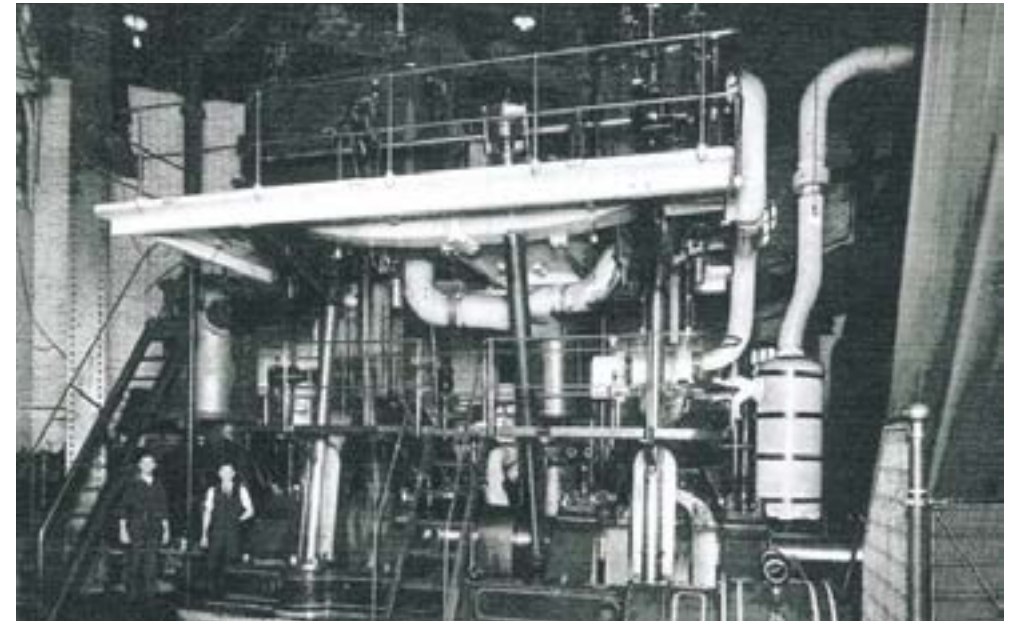
Lancashire boilers; installed 1900, removed 1932 (courtesy of North East Lincolnshire Archives)



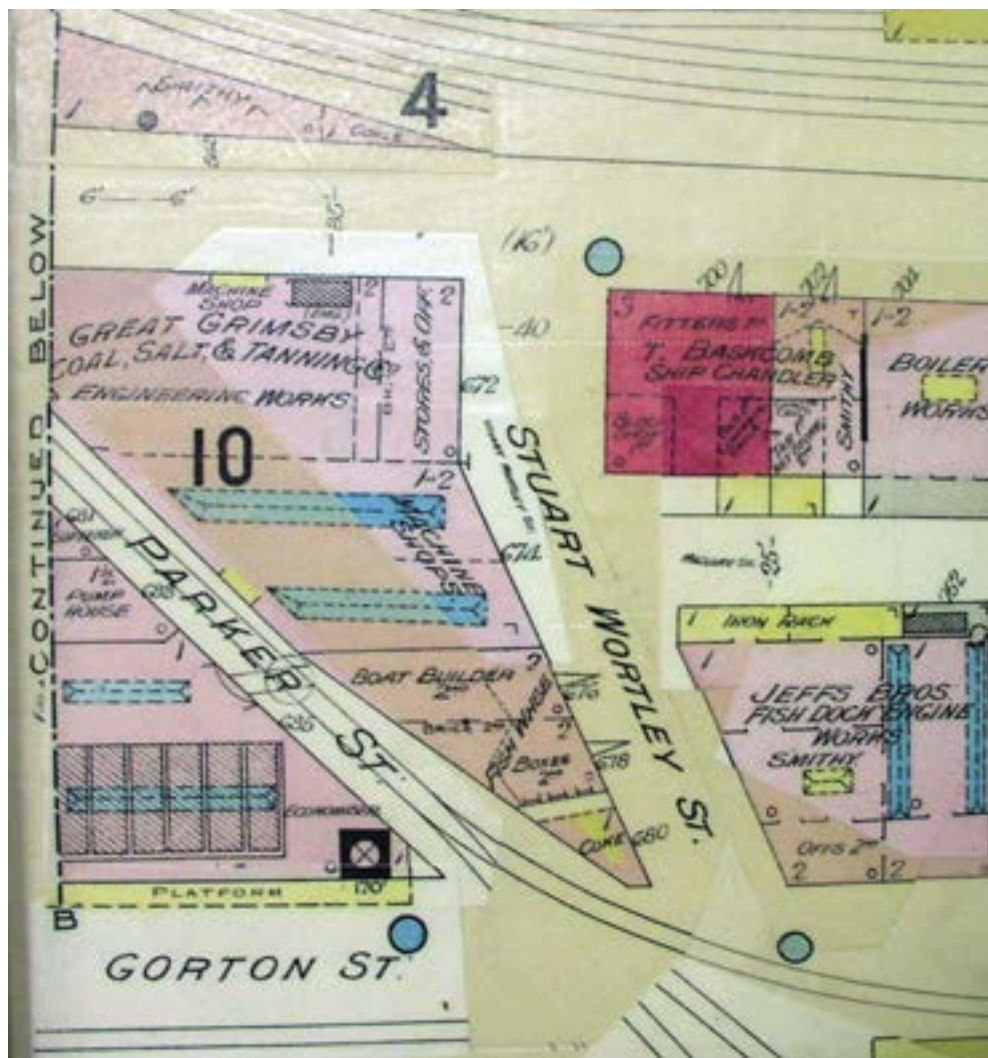
No.3 Ammonia compressor in Pontifex engine room; installed 1900, removed 1932 (courtesy of North East Lincolnshire Archives)



No.2 Ammonia compressor; installed 1900, removed 1932 (courtesy of North East Lincolnshire Archives)



Cole, Marchant & Morley steam engine which drove the Linde ammonia compressor; judging by the fenestration this would appear to have been situated in the Compressor House in 1931.



Goad plan, 1905



OS map, 1908; the original Ice Factory, 1910 extension and Engineering Works & other buildings to the southeast all are depicted. The fish shed opposite Ice Factory on the dock side has not however been erected, instead there is a fish shed further to the north along Auckland Road

2.3.3 Phase 3: Northwards Expansion (1907-1910)

By 1910, the northwards extension to the site that began after 1906 (as it is not shown on the 1906 OS map) was completed to meet the increasing demand for ice. This extension (including the loading bay to the North East corner) is depicted on a map dated 1908, although it is unlikely that the interior was complete by this date. This extension was built upon a triangular piece of land bounded by the former Stuart Wortley Street and Fish Dock Road to the north and west and separated from the main Ice Factory by the former railway line (later Parker Street). Buildings previously on this site as shown on the 1887 OS map and Goad plan of 1899 included the Great Grimsby Coal, Salt & Tanning Co 'engineering works' with 'stores & offices', a fish warehouse and a 'boat builder'. These were demolished after 1905 to accommodate the Ice Factory extension.

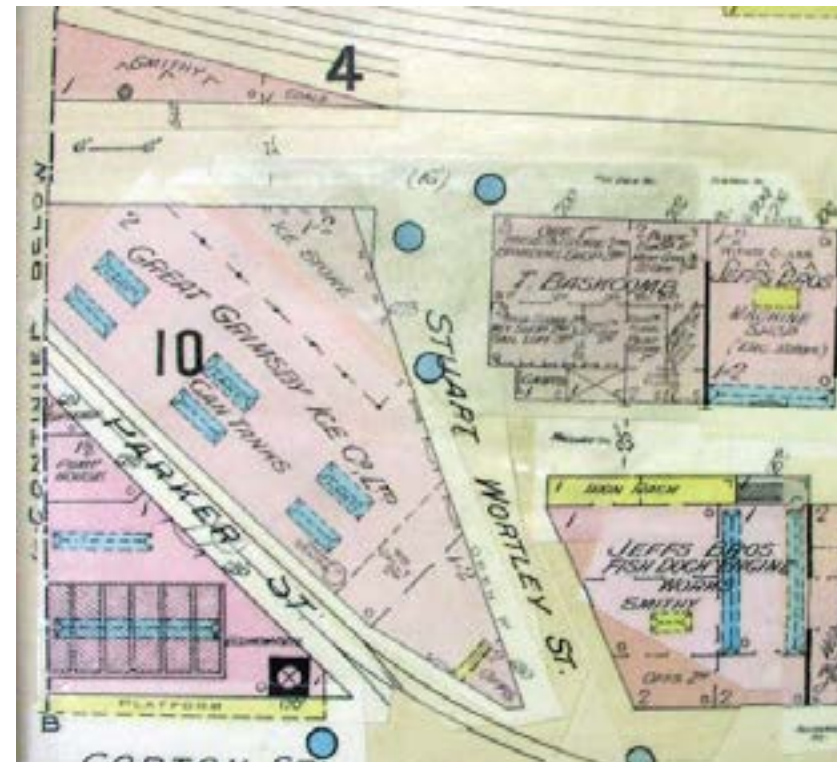
Within the extension were two can ice tanks with an output of 200 tons of ice per day. These were located in a two storey Tank House and were served by two Linde double-acting ammonia compressors driven by Cole, Marchant and Morley steam engines (English Heritage 2001; Fleming 1932, 3-4). Offices, storage areas, a loading bay and an ice store were then contrived to fit around the Tank House on the triangular shaped plot.

2.3.4 Phase 4: Drive for Increased Efficiency - Modernisation and Expansion (1914 – 1933)

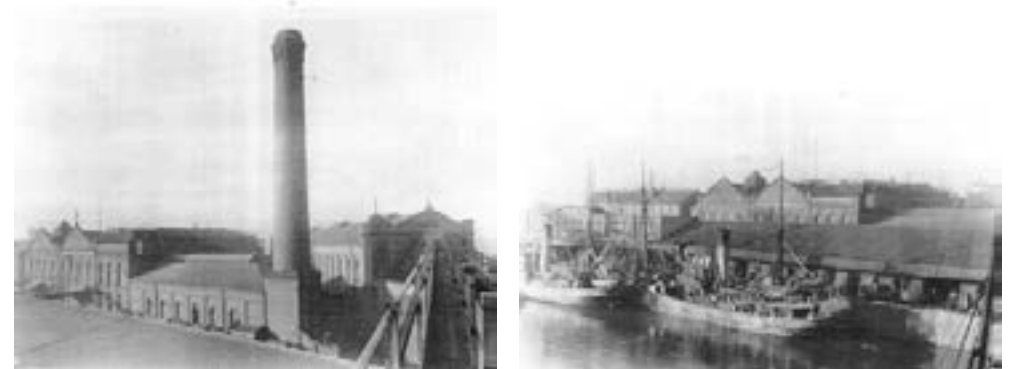
Cell ice tanks were more labour intensive than can tanks and it was probably for this reason that one of the cell ice tanks was converted to can tanks in 1914 and the last remaining one in 1926. By 1926 an output of 720 tons of ice from the Ice Factory was achieved (English Heritage 2001; Fleming 1932, 4).

The 1914 plan of the Ice Factory revealing that the 1901 plant did not extend westwards as far as Fish Dock Road confirms evidence seen on site during the building analysis that the dating of the various buildings can be refined. The 1906 OS map shows several adjoining but discrete buildings running along Fish Dock Road with the title "Engineering Works" and several buildings occupying the site of the north extension of the Ice Factory where the current building was constructed between 1907 and 1910. In comparison the 1933 OS map depicts the main building as a single block and the north building as a single block. On the Goad plan an iron store was shown under construction on the site of the later Compressor House on the 1905 plan with an engine house in place by 1917. It is uncertain how much of this fabric was reused by the current Compressor House.

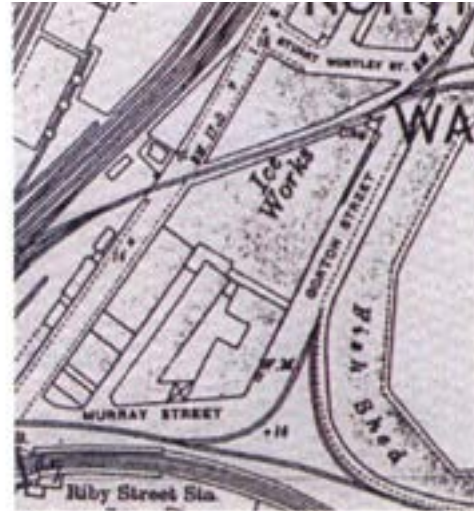
The Compressor House was not part of the original factory but was probably constructed in c.1917 being the engine house shown on the Goad plan. This is supported by the clear difference in brickwork between the 1901 building and the Compressor House visible on the north (Parker Street) elevation and by the modifications evident to the gable ends of the 1901 building rising above the flat roof of the adjoining Compressor House. Furthermore, at ground level on the Compressor House, and the north 1910 building, there is a continuous band of blue brick forming a plinth, but this detail is absent from parts of the original building.



Goad plan, 1917



The exterior and immediate setting of the Ice Factory c.1930-c.1932; note the chimney and nearby projecting building off Gorton Street (presumably a coal shed), the gravity runway for conveying ice from the 1910 Factory to the trawlers and the fish shed as existing in the early 1930s – all since demolished



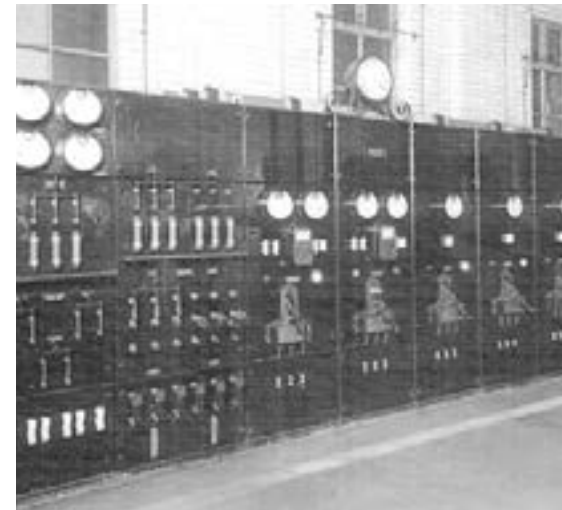
Detail extract, 1906 OS map (left) and 1933 OS map (right)



Goad plan, 1928



Goad plan, 1928



Electrical control system, produced by the Metropolitan Vickers Electrical Company of Manchester, Compressor House (courtesy of Centre for Kentish studies)



Building break seen in the interface between 1901 Ice Factory and the Compressor House

Taken together the information from the building fabric analysis, cartographic analysis and 1914 floor plan provide compelling evidence that the original Ice Factory came to the west end of the current Tank Room. The northern extension (1910) was thus probably designed to present a much more imposing frontage to Fish Dock Road, and together with the c.1917-1930 Compressor House cleverly gives the impression of a unified building, part of a single complex, despite the railway which historically ran diagonally through the site. The Compressor House mimics some of the detail of the grandiose north building, for example the blue brick plinth detail and the arched windows.

By the 1930s the Grimsby fishing fleet comprised 600 trawlers, all demanding supplies of ice for trips to the fishing grounds in the North Sea and off the west coast of Greenland, and presumably also Iceland and Norway. It was stated in *ACR News* (2009, 11) that each boat required about 15 tons of ice when going to fish in the North Sea and four times as much when fishing in the Icelandic waters.

By 1928 the Goad plan for the 1910 building shows two changes from 1917; the first is that the offices & mess rooms were shown in the southwest corner and the second that the projecting space at the North West corner was marked '*carbide & petrol store*'. The Goad plan of 1928 shows the original Factory little changed from 1917; the main alteration being the conversion of the '*lavs & mess room*' into an '*oil store*'. Significant alterations occurred shortly afterwards when the four compressors in the Compressor House, the atmospheric condensers on the roof of the Compressor House, two oil separators and possibly also the desuperheater on the roof, were installed by J & E Hall in 1931. Also installed in the Compressor House was an electrical control system. This incorporated automatic start, stop, and safety devices. It was produced by the Metropolitan Vickers Electrical Company of Manchester who also supplied the 6,000V motors for the compressors.

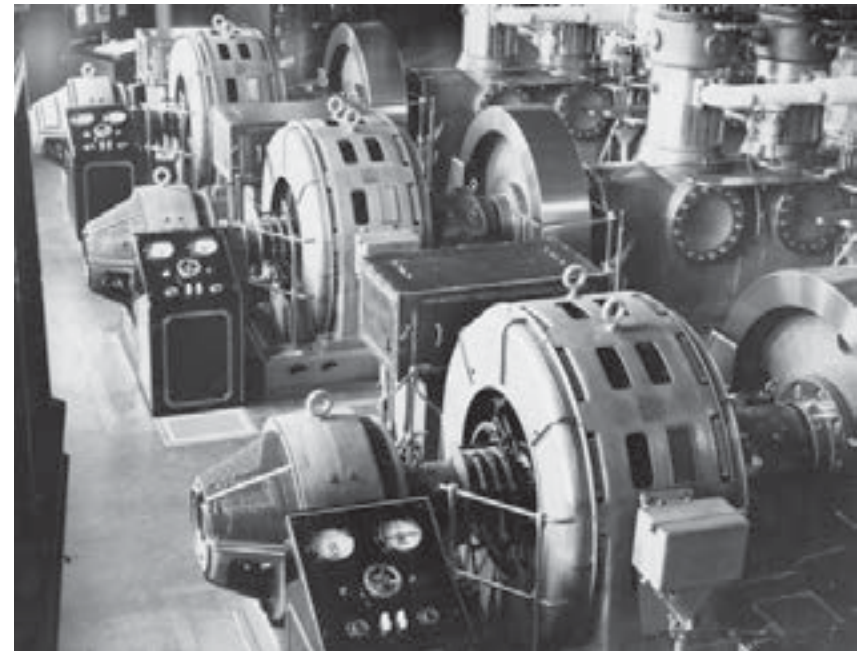
This replacement of all the steam powered plant with electrically driven compressors was a significant development. In a book written to celebrate Hall's bicentenary Harry Miller writes (in describing the effect of the Great Depression of 1930 – 1931):

'A big land order, announced to the employees by Lord Dudley Gordon in a period of deepest gloom in 1931, was greeted with cheers. This was to supply the Grimsby Ice Company four quadruple cylinder vertical ammonia compressors, directly electrically-driven, to replace a miscellaneous collection of old steam-driven machinery. The plant, with a total output of about 1100 tons of ice per day, exceeded in capacity any installation of its kind placed in Britain or elsewhere. Grimsby was at that time the leading fishing port in Britain and perhaps in the world, and further orders came to Halls in later years from the same source' (Miller, 1985).

In 1931, when the J & E Hall compressors were added they increased the capacity of the plant and the existing condensers would need to be extended. The new atmospheric condensers were put on the roof of the Compressor House. At the same time as the modern compressors and condensers were installed to meet increasing demand from the trawler fleet, the Grimsby Ice Company also embarked on a programme of works that modernised the factory. Completed in 1933, works included modifying the cooling surfaces in the tanks and the brine and ammonia circulation. Output was increased to 1,100 tons of ice per day (English Heritage 2001, 4; *Grimsby Daily Telegraph*, 16 December 1931).



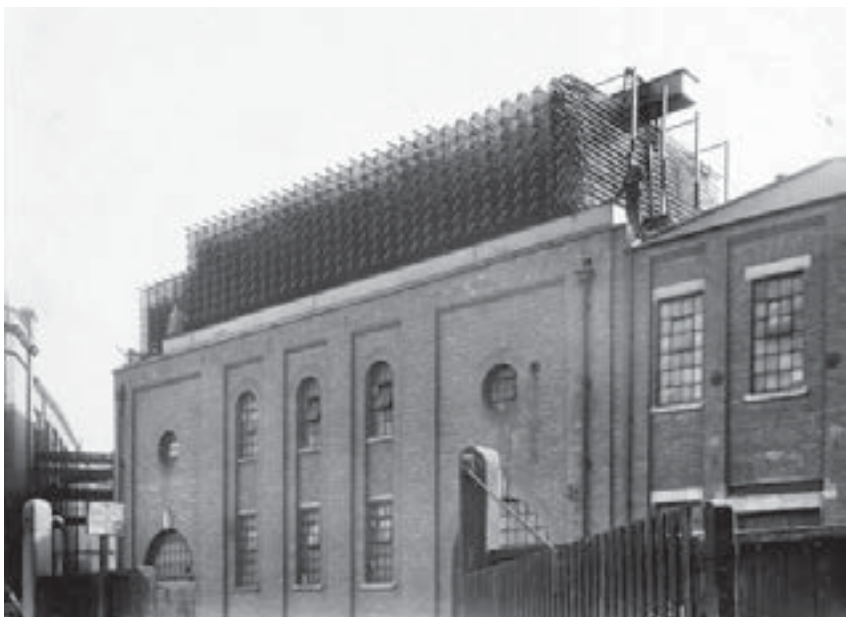
Control desk, Compressor House
(courtesy of Centre for Kentish studies)



J & E Hall ammonia compressors installed in 1931 in the Compressor House, detail view c.1930s-1960s



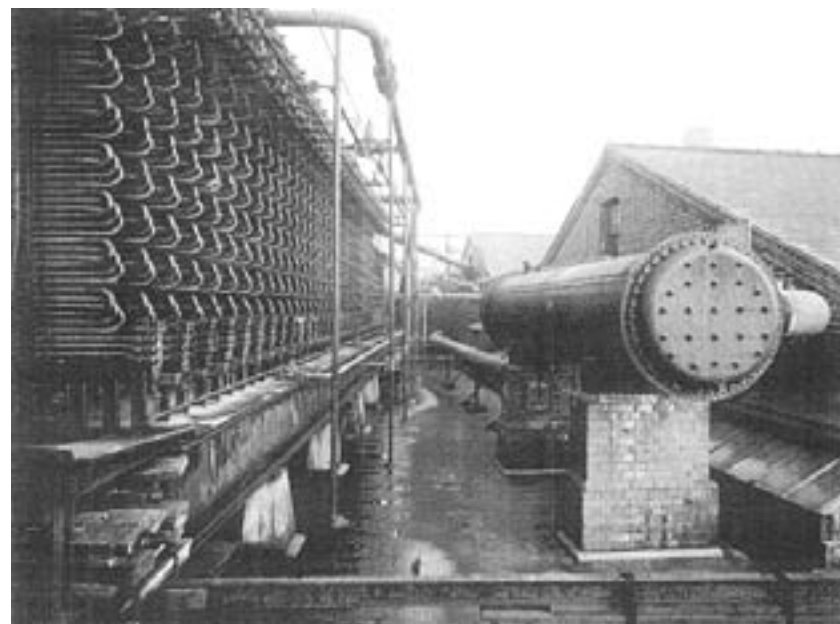
Erection of the atmospheric condensers on the roof of the Compressor House; note the water storage tank in the background (courtesy of Grimsby Reference Library)



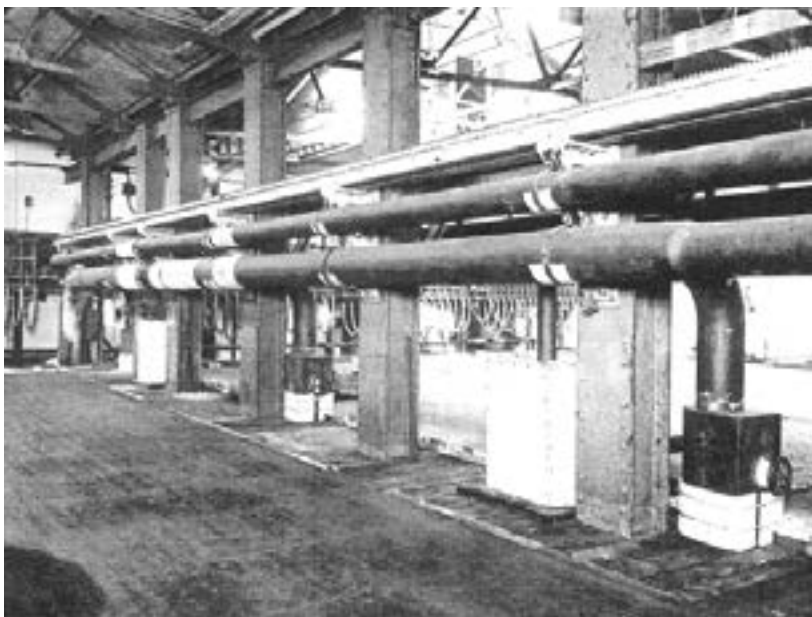
The atmospheric condensers on the roof of the Compressor House; note the adjacent Engineering Works (to the right), partially or entirely demolished shortly after this photograph was taken in 1932 (courtesy of Grimsby Reference Library)

It was during this phase of works that the now redundant chimney and Lancashire boilers in the Boiler House were removed and the cooling surfaces in the tanks and the brine and ammonia circulation was modified in accordance with the most up-to-date practice (Fleming 1932, 4). The Gantry Conveyors running across Gorton Street to the No.2 Fish Dock from the first floor of the Tank House were probably installed as part of this remodelling in the early 1930s. These supplied the trawler fleet direct with ice from the Ice Factory and could also deliver ice for fish packing to the fish landing shed below them which is described as a 'Fish Shed' on the 1933 OS map.

In 1933 an article in *Nature* magazine described the wide ranging industry that the Ice Factory made possible: 'The Grimsby Ice Company has now the largest ice factory in the world. The trawlers of Grimsby fish in the North Sea and off the west coast of Greenland. All the six hundred trawlers take supplies of ice when they set off for the fishing grounds, each boat taking about 15 tons when going to fish in the North Sea and four times as much when fishing in the Icelandic waters' (quoted in Milner 2009, 22).



Heat exchanger (courtesy of Centre for Kentish studies)



Tank Room No. 2, c.1931



Gantry Conveyors along Gorton Street; note the hoppers and shutles for dispatch into the waiting trawlers (courtesy of the National Monuments Record, 2000)

2.3.5 Phase 5: Expansion and New Compressor (1954)

A site plan of the Ice Factory, dated 1954, shows that the Grimsby Ice Company had moved into some of the buildings shown on the 1906 OS map towards the south of the site on the land bounded by William Street, Fox Street, Gorton Road and Murray Street. The buildings were described as a calcium and machinery store, repair shop, engineers store, joiners shop, fitting shop, canteen⁴, mess room, offices, garages etc. Many of them appear on the 1906 OS map and Goad maps and were built c.1890-1900 by the North Eastern Steam Fishing Co. Ltd. They were acquired by the Grimsby Ice Company who were using them as ancillary buildings to the Ice Factory from at least 1954 when they are shown on a plan of the site. Exact details are difficult to confirm as they have since been demolished, and historic research on them has not formed part of this Conservation Statement.

In response to yet greater demand for ice by the trawler fleet, a New Compressor Room was created in the c.1950s to the south of the 'Switch Room'⁵ with its Engineers Office above and which had formed a southwards extension to the Compressor House. The Switch Room's main frontage overlooking Fish Dock Road was refaced and modernised to match the New Compressor Room c.1950. This New Compressor Room was presumably constructed to facilitate the insertion of the large J & E Hall compressor, the fifth on the site. According to email correspondence (dated 25 September 2009) from Martyn Ross, Commissioning Engineer, J & E Hall International, this compressor was installed after World War II c.1949/1950. It was probably added in order to provide some standby capacity, rather than to increase output.

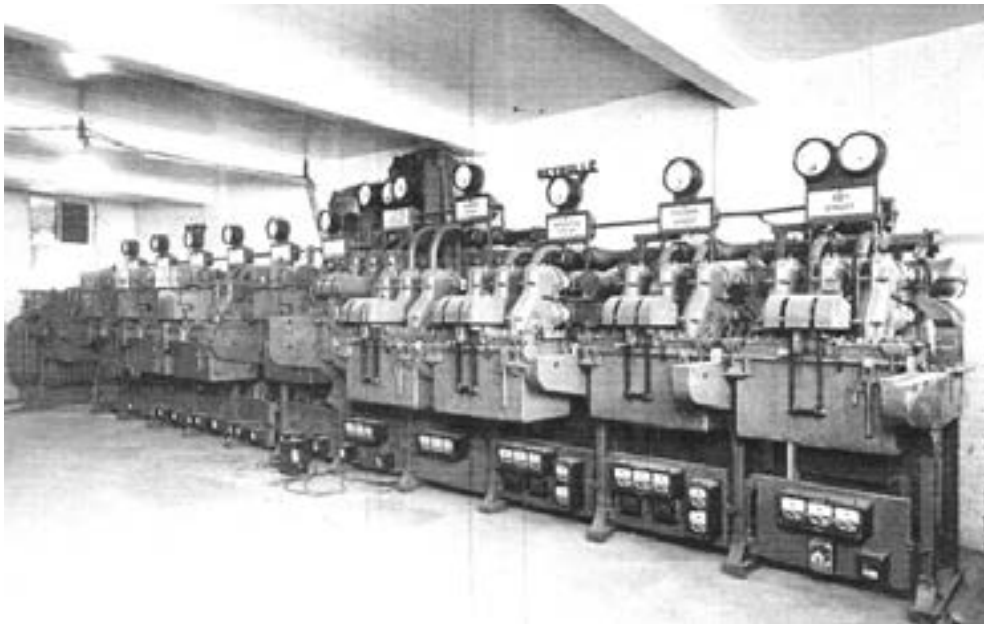
The Shell and Tube Condensers and Drysdale water pumps in the Condenser Room may also have been added during this phase of works i.e. 1954 or slightly earlier between c.1938 and 1950 involving internal remodelling and possibly new wall openings to facilitate their insertion. They are shown on the 1955 Goad plan, but not the 1937 map which depicts the boiler house and area, later the Condenser Room, as a '*garage & repairs & stores*'. The condensers probably replaced the 1931 atmospheric condensers added to the roof of the Compressor House between 1937 and 1955. Their insertion into the Condenser Room in the mid 20th century helps to account for some of the complex episodes of rebuilding seen in the Parker Street elevation as some of the fabric here was probably removed to facilitate the insertion of these large condensers. The condensers all seem to have been installed at the same time and are probably contemporary with the Drysdale pumps. English Heritage (2001, 6) state that the last of three wells was sunk on the site at about this time. Furthermore, No. 7 Tank Room is shown for the first time on the plan of 1954 above the Ice Store and the first floor Ice Store is likely to have been converted into this additional Tank Room between the 1930s and early 1950s. Interestingly also between 1937 and 1955 the Goad plans indicate that the '*ice store*' in the 1910 extension was converted into a '*gen[eral] store*' whilst the northern engine house in the original Factory had been converted into an Ice Store between 1928 and 1937.

⁴ During a site visit on 18 May 2010 Andrew Findlay, ABP, stated that the large first floor opening in the brickwork of the south elevation of the 1901 Tank House was a consequence of the removal of a building linked at this point and containing a canteen for the Ice Factory workers.

⁵ The English Heritage report (2001) names the room to the south of the Compressor House as a 'Switch Room', following an annotation on the 1954 floor plan.



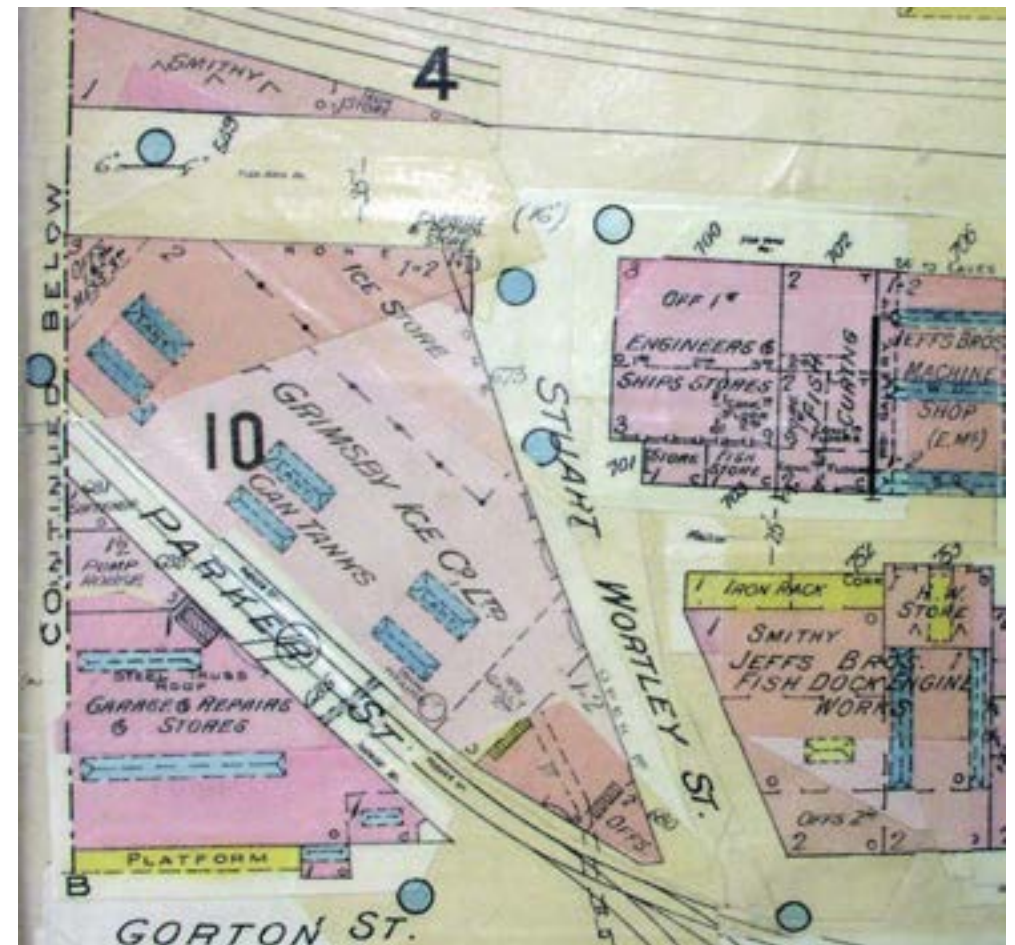
Site plan, dated 1954 (reproduced from English Heritage 2001, 16)



The Switch Room, c.1930s



Goad plan, 1937



Goad plan, 1937

The English Heritage report (2001) had suggested that the Switch Room was added to the Ice Factory at the same time as the New Compressor Room to the south. The brick and concrete elevation and window details at the front of the building on Fish Dock Road do suggest this, as the two bays have the same detailing. There are, however, two key pieces of evidence which reveal the different construction phases. Firstly, the roof above the Switch Room is pitched with timber king post roof trusses and gable ends whereas the roof above the New Compressor Room is flat with steel beams supporting a concrete roof. Secondly, the rear (east) elevation of these two bays is markedly different between the two sections. This evidence illustrates that they were built at different times, with the Switch Room and Engineers Office being substantially rebuilt from earlier buildings or entirely reconstructed slightly after the Compressor House (note the straight building break, difference in roof heights and forms and uneasy relationship – internally – between the upper floor window of the rear of the Compressor House and the Engineers Office). It is possible that the basic structure of the Switch Room, although clearly altered internally and externally after the Compressor House was constructed, may predate the Compressor House with fabric, now concealed, from the late 19th century Engineering Works. The Switch Room is first annotated as such on the 1937 Goad plan.

The discrepancy between the front of the New Compressor Room, which closely matches the adjacent façade of the Switch Room/Engineer's Office and the rear of the building, where the neighbouring walls are completely different, suggests that the west facade of the Switch Room bay was modernised when the fifth compressor was added. Moreover, if this coincided with the change from atmospheric to shell and tube condensers and the conversion of the first floor Ice Store into a Tank Room then it was part of a much larger remodelling than previously suggested.



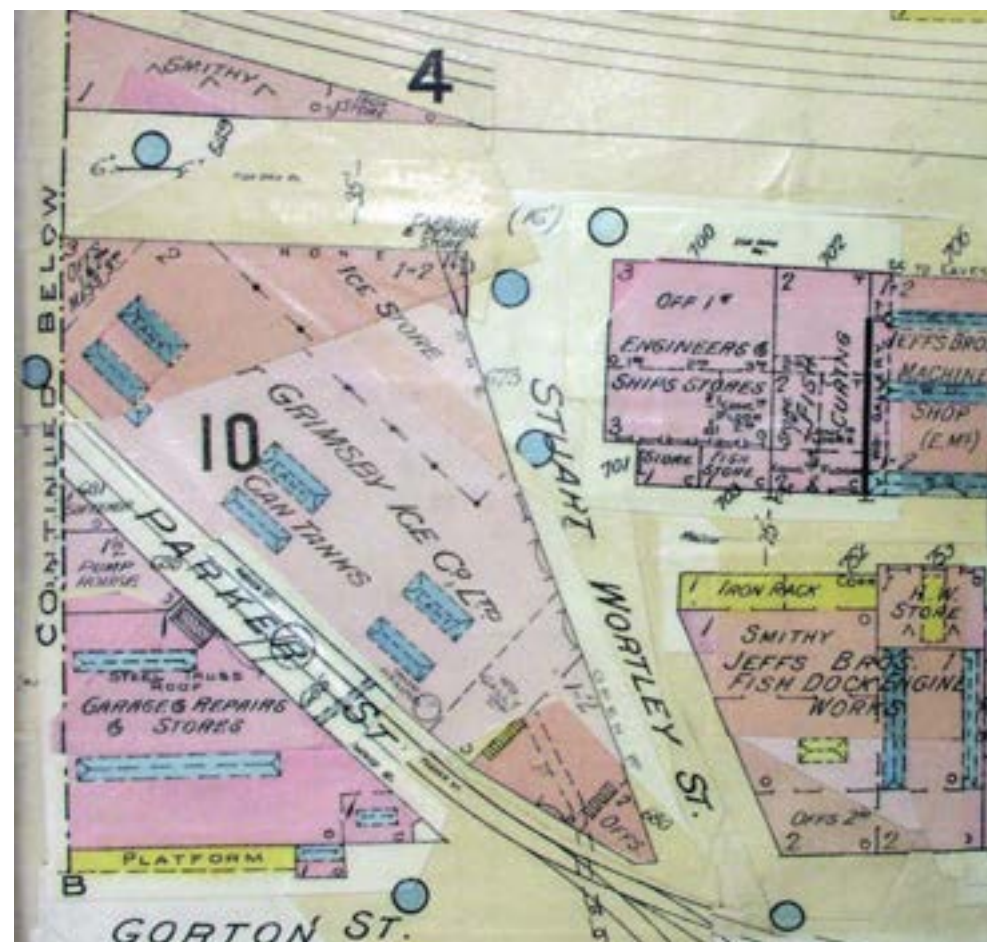
Uniform refaced front (west) elevation of the Switch House and New Compressor Room



Rear (east) elevation of the southwards extension; note the difference in roof structures, roof heights and building breaks between the Compressor House and Switch Room / Engineers Office, and between this and the New Compressor Room



Goad plan, 1955



Goad plan, 1955

2.3.6 Phase 6: Decline and Deterioration in the late 20th / early 21st Century

The Railway Companies and the Grimsby Docks area under their ownership had been nationalised in 1947 to become part of the British Transport Commission (BTC). In 1963 the Docks were split off into the British Transport Docks Board (BTDB) which became Associated British Ports in 1983. ABP have owned the Ice Factory since August 1990 when the tenancies of the Grimsby Exchange Limited (formerly Grimsby Ice Company) were terminated upon the closure of the Ice Factory.

The nozzles, tanks and tipping cradles on the first floor of the Tank House of the 1901 Ice Factory differ from those on the ground floor and appear to belong to a refitting undertaken in the early 1960s suggesting that the Factory had not begun to decline by this date. Designs for an ice tank and ice tip or cradle were prepared by J & E Hall in July 1960 and stamped by the Ice Company's Engineer's Office in July 1961 suggesting that these too date from 1961.

Unfortunately, the pattern from the late 1960s / 1970s onwards is generally one of decline. In the 1960s the railway line between the Ice Factory which branched to reach the No.2. Fish Dock, and other Dock areas, ceased to be used for goods traffic and was dismantled. The reduction in rail services to the Port both reflected and exacerbated the reduced dockside activities. Decline in the fish stocks from over fishing and the later 'Cod Wars' with Iceland resulted in a decline in the size of the fishing fleet and thus a steep reduction in the demand for ice. Furthermore the advent of quick freezing in the 1950s had grown in popularity and did not require ice. Consequently, No's 5, 6 and 7 Tank Rooms were taken out of use and the machinery in No's 5 & 6 removed in c.1973-1976. Wider changes in Grimsby included the closure of the Grimsby to Peterborough railway line in the 1970s which had provided an essential transport route for the fishing industry. Grimsby later lost its County Borough status and associated independence and control. Economic decline in the town has resulted in the closure and demolition of a number of historic, mainly Victorian, buildings. The Ice Factory closed on 3 August 1990 when the Grimsby Exchange Limited ceased production. It was Listed Grade II shortly afterwards on 12 September 1990 and upgraded to Grade II* on 12 August 1993.

An amateur film by the Cleethorpes Camera Club (July 1990), commissioned due to the imminent closure of the Ice Factory, stated that food processing factories had been erected in recent years away from the dockside. These were built to modern hygiene standards with, for example, fish filleted on smooth plastic, as opposed to wooden boards, workers wearing protective clothing, and no smoking policies. The video reported that there were only 2-3 fishing trawlers in the Grimsby Dock in 1990. The Grimsby New Fish Market contained only about 200 boxes of fish – a reduction from a peak of 20,000 boxes each day in the old fish market. From a peak of 700 fish merchants there were about 100 in 1990 and the 1000s of local people employed as filleters, auctioneers, barrow boys and so on had also drastically declined (CCC video, 1990).



Grimsby Docks Ice Factory, 1968 (courtesy of National Monuments Record)



Gorton Street elevation (courtesy of Grimsby Reference Library)

The video provides an excellent record of the function of the Ice Factory in 1990. It gives details of the operating conditions of the plant, showing the suction and discharge pressure gauges and ammeters of the plant during operation. Only two of the seven tanks were still operating at this date with the Flake Ice Making Plant satisfying much of the reduced demand. The following information was obtained from the video regarding operation:

- ◇ The suction pressure gauge showed an operating pressure of 13 psig, which is equal to an evaporating temperature of -20°C. The discharge pressure gauge read 135 psig, which is equal to a condensing temperature of 26°C.
- ◇ The motor ammeter read 31A: for a 6,000V supply this suggests an electrical input of 322kW, and a shaft power of about 310kW.
- ◇ The six shell and tube condensers were stated to be 16 feet long (4.896m) with 420 two inch tubes in each condenser.
- ◇ The fresh water supply to the ice tanks came from two 12 inch (0.3m) boreholes that are 180 feet deep (55m) and one 21 inch (0.53m) borehole, sunk as part of the 1950s expansion, which is 350 feet deep (107m)⁶.
- ◇ From footage in the video it was calculated that the slabs of ice being harvested were approximately 150mm thick and 690mm wide, with a depth of 1630mm. This would give a weight of about 152kg, which is equal to the three hundredweight mentioned in the video commentary. This is larger than the sizes given in the English Heritage report (2 cwt and 2.5 cwt which is also the weight given in the trials following the installation of the new compressors in 1931). It is possible that larger cans were introduced as part of the 1950s expansion.

Following closure, alternative uses and funding sources for the buildings were explored. Despite this, it remains vacant and between 2000 and 2001 the southern ranges of garages, offices, and remains of the early – mid 20th century buildings were demolished (reported in the entry HER Number 0348/4/0).

In 2006 the 1930s Compressor House was cleaned and enjoyed a brief renaissance as it was transformed by English film-maker Joe Wright into a film set as 1940s war torn France for the film *Atonement*, with a theatrically constructed dilapidated church appearing at the end of Parker Street on land opposite the Ice Factory. Starring internationally famous actors Keira Knightley and James McAvoy, the film featured other Dock locations in Gorton Street. Nevertheless, the Factory continued to decline and in November 1992 English Heritage added it to its *At Risk Register* – the list of England's most endangered heritage assets.

North East Lincolnshire Council has been working alongside ABP to investigate the potential for the development of the Ice Factory buildings. The first stage in this process involved having a detailed measured survey of the buildings (completed November 2009 by Hodson architects) and the second stage an *Appraisal of the Existing Structure* by Alan Baxter & Associates (completed in February 2010). This appraisal provided an outline scope of remedial works required on the buildings and associated cost estimates. The report also suggested further studies and surveys, which are required to take any development of the buildings further. One of the recommendations was the production of a Conservation Statement.



Part of the demolished ancillary buildings of the Ice Factory, formerly extending southwards along Gorton Street (courtesy of NELC)



Part of the demolished ancillary buildings of the Ice Factory (courtesy of NELC)

6 The third borehole was sunk in 1951 (Cleethorpes Camera Club video, 1990).

Grimsby, Cleethorpes and District Civic Society have expressed an interest in recent years in the future of the building and hope to achieve a consensus on the Factory's future. As part of this process they called a public meeting about the Ice Factory held on 24 September 2009. Those present included former Fish Dock workers and members of the public, the MP for Cleethorpes (Shona McIsaac), MP for Grimsby (Austin Mitchell), Regional Property Manager for ABP (Kevin Francis), Chief Executive of NELC (Tony Hunter), Councillors (Martin Vickers and Andrew De Freitas), English Heritage (Giles Proctor), the NELC former Conservation Officer Stephen Peel and Chair of the Meeting Paul Genney of the Civic Society. Following discussions at the end of the meeting the resolution to delist and demolish the Ice Factory was not carried and the resolution for the Civic Society to continue to facilitate the search for a solution was carried.

At a meeting held on 22 July 2010 at Grimsby Town Hall the Great Grimsby Ice Factory Trust (Great GIFT) was formed with the following aims:

- ◇ The preservation of the Ice Factory and the surrounding area.
- ◇ To work with other charities in the area to achieve common objectives.
- ◇ To promote education with relation to the history and engineering of the Ice Factory and its significance within the refrigeration industry.
- ◇ To work towards increasing the cultural importance of Grimsby in respect of future development of the area.

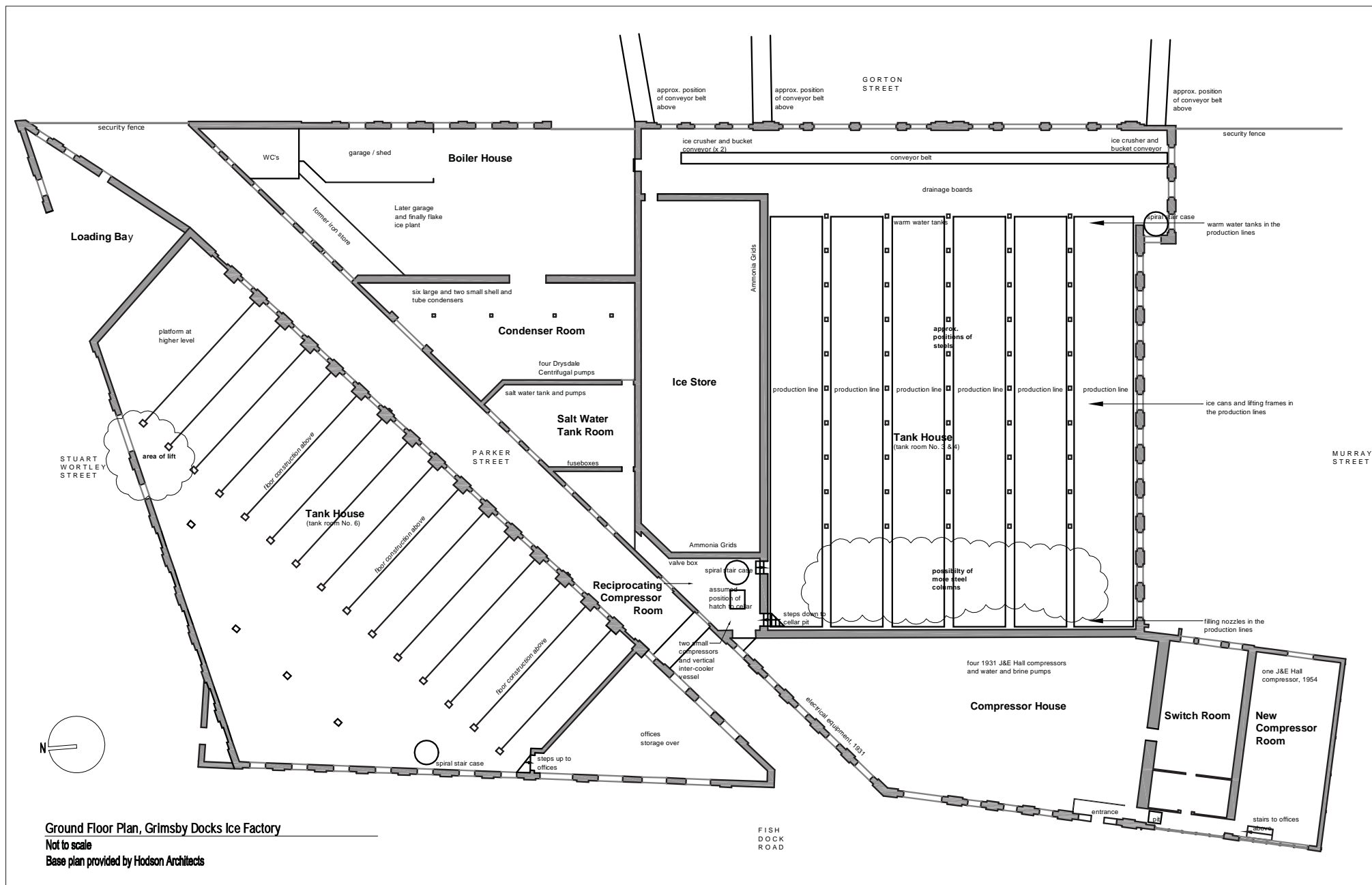
2.4 Description of the Site

The following floor plans annotate the various components of the Ice Factory. A summary of these is provided below. For ease of analysis the site is divided into individual rooms and component parts, (where possible following the English Heritage terminology), presented as a chronological descriptive narrative. Elevations are also frequently distinguished by the streets which they previously fronted. With the exception of Gorton Street to the east, these streets are no longer used as vehicular or pedestrian routes.

2.4.1 1900-1901 Ice Production Block and Ancillary Buildings

Tank House

The Tank House was built in 1901 and occupies a large two-storey high brick built structure with a semi-basement. The principal elevation fronts Gorton Street. This was the Dockside public/commercial face of the Factory and was thus treated as a display elevation. It was also where the ice left the building originally via loading doors and, from the c.1930s, via the Gantry Conveyors. The elevation has two four-bay wide pedimented gable fronts each flanked by pilaster strips which rise to form small square turrets with a central clock tower, the clock face and slated pyramidal roof of which are both now missing. The outer bays display brick round arched heads with keystones whilst the inner bays have similarly detailed segmental arched heads. The inner two bays of each gable front originally had full width segmental arched ground floor doorways below blind windows. Loading doors have replaced some of the original windows. Moulded brick bands create entablatures above the first floor, and the frieze of one of these is painted with the name 'THE GRIMSBY ICE COMPANY LTD'. Traces of painted lettering remain on the other frieze. The gables are treated as pediments with keyed-in blind oculi in their tympanums and moulded brickwork supporting stone coping.



Annotated ground floor plan (base plan courtesy of Hodson Architects)

The only other exposed elevation of the Tank House is the south side elevation. This has a considerably plainer, more utilitarian character. Extending for 14 bays the three at the east end project outwards around an internal ice stage and spiral staircase. The most noticeable element of this elevation is the wide opening roughly inserted in the first floor of this three bay projection. This previously linked with the upper floor of a now-demolished ancillary building to its south. A small adjoining building to the west with ground floor access from this projection contained the WCs / mess room in 1905. Converted to an oil store in the c.1920s, it has since been demolished. The south elevation is of pier and panel construction with round headed ground and first floor windows set within recessed panels. The north and west walls of the block are shared with other parts of the Ice Factory and are largely internal. They do, however, have the same basic structure with thickened piers, which alternate with thinner walling.

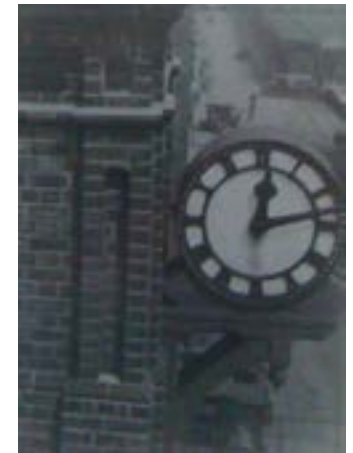
In the interior are two floors of tank rooms containing ice making machinery. Tank Rooms No's 3 & 4 on the ground floor are found above a semi-basement and Room No's 1 & 2 on the first floor are open to the roof structure. The walls are brickwork with internal steel framing. The ceilings incorporate travelling cranes on runners supported off cast iron brackets attached to the piers in the brickwork side walls and the central row of steel columns. Rows of steel columns divide the spaces in both floors into production lines, support the heavy tanks above and, on the first floor, support the central valley between the two roofs. The roof structure above the Tank House is composed of 13 roof trusses of triangulated angle-iron construction steel roof trusses supporting timber purlins under a double pitched slate roof with two lanterns. The ground floor was supported from below by two rows of steel stanchions which separated the brine tanks into three units. On the first floor there was a single tank in each room.

There were six production lines on the ground floor and four on the first floor (some on the first floor have not survived). Both floors contain evidence of the previous operations with production lines, cranes, ice cans, brine tanks, crushers, conveyor belts, bucket conveyors and so on.

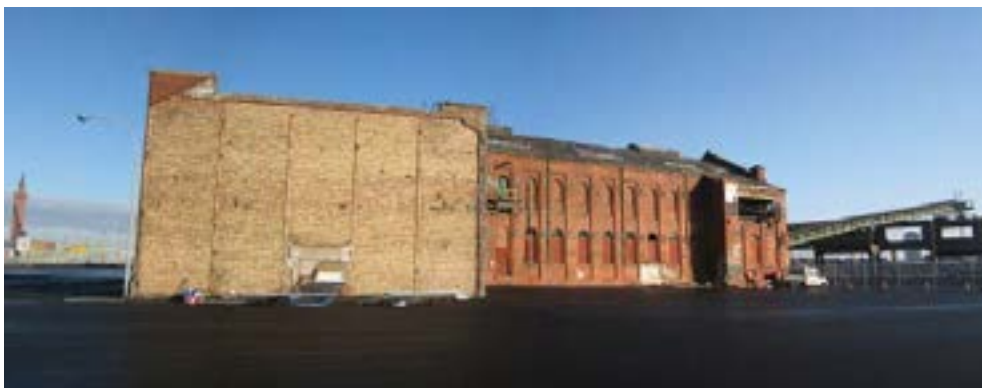
The ice was manufactured in cans in the Tank House. These were suspended in the brine tank on a rack system and pushed along the length of the tank by a set of hydraulic rams. The tanks were covered by large wooden lids forming a 'floor' surface that sealed the system. Cans were filled from a series of nozzles feeding from a fresh water storage tank. Each block of ice weighed approximately 150kg and each "lift" or group of 36 cans produced 5.4 tonnes of ice. When the ice reached the far end of the tank the frame containing the cans was hoisted out of the cold brine tank and immersed in warm water tanks towards the east end of the Tank House for a few minutes. Once the bond between the wall of the can and the ice had melted the ice block floated to the surface. With all the blocks released in this way the frame was lifted out the water tank and tipped over, sliding the ice blocks over a draining board (inclined timber decking) and onto a rubber conveyor at the east end of the Tank House.



Gorton Street elevation behind which is the 1901 Tank House



Projecting clock face, since removed



South elevation of the 1901 Tank House (courtesy of Hodson Architects)



Tank House, first floor

The ice blocks were either fed into crushers with revolving drums set with spiked teeth that were attached to the bucket conveyors at either end of the rubber conveyor or were placed in the Ice Store until required. On the ground floor survive three bucket conveyors with adjacent crushers. The crushed ice was lifted in the bucket conveyors up to the top of the building to be fed down distribution chutes to the high level Gantry Conveyors which bridge Gorton Street to the east of the Factory. The Gantry Conveyors delivered the crushed ice to trawlers waiting at the quayside.

Ice Store

Converted from an engine house in the 1930s/1940s according to the available Goad plans, the only exposed elevation is that to the east by Gorton Street. This forms a three bay brick front in the style of the adjacent Tank House. There is a loading stage, two bucket conveyors and Gantry Conveyors and three shallow recessed bays with round arched windows rising through two storeys flanking an inner bay which is segmental arched. There is a central ground floor doorway. The coped parapet, rebuilt in the c.1960s, had a blind parapet in the 1930s, presumably fronting the original atmospheric condensers which were set on a flat roof. The ground and first floor walls are blank as windows would have inhibited the function of the Ice Stores.

The blocks of ice from the Tank House were either fed into a crusher or were placed in the Ice Stores until required. Adjacent to the ground floor store survives a hatch leading to a short conveyor for carts in the landing area where ice could be transported from the Ice Store along the conveyor to the door opposite in the east (Gorton Street) elevation and conveyed to the fish market. This conveyor continues within the room and would have moved ice within and out of the store. Also within the ground floor of the Ice Store survive ammonia grids which would have stored the ice at -8°C to -10°C. These are found on the south and west walls and the ceiling. Prior to 1954 the room above the Ice Store, which was originally another ice store, was converted to a tank room (Tank Room No 7).



Ice Store

Boiler House

The Boiler House, which originally incorporated the space now part of the Condenser Room, contained six Lancashire boilers in six bays lit from tall round headed windows in the east elevation. The Boiler House is located in the northeast corner of the 1901 facility. The boilers generated the steam for the steam driven compressors. Following the modernisation of the factory in 1931, when it converted to electric power, the boilers were no longer needed and they were removed as were the associated chimney and flues. This area was used as a garage from 1937 (Goad plan). The 1954 site plan shows a garage with a repair bay and paint shop with an iron store opening onto the Condenser Room which had been created between 1937 and 1954. The base of the former chimney was occupied by WCs.

The garage subsequently became a Flake Ice Plant and Electrician's Store. Although there are several references to the Flake Ice Plant, none of this equipment remains⁷. It is shown in the Cleethorpes Camera Club video taken during the last month of the Ice Factory's operation. The Flake Ice Plant was served by its own refrigeration system comprising two Sabroe reciprocating compressors and consisted of one cylindrical ice making machine, probably either Geneglace or North Star, mounted on a steel structure. The plant was a self contained module and probably had some second-hand value as an operating unit. It was in the southeast corner of the Boiler House, next to the door through to the ice handling conveyors. It is not possible to tell from the video what refrigerant was used, nor what type of condenser was fitted. Based on the plant in the rest of the building, it probably used a water cooled shell and tube condenser fed with dock water and worked with ammonia as the refrigerant, but this cannot be determined from the video.

The original Boiler House was situated in the northeast corner of the 1901 block. It is a tall single storey building with an eight bay long elevation facing Gorton Street; 5 bays have round headed windows with stone sills and flush sill band and impost band. The elevation is a red brick pier and panel wall with English bond 1:1 over a blue brick plinth, although the angled northwest end wall to the former railway lacks any panels.



Boiler House, Gorton Street elevation

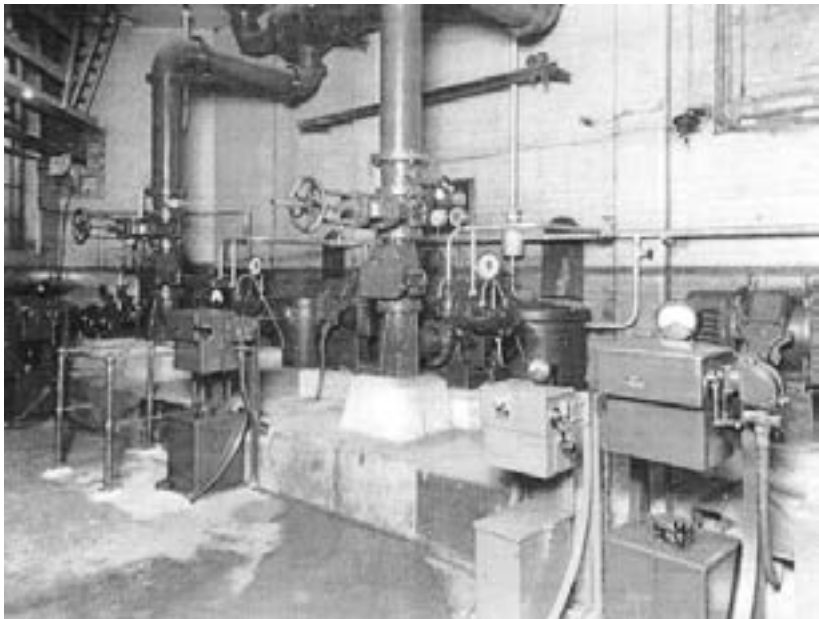
⁷ The Flake Ice Plant is thought to have been removed and sold to the ice factory at Fleetwood where it was erected on the side of the Fish Dock. If so, then it was a self contained plant, independent of any other machinery (Andrew Findlay, comment via email 9 November 2010).



Six large and two small shell and tube condensers, Condenser Room



Salt Water Tank, added c.1980s



Pump House, c.1930s (courtesy of the Centre for Kentish Studies). Later the Salt Water Tank Room.



Reciprocating Compressors

The two bays at the south end include a wide vehicle entrance spanned by a steel girder. This presumably provided access to a storage place for coal. Above this is a concrete rendered panel with lettering reading "Toujours Meilleur Marché POISSONNIERE mrne Dufour" which was added as part of the filming at *Atonement*. The chimney was situated in the northeast corner of the Boiler House by a blind panel with sill and impost band. This has been replaced by a small single storey red brick addition in English Garden wall bond (3s: 1h) with a simple character that encloses the WCs inside. The red brick English bond elevation along Parker Street has two ground floor entrances and four first floor round headed windows. It lacks a blue brick plinth and is not pier and panel construction.

The Boiler House has a slated roof with a louvered and glazed long ridge ventilator and a hipped north end. Six triangulated angle-iron trusses span the main part of the building, three half trusses, one curtailed by the oblique northwest end wall, supporting the hip.

Condenser Room

The early 1930s modernisation included the installation of additional atmospheric condensers on the roof of the Compressor House as shown on a photograph dated 1932. The shell and tube condensers were added to this room between 1937 and 1954 according to the 1954 site plan and Goad plans. They replaced the atmospheric condensers. They all seem to have been installed at the same time, so perhaps this was part of the work done in addition to the fifth compressor installation. They also appear to be contemporary with the Drysdale pumps in the Condenser Room. The use of the room in the few years (1930s) following the removal of the boilers is unknown.

Originally part of the Boiler House, the only external elevation to this room is the functional red brick one along Parker Street. This has a loading bay entrance above which are arched windows with blue brick sills. There is no blue brick plinth. Various areas of the elevation have been refaced, presumably parts of the wall were dismantled to facilitate the insertion of the machinery, resulting in a patchwork of original and later brickwork.

The Condenser Room contains a machine pit within which are the four Drysdale centrifugal pumps. These pump dock water up to the roof level and supply the shell and tube condensers situated by the raised metal grill gantry walkway and stairs in the room. These pumps supplied water up to the roof level. On the inlet of the pump there is a large vertical cylindrical strainer, which would have prevented any debris from the dock damaging the pump. The water flowed down through the condensers under gravity, draining back into the dock via pipes running below Gorton Street. There are six large and two small condensers, each a vertical shell and tube heat exchanger. The larger ones measure approximately 1000mm diameter and 4800mm high. The upper end of the condensers, containing the water end box, protrude through the ceiling and water was fed into the end through three nozzles.

Salt Water Tank Room

For most of its operational history this room was a 'pump house' as labelled on various Goad plans from 1905. The only external elevation is the one along Parker Street where there are three round headed windows set in a red brick wall. Internally this triangular shaped room is dominated by a large tank. Referred to as an "oil tank" in the Hodson Architects drawings, it is insulated and not likely to have contained oil which would not have been used to any great extent at the Factory. Rather it was probably a water tank containing salt water to feed the Flake Ice Plant and/or for use in the main ice production facilities. It was probably placed in the room in the late 20th century. The pumps adjacent to the tank are called "salt water pumps" in the fuse boxes on the wall of the room. This suggests sodium chloride solution

was added to the feed water used in making flake ice to ensure that the flakes broke away from the inner surface of the drum.

The area under the salt water tank and the small J & E Hall reciprocating compressors may have been a holding reservoir for borehole water. There are several pumps in the tank room where the motor is above floor level and the pumps below. There is also a capped borehole in the Condenser Room.

Reciprocating Compressor Room and adjacent unnamed room to the east

The only external elevation is the one along Parker Street. The unnamed room has round headed ground floor windows with an infilled door opening and three square headed upper windows. Its original function is unknown. The Reciprocating Compressor Room is a taller two bay range with recessed panels containing round headed glazing bar windows including a first floor door and gantry walkway to the northern factory unit. Another room that is triangular in plan, it contains a number of surviving equipment. There are two small J & E Hall two stage belt driven reciprocating compressors and a vertical intercooler vessel. The discharge gas from these compressors would have fed the two smaller vertical shell and tube condensers in the Condenser Room. The liquid from these condensers was then brought back to the intercooler in this room to feed the cooling coils in the Ice Store. This liquid feed was through a valve box.

The valve box contains a set of ten liquid control valves and a matching set of defrost valves and suction shut off valves. The valve box is a wooden casing containing the headers and valve bodies and filled with loose cork insulation. The valve stems stick through the front of the casing, giving easy access to the valve handles. When ice built up on the cooling coils it would be removed by shutting the liquid feed valve and feeding compressor discharge gas into the coil, causing the ice in contact with the coil to melt. The remaining ice could then easily be broken off the coil by hitting it with a heavy stick.

This room also retains a spiral staircase likely to be an original, or early, feature that provided access to the west end of the upper Tank House. Finally this room also contains a floor hatch providing access to the partial cellar.

2.4.2 1907-1910 Extension

Tank House

Between 1907 and 1910 an additional Tank House was built to the north of the original Ice Factory. This provided extra capacity. The exterior was probably complete by 1908 when it is shown on the OS map. There is now no engineering equipment of any merit in the north building. Its cooling requirements were latterly served by the refrigeration plant in the main building, although the main ammonia pipes connecting it to the 1901 plant have been removed. It was probably decommissioned long before the main plant, and lay dormant for many years prior to the eventual closure of the factory. According to English Heritage (2001) the machinery was removed in 1976.

The Tank House in the north extension is a two storey brick building with slate roofs. It is linked to the 1901 building via a small pedestrian bridge with a timber boarded deck at first floor level across Parker Street, steel beams span between the external walls. There are also ducts, pipes and the runners of travelling cranes spanning the former Parker Street between the 1901 and 1910 buildings.

The Tank House dominates the 1910 building and is stylistically similar to the original Factory with elevations incorporating tall round headed recesses and walls of pier and panel construction. The east gable end wall of the Tank House rises above the loading bay which abuts it, is three bays wide with a single bay corner tower housing a cast-iron spiral staircase (not accessed) capped by a dome flanked by four smaller domes all formerly covered with copper with the main dome surmounted by a flagpole. The tower has a narrow round headed blind panel to each side with an elongated keystone, moulded brick cornice and coped parapet. The first floor round headed recesses and windows of this elevation are repeated on the return elevation to the north along the former Stuart Wortley Street.

The 20 bay elevation along Parker Street is two storeys of pier and panel construction with two levels of windows, the western four bays of which enclose offices and storage areas. The elevation has blue brick to the ground floor. The bays have round headed openings with glazing bars to the ground floor, although one has a blind panel, another an inserted door and another has been altered to accommodate a runner for a travelling crane from the 1901 Factory. Some openings are beneath louvres, they all have stone sills and header brick lintels. On the first floor are round headed blind panels with lunettes infilled with later brickwork. There is a stepped brick eaves cornice.

Internally Tank Room No. 6 was situated on the ground floor with No. 5 on the first floor. The rooms are rectangular with access platforms and the former ice store extending to the north and west to fit the irregularly shaped plot. Although the machinery has been removed, the Tank Rooms retain steel stanchions along the north side, between them and the open area.

The stanchions support the ends of the box girders which supported the first floor ice tanks in addition to the ends of the roof trusses over both buildings. The English Heritage report (2001, 13) notes that brackets are bolted to the stanchions, and through the outer south wall, support the runners of travelling cranes on both floors of the Tank House. The steel runners bear the name 'CARGO FLEET ENGLAND'.

The ground floor retains a grid of steel beams supporting the floor below which contains three separate concrete lined pits formerly holding the brine tanks. There is a platform area at the east end of the first floor for loading ice blocks. The roof has triangulated angle-iron trusses constructed of lengths of L-section steel.

Offices and Storage Area

The offices and storage areas to the north and west of the Tank House are contemporary with it. Internally the offices were not inspected as there is no access at present. However, the interior of the office area, as visible through the windows, is suggestive of a mid-late 20th century scheme of office partitions and internal doors and furniture. The offices are first shown on the 1928 Goad plan.

The open area to the north rising through two storeys in height is described as a Storage Space on the 1954 plan, but was originally the Ice Store (converted to storage between 1937 and 1955 according to the Goad plans) and this explains the blind windows in this area.



Tank House along the former Parker Street (to the right, opposite the original Factory to the left)



Stairs to offices (courtesy of the National Monuments Record)

The external elevations are formed by Fish Dock Road, much of Stuart Wortley Street and the western four bays of Parker Street. The 12 bay red brick west elevation with blue brick plinth elevation facing the former Fish Dock Road is composite in appearance containing motifs from all the other elevations. Arguably the most striking elements are the pedimented three bay section which is flanked by blind outer bays and emphasised with full height pilasters terminating in small turrets with blind panels, moulded cornices and pyramidal stone caps. The three recessed segmental arched panels contain three light later ground floor windows with chequered brick panels above and three light first floor windows with sills and glazing bars. On the second floor (loft area) is a pilastered blind arcade of narrow round headed panels with moulded brick imposts and ashlar keystones containing recessed round headed glazing bar windows with sills. The gabled pediment has a moulded brick cornice and frieze with painted lettering reading 'THE GRIMSBY ICE COMPANY LTD' with a keyed-in oculus below stone coping with a central ball finial. The single flanking bays display a continuation of the cornice, frieze and pilasters capped with turrets. The northern of the flanking bays has a round headed ground floor entrance with double doors beneath a steel lintel, chequered brick tympanum and keyed arch. The other bay forms one side of an angle turret beside the former railway passage.

The return bay along Parker Street contains two small single light windows. The four bays along Parker Street include three light later ground floor and first floor windows with glazing bars beneath steel lintels, separated by chequered brick panels complementing those in the pedimented section on Fish Dock Road. Internally this area probably contained offices for senior management, hence the large, elaborate window openings and surrounds. There are round headed openings above containing lunettes with sills above blind panels. There is a first floor door to the iron gantry walkway linked to the original Factory unit.



Large open space with lift to the rear.



External elevations along the former Fish Dock Road and Stuart Wortley Street

The first floor round headed recesses and windows of the east elevation of the Tank House are repeated on the two storey return elevation to the north (Stuart Wortley Street) which has a tall three bay central section flanked by lower six bay sections each with recessed panels.

Internally at the east end of the storage area, where it narrows to a corner, there is a lift adjacent to a loading door in the north elevation. The room is a simple full-height space with no evidence of a mezzanine floor. There are pitched roofs set at right angles to the Tank House and supported on timber king post trusses.

Loading Bay

The building occupying the eastern end of the 1910 building was a loading bay with a wide loading door opening on the north elevation with four high level windows lighting the space from above the access opening on Stuart Wortley Street. Internally the loading bay also accommodated offices (shown on various Goad plans from 1917) and later a bricklayers' store on the ground floor with office above at the eastern end (shown on the 1954 site plan). There is a walkway at an upper level leading to the platform on the first floor of the Tank House. From at least the c.1930s there was a substantial Gantry Conveyor extending from the upper level of the Tank House above the loading bay to the Docks which no longer survives. It was presumably removed in the 1970s when the machinery from the building was removed.

It is possible that the loading bay incorporates some earlier fabric from the late 19th century building previously on this site as the Parker Street elevation is not quite aligned with the rest of the elevation. It contains from west to east an infilled ground floor loading bay opening with a later narrower opening inserted and a large 12 x 5 pane window with a steel lintel and pier and panel ground and first floor round arched sash windows with a concrete parapet above.



North exterior elevation with loading doors east of the Tank House

2.4.3 Compressor House: c.1917-1930 Building

Compressor House

Situated south of and adjoining the original 1901 Tank House, is the Compressor House built c.1917 to house the steam engines and, from 1931, the J & E Hall ammonia compressors and associated plant and pumps.

There is an unambiguous building break along the north (Parker Street) elevation between the original 1901 building and this extension. The Compressor House is a tall single storey building facing Fish Dock Road and Parker Street. The outer walls (both five bays in length) are built of red brick, in pier and panel construction, over a blue brick plinth. The west Fish Dock Road elevation was the principal one. The bays along Parker Street have windows at two levels. The lower windows are flat headed and the upper round headed all with stone sills and glazing bars. This pattern repeats on the west elevation. This external wall also displays wider end bays which have keyed round headed ground floor openings with glazing bar windows; the one to the south incorporating a central door. The entrance is embellished with three rows of header bricks.

There is an upper loading door in the northeast corner in the final bay on the Parker Street elevation enabling motors and other pieces of equipment to be transferred for repair or replacement in and out of the Compressor House via a travelling crane.

Internally, the steel girder framework supports the two cranes required for the maintenance of the new machines and the insertion of a guide rail above their motors. Rising above brown glazed bricks to dado level are white glazed bricks providing additional light to the room. By the entrance is a timber lobby with timber panelling, steel stairs and an office above in the southwest corner of the room. This probably dates from between the c.1930s and c.1950s.



Compressor House, external elevations; note water tank above installed c.1930

There are four J & E Hall 4-cylinder single stage reciprocating compressors within the Compressor House. The electric motors are of the "slip ring" type. *ACR News* (2009, 12) reported that these 16.5in diameter, 15in stroke machines were designed to run at 250rpm, each powered by 600hp, 6,000V motors (supplied by the Metropolitan Vickers Electrical Company of Manchester). Next to each of the compressors there is an electrolytic resistance starter. Metal plates were dipped in electrolyte to provide an increased resistance in the motor windings, which enabled higher torque to be generated by the motor in order to start the compressor rotation. Varying the depth of insertion allowed the torque to be ramped, providing a very smooth start. Between the motor and the compressor there are very large flywheels which is part of the reason that a high starting torque was required. The flywheel by each compressor enabled it to run smoothly without the variations in torque caused by the strokes of the four cylinders causing undue vibration. To assist with maintenance of the compressors, for example in rotating the crankshaft when checking clearances, there was a ratchet mechanism on the flywheel. This would be operated by hand when the motor was electrically isolated, in order to "inch" the flywheel round to the correct position for maintenance.

The roof above the Compressor House is of particular interest in terms of the operation of the Ice Factory. This is a flat roof with concrete coping on top of brick parapets. The gable ends of the original Tank House rise above this roof to the east. The discharge gas from the compressors below passed up to the roof where it fed a shell and tube type desuperheater and then passed to a pair of vertical vessels located directly below a large rectangular water header tank. The vertical vessels were oil separators installed between 1930 and 1932 to prevent the possibility of oil finding its way through the condenser into the evaporator coils.

The original J & E Hall plant from 1931 was connected to two atmospheric condensers explaining why two separate pipes lead from the oil separators to the shell and tube condensers with a strange piping arrangement around the oil separators. The roof of the Compressor House is now empty apart from the desuperheater which is along the east edge of the roof, next to the Tank House gable end and the water tank. In 1931, when the J & E Hall compressors were added they increased the capacity of the plant and the existing condensers would have needed to be extended. The new condensers were put on the roof of the Compressor House. The new array of atmospheric condensers consisted of 12in bore Staffordshire iron pipes in 34 stacks, 54 pipes high – a total run of 44,200ft or over 8 miles (*ACR News* 2009, 12). The loop of pipe around the oil separators would have been installed when the atmospheric condenser on the Compressor House roof was removed and the shell and tube condensers were installed.

From the c.1940s / early 1950s the discharge gas then passed from the oil separators through a pair of pipes vertically stacked above the perimeter wall of the flat roof and to the ammonia condensers in the Condenser Room. The upper end of the six condensers in the Condenser Room, containing the water end box stick up through the ceiling and water was fed into the end through three nozzles. Liquid ammonia then drained from the bottom of the condensers to two horizontal liquid receivers. The main liquid lines from the receivers could not be traced through the voids but are presumed to feed a series of pumping stations located along the sides of the brine tanks in the Tank House. These pumping stations are visible on the upper floor of the Tank House, but are less obvious on the lower floor. The suction pipes from the brine coils return to the pump stations and dry suction pipes run from these at high level to the Compressor House.

The processes described above ensured good heat transfer between the ammonia coils and the brine and gave even temperatures throughout the tanks. The brine was chilled to about -13°C in this way. Along the inside of the north (Parker Street) elevation are control panels (1930-1933) feeding electrical supply to the compressors. They were also produced by Metropolitan Vickers.

2.4.4 1930s – 1950s Extensions

At the southern end of the site two extensions were added to the Ice Factory between c.1932 and 1954. Adjoining the Compressor House was a Switch Room with an office/workshop above and south of this a single storey (double height) New Compressor Room. The original design and appearance of the west elevation facing Fish Dock Road is unknown as it was rebuilt following the construction of the New Compressor Room to follow a consistent uniform style.

Switch Room

The English Heritage report (2001, 13) names the room to the south of the Compressor House and north of the New Compressor Room as a Switch Room, following an annotation on the 1954 floor plan. It was first labelled Switch Room on the 1937 Goad plan. In more recent years, (probably the 1970s-1980s), the Switch Room was subdivided to the west with brick and blockwork partitions creating a short corridor by the west elevation and a small room adjoining the Switch Room. The purpose of this is unclear and the large windows on the west elevation would suggest that this room was not intended in the mid 20th century to be subdivided thus blocking off this source of light. Part of the Switch Room may be late 19th century, i.e. adapted for use within the Ice Factory, but due to later alterations concealing any earlier fabric, this cannot be determined at present.

Chief Engineer's and Electrician's Offices

The Chief Engineer's and Electrician's Offices above the Switch Room are accessed via the New Compressor Room or via the stairs and small office in the Compressor House. Within are c.1940s-1950s glazed timber partitions creating an office space with plan chests. There is a subdivided workshop adjacent to the east with no direct access between the two rooms. The door is marked 'Electrical Department'. The ceiling has timber joists and rafters supported on steel beams. The roof above this floor has a loft with three king post trusses under a dual pitched hipped slate roof.

New Compressor Room

The east elevation clearly shows a building break between the New Compressor Room and Switch Room bays revealing that the New Compressor Room was a later addition (c.1946-1954) at which time the west elevation of the Switch Room and offices above facing Fish Dock Road was refaced to match the west elevation of the New Compressor Room. The south elevation is of interest as it was formerly an internal wall designed to hold another building to the south (since removed). Historic photographs show buildings to the south pre-1954 and, like many other buildings on the Docks, the New Compressor Room was almost certainly built in a space between two older buildings. Unlike the pitched roof with king post timber trusses above the office/workshop adjacent (see above), the roof above the New Compressor Room is a flat reinforced concrete slab spanning between steel beams.



J & E Hall compressors
installed 1931



Switch Room



First floor workshop

The front elevation facing Fish Dock Road is of a uniform 1950s style with three tiers of windows extending upwards through most of the elevation. There are two wide and tall metal framed windows which have a continuous concrete sill and are each six lights wide with three tiers. Concrete panels separate the tiers of windows which have a continuous concrete lintel above the top tier. This elevation has a blue brick base with red brick brickwork above with English Garden Wall bonding of alternate rows of stretcher and header bricks. There is a coped parapet. The rear elevation has a more utilitarian character. Concrete quoins are present at the southeast corner but also separating this extension from the earlier Switch Room. There is a ground floor loading bay door on runners and a large 12 x 5 pane window above with a concrete lintel.

Internally the New Compressor Room has walls of partially glazed white tiles to provide additional lighting. Steel roof beams are supported on steel columns built into the brickwork side walls. The room contains a J & E Hall 4-cylinder single stage reciprocating compressor. The electric motor of the ammonia compressor is of the "slip ring" type. The compressor has a discharge pipe to the tank on the roof and an incoming pipe. There is a travelling crane to move components when necessary for maintenance. A steel staircase by the west elevation of the New Compressor Room provides access to the first floor offices adjacent.



J & E Hall compressor; installed c.1946-1954

2.5 Comparative Analysis: Regional and National Context

There are four Listed ice factories in England of which the Grimsby Docks Ice Factory is the only Grade II* example. The remaining ice factories, all Grade II Listed, are described below using the information provided in the Listing descriptions.

The first is a three storey ice factory in Bridgegate, Barnard Castle. This is not a purpose built ice factory but was instead built as a carpet mill, later used as an animal food factory and then converted into an ice factory. It is now a workshop and garage. As such it has considerably fewer diagnostic features and lacks any *in-situ* ice making machinery. Built in the mid-late 18th century, it is a rubble stone range with ashlar or roughly tooled quoins and dressings, and a stone slate roof.

A former ice factory and cold store in Digbeth, Birmingham was designed in 1899 by Ernest Bewlay for the Linde British Refrigeration Company and completed in 1900. It is a four storey red brick building with a basement and a slate roof. The front to Digbeth Road has a distinct architectural treatment. There are ten bays, at ground floor level these have semi-circular relieving arches and the seven bays at the left are blind with the three to the right having three metal-framed windows with cambered heads. The first floor is blind, but the second and third floor windows are paired and the third floor has lunettes, save to the two right-hand bays which are blind. The left flank abuts No. 135 Digbeth. The right flank has two shaped gables with a loading bay to the ground floor which has a raised platform and four iron columns with bollards. The second and third floors here have a wall arcade but no windows. To the tops of the gables are large circular air inlets. A wall to ground floor level at the right has been demolished and the 1937 Goad insurance plan of the site indicates that this is probably where the boiler house chimney once stood.

Internally the building has a tall ground floor and lesser height to the three upper floors. The loading bay is at the eastern end of the building, giving onto a courtyard which is entered from Digbeth and Orwell Passage. Immediately behind are a staircase and two lifts leading to each floor. The floors are supported by a grid of evenly spaced iron columns with moulded caps supporting steel beams. At each level there are four main chambers. These have heavy, insulated doors and the walls and ceiling are lined with wood panelling behind which is cork insulation. There are metal ducts of rectangular section across the ceilings, which are also covered with cork insulation and boxed-in with wood panels. To the top of the building there are replaced fans which circulate cold air. The roof structure has been replaced to the original pattern. Opposite the loading bay, on the other side of a courtyard, is a lower building with shaped gables which housed the office, stores and canteen, built in 1920 to designs by Cossins, Peacock and Cooke, which is not Listed. No ice making machinery survives.

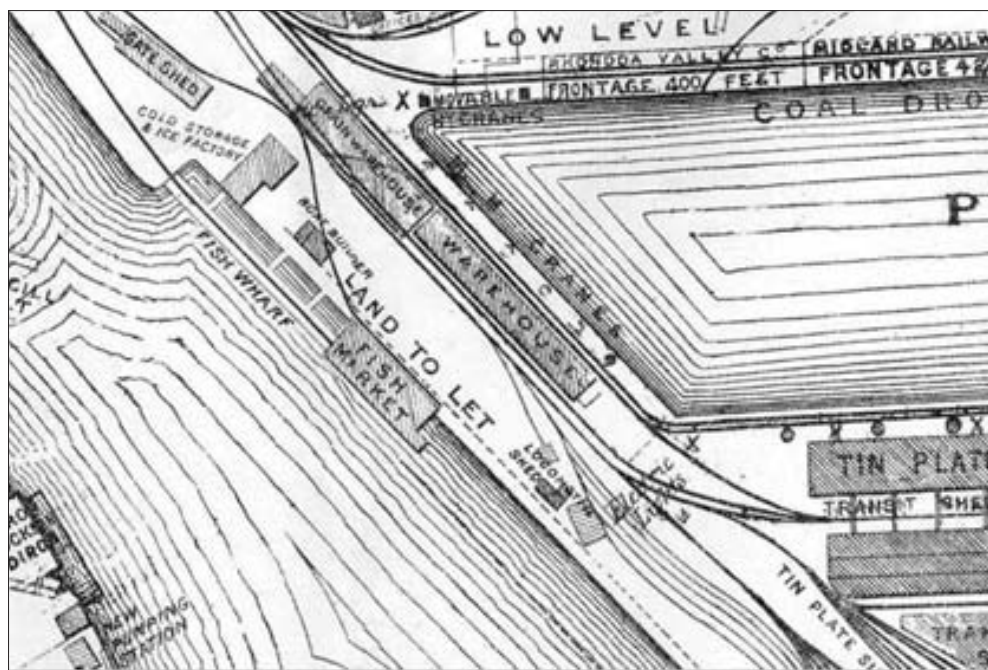
The third example is found as part of a larger site in Padstow. In the 1890s/1900s an ice factory and new fish packing shed was built in the Lower Yard. The ice factory was not a principal reason for the designation and it is not clear how much survives. The principal reasons were given as firstly, the mid 16th century harbour walls are contemporary with the Grade II Listed walls to the north and south quay and form part of an unusually complete group of harbour structures in Padstow; secondly they survive as an early example and are substantially intact, and thirdly they are associated with Padstow's shipbuilding industry.

In Wales three ice factories are recorded online in the records held at Coflein. The first of these, Milford Haven Ice Factory, Pembrokeshire, was built in 1901 where it was one of two ice making factories in Milford Haven⁸. It was constructed of brick with corrugated asbestos roofs and comprised six sections, each relating to the process of ice making. It was demolished in c.1989. An ice factory in Neyland, Pembrokeshire, built in 1908 as part of a fish market, has also been demolished. By the 1920s the fishing industry in Neyland had gone into decline and the factory was sold in c.1935.

The only known surviving ice factory in Wales, from the research undertaken as part of this Conservation Statement, is the Swansea Ice Factory which is Listed Grade II (NPRN 33320). Built around 1880, the ice factory would have supplied ice to trawlers berthed at the nearby fish wharf on the east bank of the River Tawe, and also to the adjacent fish market where the trawlers' catches were sorted and sold. According to www.swanseadocks.co.uk, the original freezing floor of the ice factory is still in place, as is the tall chimney of the engine house where a large coal-powered steam engine would have provided the compression needed to manufacture the ice. However, no machinery survives *in-situ* and much less fabric survives compared to Grimsby Docks Ice Factory. In 1901 the trawlers moved into the South Dock Basin where a new ice factory (now demolished) and other facilities were established for the deep-sea fishing industry and so the original ice factory became redundant.

In 1926 it was taken over by ships' chandlers McSymon & Potter, who traded from the premises for almost half a century, whilst adding several extensions to the original building. In more recent years it was occupied by local flag-makers Mott & Jones. Interestingly the ice factory is currently undergoing extensive renovation for future use as a restaurant.

In conclusion, the available evidence reveals that the Grimsby Docks Ice Factory is an extremely rare example of this building type to survive and the early to mid 20th century machinery that it contains *in-situ* is the only example to survive in its original context in England and Wales.



The Ordnance Survey map from the 1880's shows the location of the ice factory, the fish wharves and the fish market on the east bank of the River Tawe, Swansea.

⁸ The other ice factory was not described. Closed in 1965 it is presumed to have been demolished many years ago.

2.6 Consultation

In order to ensure that various views are represented in the Conservation Statement and where possible a consensus emerges as regards the significances, issues and overall vision supported with conservation policies, the owners, local authority and English Heritage were consulted and provided with a draft from which to comment. This final report incorporates refinements and comments received on the first and second drafts. In addition Great GIFT and the Grimsby, Cleethorpes and District Civic Society were consulted via the distribution of questionnaires. These groups have been engaged with the site over the past months and / or years and have a keen interest in its future. The following individuals / organisations have been consulted August – September 2010:

- ◇ Andrew Findlay, Senior Estate Surveyor, Grimsby & Immingham, Associated British Ports.
- ◇ Catherine Dewar, Historic Areas Advisor, English Heritage.
- ◇ Gill Osgerby, Urban Renaissance Project Officer, North East Lincolnshire Council.
- ◇ Liz Mayle, Conservation Officer, North East Lincolnshire Council.
- ◇ Grimsby, Cleethorpes and District Civic Society via Pauline Lee, Secretary.
- ◇ Great Grimsby Ice Factory Trust (Great GIFT) via Vicky Hartung, Chairman.
- ◇ Society for Lincolnshire History and Archaeology, represented by Chris Lester⁹.

The section below highlights the key points that emerged during consultation with the Civic Society, Great GIFT and the Society for Lincolnshire History and Archaeology which is a supporter of the Great GIFT. A more comprehensive coverage of responses has been included in Appendix F.

2.6.1 Responses from Great GIFT, Grimsby, Cleethorpes & District Civic Society and Society for Lincolnshire History and Archaeology

All respondents believed that the Ice Factory is an important building. Some placed greater emphasis on the importance of the historic processes and contribution to the fishing industry (and therefore economic development of Grimsby), others the size and scale of the Factory and others the rarity of the building type and its machinery. In terms of its value to the local community most respondents noted its potential for reuse. An overarching problem was considered to be finding a sustainable use (or uses) for the site. Perceived obstacles to this included its poor condition, location within a working dock, lack of current use and considerable amount of machinery that may limit future uses.

The respondents' comments on the future of the site focused on sustainable re-use and renovation of the site as opposed to demolition; some viewing it as an opportunity for a larger regeneration programme for the area in which it lies. It was noted by a number of respondents that the buildings are large enough to accommodate a variety of uses and therefore a variety of potential visitors.

⁹ A supporter of the Great GIFT, the SLHA promotes an awareness and knowledge of all aspects of the history and heritage of the historic county of Lincolnshire. They have over 600 members including institutional and overseas ones and their roots go back to 1844. The Industrial Archaeology Team has a particular interest in industrial buildings and has been concerned about the future of the Grimsby Docks Ice Factory for many years. In 2001 they organised an East Midlands regional conference in Grimsby entitled 'Fish and Ships' to which over 90 industrial archaeologists came from as far away as Northamptonshire. The Ice Factory was a key site on the dock tour and many delegates expressed their concern about the state of neglect in which it was found

2.6.2 Responses from specialists in the Refrigeration Industry

A small number of refrigeration specialists were contacted for their views. All noted the high significance (rarity, age, size, engineers) of the *in-situ* ice making machinery and the importance of mechanical refrigeration to modern lifestyles. One comment stated, *'The J & E Hall refrigeration compressors still in place at the Grimsby Ice Factory are a reminder of the early years of refrigeration. They are the oldest of their type still in existence and amongst the largest ever made. As a record of the history of the modern world, the ice making equipment within the Grimsby Ice Factory is an essential and irreplaceable artefact'* (Neil Everitt – Editor, *Air Conditioning Review*).

2.6.3 Consultations: Concluding Remarks

It is clear from the consultations with specialists and civic societies in the local area that there is great concern amongst those interested in heritage assets about the future of the Ice Factory. The site is regarded as important because of its role in the history of the fishing industry in Grimsby, the rarity of the machinery, or the landmark nature of the buildings. Whilst aware of a number of the key challenges – funding, sustainable uses and access issues – a variety of potential future uses were proposed and could be taken forwards to explore the viability of these in greater depth.

3 STATEMENT OF SIGNIFICANCE

3.1 Introduction: The Concept of Significance

This assessment of significance has been informed by non-intrusive site investigation combined with historic research, analysis and consultation. Significance may include intangible concepts which are difficult or even impossible to define scientifically but which can be appreciated irrespective of this. The cultural significance of a historic place is derived from a wide range of perspectives and values encompassing not just the physical fabric of the buildings but also their setting, contents, use, associated history, tradition and local distinctiveness (Kerr 1996, 4). Consequently, cultural significance is unique to each place and thus the criteria by which such significance is assessed and judged is also site specific. The criteria used to assess the buildings and machinery at the Ice Factory are based on a broad understanding of the historic place. They aim to consider not only the architectural, industrial, historical and social importance of the site but also broader aspects of its significance within the wider context. The method of assessment and criteria used has been informed by *Conservation Principles, Policy & Guidance* (English Heritage 2008) and *Conservation Management Planning* (Heritage Lottery Fund 2008). The cultural significance of the site is considered to reside in several categories described below (in no particular order):

National, Regional, Local: covers the significance of the site on a variety of scales from local to national to ensure that local values, not necessarily recognised on a national scale, can be identified.

Statutory: includes any statutory designations that apply to the site.

Architectural: includes the general architectural development of the site, with particular references to changes in the form, function, style and design, and how such changes reflect the various fashions, technical advances and demands of a specific period. It also includes the integrity and completeness of the design, the age and rarity of the fabric and features, the division and use of space within each building, the significance of the site with regards to the general development of ice production, the significance of architects and engineers connected with the site and the intrinsic qualities of the buildings themselves. Generally the older and/or rarer the fabric and features, the integrity and completeness of the design, and the importance of the architects and engineers, the greater the significance will be. Other considerations include the ability to demonstrate, for example a particular custom or tradition associated with the site, linkage to any particular events or an important construction technique or episode.

Industrial: includes the ability to demonstrate specific industrial processes through the machinery and its spacial arrangement within the buildings and how these changed over time, the rarity and degree of specialisation, and degree of surviving machinery and built fabric.

Historic: aspects of the site that help us understand life in the past and the broader context of British social history, especially where it reveals important trends or events in historic development and associational links, including links to significant people that are important in the site's history or design, or the history of Grimsby or the wider region / nation. Historic value can also include the changing use of a site or its evolving place in a local community.

Community and Social: aspects that make or have made the site valuable as a community or visitor resource or a reference to the social and cultural value placed on the site by the local and wider community.

Educational and Academic: any part of the site that could be particularly important in providing learning, and research opportunities for aspects of the site, its use and wider relevance. Education in its widest sense incorporates private scholarship, Life Long Learning, adult education, enabling intellectual access, increasing understanding, and meeting the needs of local communities and other visitors.

Formal and Aesthetic Qualities: the visual appearance of, as well as the associated emotional reaction to, the unique "sense of place" of a feature or site. It describes the character of a feature within its context and its atmosphere and relates directly to the ability of the site to generate emotional and psychological well-being. Items that form an essential part of the character of the site and surrounding landscape are likely to have a high significance. Aesthetic significance often stimulates individual reactions, which contribute to people's experience and appreciation of a feature.

Group Value: principally, group value describes the way in which either the site generally, or individual aspects of it, contribute to a wider group and thus enhances that group's significance. These might be associational links relating to any other area of significance, or geographical ties to relevant neighbouring features, buildings or landscapes.

For ease of analysis, and in line with the recommendations in the Brief to Consultants, the assessment of significance will separate the buildings and machinery into two sections. Furthermore, in order to highlight differing levels of significance the categories highlighted above will be assigned a relative significance (see Section 3.2).

3.2 Designations of Significance and their Use in Practice

The relative significance of the machinery and buildings both to other similar sites within the UK and in particular to other spaces / features within the same site, are discussed below and key features and spaces are noted. The designations are not simply an assessment of the architectural significance of the spaces, but rather the combination of the factors described above. The designations can be used to inform the level of change that is likely to be acceptable within the buildings, machinery and key spaces (see Chapter 4). However, unless otherwise stated, the designations are not accurate to the level of each individual room or feature and provide a guide only. Every case should be considered on its merits and in relation to the other spaces and elements.

Exceptional Significance

Exceptional Significance defines elevations, spaces or machinery that are of outstanding cultural value, often having an international as well as national significance. Loss of these elements would be a major loss to local, regional, national and probably also international heritage and would greatly diminish the value of the asset.

High Significance

High Significance defines elevations, spaces or machinery that are of such great cultural value that significant alteration, deterioration or demolition would be a great loss to local, regional or national heritage and would seriously diminish the value of the asset.

Moderate Significance

Moderate Significance defines elevations, spaces or machinery where the general significance is moderate and for which the character and historic integrity of the site would be considerably affected by the loss of this element.

Low Significance

Low Significance is used to define elevations, spaces or machinery where there is little cultural heritage present, the character and historic integrity of the site would be affected by the loss of this element, but the design intention would remain apparent and the affect on the site would be limited.

No or Intrusive Significance

No or Intrusive Significance is used to describe elevations, spaces or machinery with either no cultural heritage, meaning the character and historic integrity of the site would not be affected by the loss of this element, or which have later intrusions which have a negative impact upon significance.

3.3 Summary Statement of Significance

The assessment of significance below separates the buildings and machinery for analytical purposes by separating complex elements as per instructions in the brief. However, it should be noted that the buildings and machinery share the same historic context, functional relationships and their significances are enhanced by their group value. To separate the principal ice making machinery from the buildings would seriously compromise the special interest of the whole heritage asset.

Overall the Ice Factory buildings have a high significance. The following text highlights the key points of significance of the buildings and spaces that form the Grimsby Docks Ice Factory:

- ◇ Ice factories are a rare and little examined historic building type. This is a very rare, and substantially complete, example of a 20th century ice production factory.
- ◇ The Ice Factory is a locally and nationally iconic building, a visible element on Grimsby's skyline from the A180 flyover and docks area.
- ◇ The Ice Factory illustrates Grimsby's importance as the world's foremost fishing centre in the early 20th century. The function of the buildings and machinery within, represents a direct response to contemporary economic growth and food processing linked to changing lifestyles and expanding trade activities for perishable goods.
- ◇ Grimsby Docks Ice Factory played a role in establishing Grimsby as the largest fishing port in the world by the late 19th / early 20th centuries (English Heritage 2009, 2; Sather & Associates 2002, 5).
- ◇ The Ice Factory is understood from the Listing description and HER to be the earliest remaining purpose built ice factory in England.
- ◇ The Ice Factory is thought to have been the largest ice factory in England in the early 20th century and a 1931 article in the *Grimsby Daily Telegraph* (16 December 1931) and 1933 article in *Nature* magazine described it as the largest in the world.
- ◇ The importance given to the evolution of historic buildings is a well established principle and it is significant that the buildings retain much of their original external fabric and evidence of later alterations related to important changes in the ice making processes. These include the change from steam driven to electric machinery or the intensification

of uses with further buildings added or rooms converted to different uses to promote a greater output of ice in order to meet growing demands within the local economy.

- ◇ Held in sufficiently high regard by the local civic society for some members and other non-members with an interest, to form a new trust - the Great Grimsby Ice Factory Trust (Great GIFT) - set up to preserve the Ice Factory. *Conservation Principles* (2008), a policy document by English Heritage, attaches importance to communal values. Available evidence from the minutes of the Grimsby Cleethorpes & District Civic Society public meeting on 24 September 2009 (<http://grimsbycleecivic.co.uk/IceFactoryDebate.html>) would suggest that sections of the local community regard the Ice Factory as an important historic building. This high profile building is however controversial with sections of the local community and some politicians preferring to see it removed. At the end of the evening there was an appeal to the audience for resolutions. The first; that the Ice Factory be delisted and demolished was not carried. The second, that the Civic Society continues to facilitate the search for a solution was carried.

Overall the primary ice making machinery within the Ice Factory buildings has an exceptional significance. The following text highlights the key points of significance of the machinery within the Grimsby Docks Ice Factory:

- ◇ Research to-date has revealed that the historic refrigeration equipment in the Grimsby Ice Factory is unique in the UK being Britain's last surviving examples of *in-situ* early, albeit not original, 20th century refrigeration equipment. The Factory also has a specific link to the local area's history.
- ◇ For over half a century the machinery ensured the production of large quantities of ice and was a vital cog in the production of ice for the Grimsby fishing industry supporting its growth and economic success.
- ◇ From discussions with Elaine Pearce at the DCMS (29 September 2010), it was revealed that the English Heritage advisor's report gave the reasons for the upgrade from Grade II to Grade II* in 1993 for the site being the earliest surviving (purpose built) ice factory in the UK and the only one to survive with its machinery.
- ◇ The compressors and equipment installed during the 1931 upgrade to electric power were by J & E Hall. This company is commonly recognised amongst refrigeration specialists to have been one of the great refrigeration companies of the 20th century.
- ◇ The 1930s installation of the J & E Hall machinery was the largest of its kind anywhere in the world at that time.

Please note that as a Grade II* Listed building, the Ice Factory – including all its fixtures and fittings – are of national significance falling within the top 6% of Listed buildings. Thus the overall significance of the site is exceptional. Within this overall significance some elements are of greater significance when compared to others and this is explored in Section 3.4.

3.4 Assessment of Significance for the Buildings

For an explanation of the methodology and categories please refer to Section 3.1.

3.4.1 National, Regional, Local Significances

Grimsby Docks Ice Factory is a highly significant example of a 20th century ice production factory in terms of its rarity, scale, degree of surviving historic fabric, evidence of change over time and location at the heart of the world's foremost fishing centre in the early 20th century. It was also a significant local employer and stimulated and supported the local economy (fish processing was a major part of the success of Grimsby's economy throughout much of the 20th century). For these reasons the buildings are considered to have a high overall national, regional and local significance. The 1950s addition has a low significance on the basis that this extension was relatively minor and of a more recent date. The compressor within the extension has a moderate significance.

3.4.2 Statutory Significance

The site is Listed Grade II*. This covers all the buildings, their contents and fixtures such as the Gantry Conveyors across Gorton Street. This grading recognises the high significance of the Grimsby Docks Ice Factory which is considered to be of more than special architectural/historic interest.

3.4.3 Architectural Significance

The architectural significance of the 1901 and 1910 buildings is high because they are Grade II* Listed, the largest in England and probably the UK, are a very rare building type to survive and were purpose built with a degree of architectural elaboration providing status symbols. A 1931 article in the *Grimsby Daily Telegraph* (16 December 1931) and 1933 article in *Nature* magazine described the Factory as the largest in the world. Furthermore, the *Grimsby Daily Telegraph* stated 'when all the electrical machinery has been installed, the factory will be capable of making 1,100 tons of ice per day – by far the largest output of any ice factory in the world' (16 December 1931).

The external elevations of the Compressor House are of high significance and the New Compressor Room extension of lower significance. This latter was assigned a lower category relative to the other buildings on the basis of its limited size and scale and more recent date of construction. However, the west elevation has a moderate significance as an example of a façade typical of the date with the use of concrete cladding and large tiered windows.

In common with most historic buildings, although the Ice Factory buildings are of high overall significance and of high architectural significance, this is variable across the site with some elements being of more or less architectural interest than others. In order to gain a fuller understanding of the significance of the buildings, the illustration and list below identifies individual features of varying significance relative to one another. These are intended to provide a guide and are not exhaustive but instead cover notable features.

The items below cover the main salient points. If something is omitted this does not mean it has no significance.

External Elevations / Features

Positive Features:

- ◇ The pediments with company names have an exceptional significance and illustrate the pride of the Grimsby Ice Company in this large, dominant industrial building.
- ◇ The clock tower is compromised by the lack of a clock face and loss of some detailing but is nevertheless an embellished notable feature with carved brickwork and is therefore judged to be of high significance.
- ◇ The copper domes on the 1910 building, although now stripped of copper, nevertheless have a high significance for their rarity in industrial buildings and image of investment in the building they projected.
- ◇ The Gantry Conveyors across Gorton Street were an important part of the operation and thus have a high significance. Features such as this also rarely survive *in-situ*.

Negative Features:

- ◇ The large opening in the first floor of the south elevation, which was inserted to provide access to a building to the south (now demolished), is unsightly and has a detrimental / intrusive significance negatively impacting upon the rest of the elevation which is an original elevation for the Tank House.

Internal Spaces

- ◇ The floor plans have an exceptional significance as they help to reveal the industrial processes that occurred within the factory.
- ◇ Evidence of the symbiotic relationship between the machinery and building such as the steel framework of the building supporting internal travelling cranes and floors in the Tank Rooms which are in fact wooden 'lids' for the tanks are of high significance.
- ◇ The iron staircases have a high significance as original or early features with some architectural interest.
- ◇ Areas of glazed tiled brick walls have an uncertain significance. Further research may be needed to determine their function and significance. Some of the other, more recent internal walls such as the blockwork ones in the Switch Room have no significance and are intrusive.
- ◇ The lift in the 1910 building is likely to be an early feature and is of high significance. It was not possible to closely inspect the lift due to the uncertain condition of the floor in this area and therefore it is difficult to assign a precise date, albeit the character of the lift does appear to be consistent with an early-mid 20th century date.

Landscape Setting

The size and scale of the buildings and their location within the industrial dockside ensure that, despite their disuse, the Ice Factory is a visible (even dominant) component of the setting visible from the A180 flyover and other parts of the dock.

Rarity and Scale

Ice factories are a rare and relatively poorly understood building type. This one is thought to be one of only 2-3 purpose-built ice factories to survive in England and Wales and is a particularly large example. Indeed it was described in a 1933 article in *Nature* magazine to have been the largest ice factory in the world at that date. Subsequent information provided by statutory bodies and refrigeration specialists supports that view (Milner 2009, 22; *ACR News* 2009; English Heritage Listing Description; HER data).



Ground Floor Plan: Levels of Relative Architectural and Industrial Significance

Architectural Evolution

The site was used throughout most of the 20th century (almost 90 years) and during that time it evolved to meet the changing needs of the local economy and developing technologies. The Ice Factory retains much of its original external fabric from the 1901 Factory and evidence of later changes related to important developments in the ice making processes. These include the change from steam driven to electric machinery, or the intensification of uses with further buildings added or rooms converted to different uses (such as the conversion of the engine house to an ice store or the ice store on the first floor to Tank House No.7, the removal of the Lancashire boilers, the addition of the Flake Ice Plant within the original boiler house area and so on) to promote a greater output of ice or improve efficiency in order to meet growing demands within the local economy.

The different components of the buildings are clearly signposted by building breaks and differences in design. However, they form a harmonious whole as they were clearly designed to complement one another and they incorporate many similar design elements such as the treatment of doors and fenestration, coping, pediments, blue brick plinths and red brick walls, iron staircases and so on. Although these features are variable, they vary both within and between elevations and there is sufficient repetition to provide a surprising degree of harmony.

Architects, Engineers and Refrigeration Specialists

From the research to date no regionally or nationally significant architects are known to have worked on the buildings. The consulting engineer in 1900-1901 was W. F. Cott and his signature appears on a plan dated 1914 marked as the property of the Linde British Refrigeration Company (LBRC). It seems likely that this company was brought in to advise on machinery and possibly also the factory layout. The earliest machinery is thought to be Linde ammonia compressors as described in the English Heritage (2001) report. This is significant as Professor Carl von Linde of Weisbaden had built his first ammonia refrigeration compressor in 1873 and was an early pioneer in ammonia refrigeration. The British arm of his business, the LBRC, was formed in 1885 and by 1904 the main markets for Linde compressors were ice making plants, breweries, cold stores for meat and other produce at large ports and distribution centres, and refrigerating ships' holds. The company was involved in a number of UK businesses.

The Ice Factory buildings are likely to represent the work of a number of individuals, both consultants from the LBRC and other specialist companies and in-house engineers and employees. The aim would always to have been to maximise efficiency and output whilst also highlighting ownership.

Design and Structure

The Ice Factory has a predominately functional exterior that has been altered over the years to suit the changing needs of the Factory. It is, however, notable (particularly for the more visible elevations previously facing busy roads), where decorative elements were applied. These included decorative chequered brickwork and pediments displaying the company name that are status symbols. The addition of the company name on the Gorton Street and Fish Dock Road frontages would suggest pride in the building and accounts for the degree of elaboration on the more 'public' or visible frontages. Despite some decorative elements, the overall external character of the buildings is of high significance with some exceptional features.

The structure of the buildings is load-bearing brickwork walls with internal steel columns supporting steel and timber roofs and floors. This is fairly typical of the period and can be seen across many Victorian, Edwardian and early 20th century industrial buildings. Much more unusual in terms of the structure is the relationship between the function / contents of the buildings and the structure. There are many functional industrial buildings where the form and structure has been designed to accommodate particular processes, such as cotton mills or weaving sheds, however, at the Ice Factory this relationship is far more symbiotic than usual in that on a number of occasions the ice making machinery and associated machinery / plant forms part of the structure and vice versa.

3.4.4 Industrial Significance

The Ice Factory is an important part of Grimsby's industrial heritage. The buildings at the Grimsby Docks Ice Factory have an industrial character which reflects their industrial uses. Over and above the functional character are interesting and significant embellishments such as the copper domes and clock tower. Analysis of the buildings' architecture and plan form can help elucidate and understand the historic functions and the ice making processes. For example, Ice Stores can be identified on the basis of the lack of windows and doors with thick cork insulation. This identification is then confirmed by the presence of ammonia grids. The shape of the Tank Houses; large and rectangular with travelling cranes, helps us to envisage the movement of the ice cans beneath the floor, which is in fact large wooden lids covering the brine tanks.

3.4.5 Historic Significance

The buildings have a high historic significance for two main reasons. Firstly, they have a high local and regional significance due to their connections with the local fishing industry and secondly, they have a high national significance due to their role within the history of refrigeration. The buildings form a highly important part of the growth and success of the early-mid 20th century fishing industry within Grimsby and played an important role in the growth of the refrigeration industry (Milner 2009, 21). The early 1950s building has been assigned a low historic significance on the basis of its relatively minor contribution to the historical development of the factory i.e. it was not part of the original factory, not part of a large scale addition (it only housed a single compressor) and not part of a technological advance.

The Role of the Fishing Industry and its Dependence upon Ice

The growth, and possibly also the early origins of the town, were dependent upon the fishing industry with some evidence of coastal trade. Located on The Haven, which flowed into the Humber, Grimsby provided an ideal situation for ships to shelter from storms and exploit the rich fishing grounds in the North Sea. A permanent settlement was founded by the Danes in the 9th century (although there is some evidence of earlier settlement / activity in the Roman period).

The Domesday Book (1086) recorded a population of c.200 with a priest, a mill and a ferry. During the 12th century Grimsby developed into a fishing and trading port. Grimsby, '*had well-developed and sophisticated patterns of trade across northern Europe and Scandinavia in the Middle Ages, with the 13th century in particular giving rise to a flourishing fishing trade*' (English Heritage 2009, 3). These activities generated considerable tax revenues to the Crown. The town was granted a charter by King John (1201) and the first mayor was installed

(1218). Rigby (1993, 34) has noted that overseas trade provided little income for the town during the Medieval period with fishing, coastal trade, local marketing and manufacture of considerably greater significance. The dependence upon fishing and port related activities is illustrated by the decline of Grimsby from the 15th to the late 18th centuries when the silting of The Haven prevented ships in the Humber from docking.

The current town was largely a Victorian phenomena following the Georgian creation of the Great Grimsby Haven Company formed by an Act of Parliament in May 1796 and construction of new docks following the Grimsby Docks Act of 1845. The influx of workers to cope with the vastly increased trade and associated experts (medical, scholastic, engineering, legal) resulted in large new tracts of houses, new roads and transport infrastructure, new industries and industrial buildings, new schools, shops, expanding emergency services and so on. Grimsby's political hierarchy was based on commercial success. In 1891 the town became a County Borough.

It is claimed that Grimsby became the largest fishing port in the world in the late 19th and 20th centuries based upon its provision of '*specialist fish docks, marketing facilities, fish processing infrastructure and rapid transport systems*' (English Heritage 2009, 2). During the peak of production in the 1950s Grimsby was one of the largest and busiest fishing ports in Europe. Unfortunately from the c.1970s, the fishing industry has been in decline largely due to the reduction of fish stocks following over-fishing and the Icelandic Cod Wars.

This history is reflected in that of the Ice Factory which expanded to support the growing fishing industry and which declined due to the reduction in fish processing until it ultimately closed in 1990. Grimsby does, however, remain one of the largest fish markets in England and many food-related companies operate there making it one of the largest concentrations of food manufacturing, research, storage and distribution in Europe. More than 100 local companies are involved in fresh and frozen fish production, the largest of which is the Findus Group which includes Young's Seafoods, and the industry continues to be a significant local employer. As one respondent from Great GIFT commented during the consultation phase '*The Ice Factory was an essential supplier to the trawler fleet, replacing ice imported from Norway which could not keep up with the fleet's development. It was the trawler fleet which made Grimsby what it was, the foremost fishing port in the world. Today this is reflected in a thriving food industry, a busy port and a large and diverse town. For these reasons it has a local and regional importance*'. In 1881, a fifth of the smacks (fishing boats) in England belonged to Grimsby and these landed a third of the fish catch in England and Wales (Sather & Associates 2002).

Role in the Growth of the Refrigeration Industry

The Ice Factory is a very rare relic of early refrigeration. It is understood from the Listing description and HER to be the earliest remaining purpose built Ice Factory in England. '*The importance of freezing to the history of Grimsby cannot be overstated*' (Chapman 2007, 93). In the 1860s the majority of the ice was imported from Norway and transported in ice-barques. The Great Grimsby Ice Company managed most of this trade and supervised discharge at a berth alongside the slipway at the north end of the Royal Dock. However, more ice was required as the fishing industry expanded and it was deemed increasingly important for Grimsby to produce greater quantities of its own ice. In 1890 an ice factory was opened at the corner of Victoria Street and Corporation Road initially run by a Mr Molyneux and later by a Mr Naylor. The factory produced 25 tons of ice per day. The factory was later taken over by the Great Grimsby Ice Company and the Co-operative which combined into the Grimsby Co-operative Ice Company. A few other ice factories were opened subsequently such as the

Standard Ice Factory in Victor Street after 1918 which still survives, albeit without any ice making machinery. However, the Grimsby Docks Ice Factory was built on a large scale to produce much greater quantities of ice. Although these early ice factories have all closed, Grimsby and neighbouring Immingham and Cleethorpes continue to have one of the largest concentrations of cold storage facilities in Europe.

As one highly experienced refrigeration specialist has stated, '*The former Grimsby Ice Company factory is an irreplaceable piece of our industrial refrigeration history. The factory is an early link in the supply chain that insures safe, high quality perishable foods to developed countries. It is a reminder of the continuing effort to provide a secure "cold chain" in the developing world where the loss of harvested fruits, vegetables, meat and fish often exceeds 40% due to the lack of proper handling and continuous refrigeration. The Grimsby Ice Factory is the only remaining building of its type in the UK. It houses Britain's last surviving samples of early 20th century refrigeration equipment. If the building is demolished, it will deprive us of a rare opportunity to see this equipment in its original setting*' (Bruce Badger – President International Institute of Ammonia Refrigeration)

Historical Associations

The Grimsby Ice Company was one of Grimsby's leading fishing companies. The owners were an important part of the contemporary local economic structure and were important employers. The owners were fishing vessel owners and the Grimsby Ice Factory was one of several interests.

Contribution to Modern Life

In addition to being a crucial element in food production and thus the economic prosperity of Grimsby, refrigeration is one of the key technologies contributing to modern standards of living and eating. The function of the buildings represents a direct response to contemporary economic growth and food processing linked to changing lifestyles and enabled perishable goods to be transported much greater distances than would otherwise have been possible. Ice enabled the sale of 'out of season' produce and wide inland distribution of frozen fish. This importance has been reflected in some of the comments from refrigeration specialists during the consultation phase:

'It is easy to forget how reliant we are on mechanical refrigeration for our continued existence on this planet. Refrigeration is essential for food storage and distribution, indispensable in many industrial processes, and is vital in modern medicine for the preservation of organs for transplant, blood plasma storage and production and storage of drugs' (Neil Everitt – Editor, *Air Conditioning Review*).

Symbolic Value

The buildings symbolise Grimsby's great past and long history of fishing and port related activities. Grimsby is indelibly linked with the sea fishing industry – a major source of its prosperity, employment, population growth and expansion. The growth of the ice production and purpose built buildings is intrinsically linked to the growth of the fishing industry as Grimsby became increasingly established as one of the foremost east coast fishing towns. The main historic significance of the buildings is what they tell us about the economy of Grimsby in the 20th century and the changing role and processes of ice production. Surviving remnants of ice production, the growth of the Docks and the fishing trade are symbols of Victorian ingenuity, engineering and commercial expertise.

3.4.6 Townscape / Landmark Value

Due to its scale and location the Ice Factory is a famous local landmark and an important element in the townscape. It is highly visible from the main road to Cleethorpes sea front (A180 flyover). The long frontages help to create a sense of streetscape – although this is compromised by the removal of all the roads, except for Gorton Street, around the buildings.

In recent years film and documentary makers have capitalised upon the landmark value of the buildings and their dominant presence. Most notably, in 2006 part of the building was cleaned and enjoyed a brief renaissance as it was transformed by English film-maker Joe Wright to a scene from 1940s war torn France for the internationally acclaimed film *Atonement*. This also forms part of the recent historical significance of the building.

3.4.7 Community and Social Significance

As set out in the Planning (Listed Buildings and Conservation Areas) Act 1990, buildings are Listed for the benefit of the nation. To the refrigeration community the Ice Factory seems to be universally considered to be of exceptional significance (see section 2.7.2). In addition to these comments, the international significance of the Ice Factory is highlighted by the attention it receives in international journals such as *Condenser* and comments from overseas such as the correspondence below from America:

'The ice factory is a unique historical site which houses ice-making equipment in its original setting. My understanding is that it is the only site in the UK that does this. Since much of the economy of the North of England was built upon the fishing industry and since Grimsby is still a center for refrigerated storage and food distribution, it would be a shame to lose a site that encapsulates the community's history in such an evocative manner. Here in Alexandria, we have converted an old munitions factory, "The Torpedo Factory," into a vibrant arts center and history museum which has increased tourism and enhanced our community life as well. I hope that you can do something similar in Grimsby' (Liz Milner, Marketing/Communications Writer, International Institute of Ammonia Refrigeration).

Within the local community, opinion seems to be divided, indeed polarised. To most local historians, to some within the Grimsby, Cleethorpes and District Civic Society, and Great GIFT and perhaps others, the Ice Factory is a hugely important site worthy of saving and repairing/ refurbishing for new uses, but to others it is an eyesore that is in need of demolition.

It is noteworthy that in October 2010 the Victorian Society placed Grimsby Docks Ice Factory on a list of ten buildings, drawn up by using nominations from members of the public, that it considers to be the ten most threatened Victorian/Edwardian buildings in England and Wales.

The overall impression from the small number of respondents who completed the questionnaires – 10 from Great GIFT (see section 2.7.1) was that the machinery was considered to have greater importance than the buildings, for example *'The building itself is architecturally important but the effect is currently lost owing to its poor condition', 'It is not so much the building but the industrial ice making heritage that is important' or 'it has no real architectural significance but...it played a crucial part in Grimsby becoming the biggest fishing port in the world' or 'unique machinery although I concede building relatively mundane'*. Other responses were more positive towards the building such as *'It was, and has the potential to be again, an iconic building'*.

These respondents from local groups often focussed upon the local historic significance of the buildings such as their importance to the fishing industry, a major source of economic growth and employment in the area. Thus the Ice Factory *'was a hub for the central commercial activity of its immediate environment. It is an important manifestation of Victorian working practices on the Docks' or 'without ice the fish could not be transported across the country. Later ice was central to the continuation of deep sea fishing in the 1950s/60s'*.

In terms of its value to the local community, many responses noted its potential for reuse. The site *'has potential to affect the town's regional importance. The building is a landmark which should form the focus for the regeneration of the area in which it stands and its size is large enough to permit multiple uses'. 'The Ice Factory could be the focal point for the regeneration of the whole docks/Freeman Street area with facilities for businesses such as meeting rooms, educational and community facilities, and public heritage facilities.' 'Our industrial heritage... reaffirms who we are and where we have come from. As we are no longer a manufacturing nation, this kind of industrial heritage gives an insight to younger generations of what it was like to work in a factory, 24/7 with heavy machinery/engineering and the dangers involved. The science and engineering behind making ice in such a massive scale is a worthy topic for any museum to cover'.*

Suggestions for future uses of the buildings, from the consultation with the amenity societies, include:

- ◇ Moving the Fishing Heritage Centre to the Ice Factory.
- ◇ Museum.
- ◇ Restaurant / café.
- ◇ Conference facilities / meeting rooms.
- ◇ Art gallery.
- ◇ Small theatre / cinema.
- ◇ Indoor activity centre.
- ◇ Flagship office for ABP or shipwrights.

The number of stories in the local newspaper (*Grimsby Telegraph*) reflect the interest in the future of the site and some letters / comments in the local press from residents sometimes make mention that they were once employed in the Factory. The Ice Factory employed as many as 70 people and operated 24 hours a day, 365 days a year (Milner 2009, 22). The site is, therefore, likely to have significance for former employees, although it should not be assumed this will necessarily secure their support for its repair and survival.

The poor condition, lack of use and lack of public access to the Factory compromise its community and social significance and, largely due to its deteriorating condition and the expense required to bring it up to standard, some sections of the community perceive the buildings as an eyesore that should be removed. It is difficult to determine the prevailing view within the local community but overall, based upon discussion with Gill Osgerby (NELC) who has attended public meetings and read the comments on the website; it is considered that the local split in opinion between restoring and demolishing the building is finely balanced. It may be that those individuals calling for its demolition would change their view if the buildings were repaired and brought back into a viable use as their comments tend to suggest that they believe it is beyond repair rather than on the basis of its significance, or lack thereof.

This community and social significance is considered to be particularly vulnerable to diminishment over time assuming that the fabric of the buildings continues to decline.

3.4.8 Educational and Academic Significance

Given its historical significance, degree of surviving fabric and symbolic value, the Ice Factory has a high potential to have an educational and academic significance (if used in part as a museum / heritage centre) but its condition and lack of use and access currently precludes this. For historians, the degree of surviving information (photographs, plans, technical data held at the Centre for Kentish Studies and elsewhere) provide important sources of evidence and have an academic importance.

3.4.9 Formal and Aesthetic Qualities

The significances described above combine to create an impressive building in terms of scale and dominance within its locality. It is also clearly an industrial building and symbol of Grimsby's great industrial past. However, the issues that affect it, in particular its lack of uses, broken or boarded windows and doors and state of disrepair, all combine to give the building a forlorn air and this temporarily masks its formal and aesthetic qualities.

3.4.10 Group Value

The group values between the buildings and their associated machinery are of key significance and the presence of the two together in their historic context considerably enhances the significances they would have were they separate.

Within the wider setting the Ice Factory is part of the Port area which contains the highest concentrations of Listed buildings / structures in Grimsby. There are 6 Grade I Listed buildings in Grimsby with the only secular Grade I Listed building at Grimsby Docks being the Dock Tower at the Royal Dock. Grimsby Docks Ice Factory is one of only four Grade II* Listed buildings in Grimsby. The other Secular Grade II* buildings are the Hydraulic Accumulator Tower to the west of the Dock Tower at the Royal Dock, Grimsby Haven Lock and Dock Wall. Clee Hall Farmhouse forms the only non-dock related Grade II* Listed secular building in Grimsby. There are 120 Grade II Listed buildings.

The Ice Factory forms part of a landscape of docks, quays, transport systems and specialised building types that English Heritage (2009) consider to form '*the most important representation of the industrial-scale fishing trade in England. This landscape and its constituent buildings survives with a high degree of integrity and forms a unique environment of great historic interest*'. The Dock landscape provides the largest surviving concentration of fish smokehouses in the country and six of the smokehouses are Listed Grade II. Fishing was the dominant trade in the area and the Ice Factory is part of this industrialisation of the fishing trade from the mid-late 19th century that has enriched the town with an important legacy of historic buildings. '*One of the main legacies of Grimsby's achievement in creating the world's busiest fishing port by the late 19th century is that this area of the town contains the greatest concentration of fish-processing buildings known in England. Hull provides the closest regional comparison, as Grimsby's only serious rival in the trade, but here numbers of fish-processing buildings are smaller and the surviving examples are more scattered*' (English Heritage 2009, 15).

Freeman Street to the south of the site was at the heart of the fishing community with a dense urban grain of shops, businesses and residences. The area around the docks continues to form part of a landscape of fishing and dock trade related activities. Many of the former smokehouses in the areas nearest the Ice Factory are in buildings converted from other uses when the primary fish processing moved from the various 'pontoons' around the dock sides. Nevertheless, the specialised use of the dock peninsula created a specialised landscape with distinctive characteristics such as the smokehouses with ridge vents and cowls.

Arguably the most visually dominant feature in the setting is the Dock Tower on the great Royal Dock, '*although a functional piece of engineering, it is a perfect thing, unique in Britain, the symbol of Grimsby*' (Chapman 2007, 23). This housed the hydraulics operating the lock gates and cranes. It is now a symbol of the fishing and dock side industries. Close to the Ice Factory, on the opposite side of Gorton Street, the former fish market also had a close historic and functional tie to the Ice Factory with the Gantry Conveyors from the Factory linked to the dockside where crushed ice could be loaded onto waiting trawlers. The nearby pontoon, now largely demolished, was the local hub for the fish merchants and trawler owners. It included sales and gutting areas and offices. It was one of a number of other dock side sheds used for the fishing industry. Its survival owes much to the Gantry Conveyors resting on parts of its structure.



Enderby's Smokehouse, Maclure Street (opposite the Ice Factory's north elevation)



Winch House with associated slipway and jetty used to haul fishing trawlers from Fish Dock No. 3 for maintenance and repair



Brown's Engineering, Henderson Street; built in 1893 and designed for the Grimsby Box and Fish Carrying Company



Marina



Former fish market with conveyors from the Grimsby Docks Ice Factory transporting crushed ice to waiting trawlers



Dock Tower, Royal Dock

3.5 Assessment of Significance for the Ice Making Machinery & Ancillary Plant and Machinery

Many of the significances described above also apply to the machinery. To avoid unnecessary repetition this section should be read in conjunction with Section 3.4 above with the additional significances described below applying only, or predominantly, to the machinery and contents of the buildings.

3.5.1 National, Regional and Local Significances

The ice making machinery is considered to be of both national and international significance. This is because the early 20th century ice making machinery (1930s) is most likely unique in the UK, certainly its *in-situ* survival seems to be unique from the research undertaken and it is complemented by the survival of later machinery c.1935-1955 which forms a near complete ensemble of the machinery required to operate the factory. The ice making machinery relates to machinery used directly to produce ice and essential to the operation such as the ammonia compressors, ammonia pump sets, ammonia grids, condensers, ice cans and filling nozzles.

Other elements of the machinery are less significant, either because they are secondary elements or because they are not as rare, for example being used in other industrial processes. A number of these ancillary machines – such as the water pumps, crushers, bucket and rubber conveyors etc have a high local significance as part of the link to Grimsby's history and as part of the historic operation of the Factory. As the significances of the different machinery within the site are variable the table below aims to assign significance to the main components as an aid to decision making. These designations are based upon considerations such as age, rarity, manufacturer, historic importance within the ice making process i.e. primary or ancillary machinery / plant, aesthetic values, educational potential, community significances and so on which are explored in the sub-sections below.

Please note that all machinery of exceptional and high significance is considered to be integral to understanding the site and should not be removed or dismantled. In order to fully understand the historical operations of the site elements of relatively moderate significance should also be retained in-situ unless there are compelling justifications for their removal.

Element

Four J & E Hall compressors, motors and switchgear in the Compressor House

Level of Significance

Exceptional

Reasons for Designation

- ◇ Age & rarity – the earliest surviving known refrigeration compressors in the UK (installed 1931) to survive *in-situ*.
- ◇ Thought to be the only example of compressors of this size in their original location in the UK.
- ◇ Manufacturers – J&E Hall were famous, well respected engineers.
- ◇ Historic associations – a key change from steam to electricity driven processes.
- ◇ Educational value.
- ◇ Part of the historic operation of the Factory.



Element

Control panels at north end of the Compressor House

Level of Significance

High

Reasons for Designation

- ◇ Part of the 1931 installation.
- ◇ Educational value.
- ◇ Part of the historic operation of the Factory.



Element

Water and Brine pumps in the Compressor House

Level of Significance

High

Reasons for Designation

- ◇ Part of the early 1930s installation.
- ◇ Educational value.
- ◇ Part of the historic operation of the Factory.



Element

Two 2-stage compressors in the Reciprocating Compressor Room

Level of Significance

Exceptional

Reasons for Designation

- ◇ Educational value.
- ◇ Part of the historic operation of the Factory.

**Element**

Valve box in the Reciprocating Compressor Room

Level of Significance

High

Reasons for Designation

- ◇ Educational value.
- ◇ Part of the historic operation of the factory.

**Element**

Condensers and four dock water pumps in the Condenser House

Level of Significance

High

Reasons for Designation

- ◇ Educational value.
- ◇ Part of the historic operation of the factory. Installed c.1937-1955.



Element

Ice cans, filling nozzles, lifting frames etc in the main Tank Rooms

Level of Significance

Exceptional

Reasons for Designation

- ◇ Primary processes in the manufacture of ice.
- ◇ Educational value.
- ◇ Part of the historic operation of the factory.
- ◇ Tank Rooms part of the structure of the building.



Element

Ice crusher, bucket conveyor and rubber conveyor

Level of Significance

High

Reasons for Designation

- ◇ Important ancillary processes.
- ◇ Likely to be of interest to the general public.
- ◇ Part of the historic operation of the factory.
- ◇ Educational value.



Element

Gantry Conveyors and chutes on Gorton Street to Dockside.

Level of Significance

High

Reasons for Designation

- ◇ Educational value.
- ◇ Highly visible from the streetscape.

**Element**

Compressor No. 5 in the New Compressor Room

Level of Significance

Moderate

Reasons for Designation

- ◇ A J & E Hall compressor, albeit early 1950s in date.
- ◇ Part of the continuing expansion of the site.
- ◇ Educational value.

**Element**

Desuperheater and Oil Separators on the Compressor House Roof

Level of Significance

Moderate

Reasons for Designation

- ◇ Part of the 1930-1932 installation.
- ◇ Part of the historic operation of the factory.



Element

Ammonia pump sets in the main tank rooms

Level of Significance

Moderate

Reasons for Designation

- ◇ Educational value.
- ◇ Part of the historic operation of the factory.

**Element**

Ammonia grids in the Ice Storage Chamber

Level of Significance

High

Reasons for Designation

- ◇ Primary processes in the manufacture of ice.
- ◇ A key piece of evidence in understanding the use of an otherwise empty room.
- ◇ Part of the evolution of the building – converted from an engine house c.1930s-1955.
- ◇ Educational value.

**Element**

The salt water tank (sometimes erroneously referred to as an "oil tank")

Level of Significance

Low

Reasons for Designation

- ◇ Part of the later historic operation of the factory, installed c.1980s.



Element

The water tank on the roof

Level of Significance

Low

Reasons for Designation

- ◇ Part of the historic operation of the factory, installed as part of the early 1930s upgrades.

**Element**

The M&E

Level of Significance

Low - None

Reasons for Designation

- ◇ Necessary for the historic operation of the factory.

**Element**

The "Switchroom" contents

Level of Significance

None

Reasons for Designation

- ◇ Contains only used, non-functional old fridges.
- ◇ No evidence of switch controls.



3.5.2 Statutory Significance

The presence of the early and mid 20th century machinery and its degree of survival within the factory buildings is the main reason given by the English Heritage advisor for the decision to upgrade the site to Grade II* (as opposed to Grade II). All the machinery and other contents within the buildings are consequently Listed Grade II* (Elaine Pearce pers comm. 29 September 2010).

3.5.3 Industrial Significance

The reciprocating compressors by J & E Hall and slip ring motors by Metropolitan Vickers are excellent examples of this industrial equipment, and probably unique in their size and age. The J & E compressors (1931) are rarer than most of the other equipment and thus of exceptional significance. The fifth machine from the early 1950s was perhaps no longer in production and was manufactured from old drawings and parts to match the previous ones. The compressors have four cylinders each with a bore of 16.5 inches, stroke of 15 inches and operating speed of 250rpm (*ACR News*, Nov 2009). This gives a gross swept volume of 3,152 m³/h and suggests a capacity of approximately 1,100kW of refrigeration, consuming about 305kW, giving a coefficient of performance of about 3.6. This is the only example of compressors of this size in their original location of which we are aware.

The equipment in the 1901 Tank House related to the primary component of ice making such as the ice cans are of exceptional importance, other more ancillary elements including the handling, crushing and conveyance of ice is of general public interest and moderate significance.

3.5.4 Historic Significance

Grimsby was at one time the largest fishing port in Britain, and the Grimsby Ice Factory, with a production capacity of 1100 tons of block ice per day was said to be the largest in the UK and possibly Europe. There were similar facilities in other parts of Britain, notably in Hull, Fleetwood and Swansea. These plants were somewhat smaller and most have been demolished. At Swansea some of the building has been lost, and all the machinery removed.

Mechanical refrigeration was developed in the second half of the 19th century using a wide variety of refrigerants and techniques. Ammonia refrigeration for land based plant was the state of the art technique when the Ice Factory was originally constructed, and steam powered compressors were the standard solution. Electrical power was introduced gradually over the next thirty years, and by 1930 had almost completely replaced steam plant.

The original equipment was supplied by Pontifex and Wood, who were a leading engineering manufacturer of engines, compressors and ice plant at the turn of the century. Their heritage was in absorption plant (an alternative way of using ammonia as the refrigerant which does not require a compressor but is significantly less efficient). It seems likely that the ammonia compressors at Grimsby were among the earliest compressor plants they installed. The original equipment in the north (1910) building comprised Linde ammonia compressors and Cole, Marchant and Morley steam engines. Carl von Linde was a German engineering professor who led the development of more efficient refrigeration compressors from 1872 onwards and founded a compressor manufacturing company.

Unfortunately none of the steam raising boiler plant, steam engines or steam powered compressors remain on the site. However, the key change from steam engines and steam powered compressors to electric powered compressors is represented on the site with the survival of compressors installed in 1931 by J & E Hall. This company is commonly recognised amongst refrigeration specialists to have been one of the great refrigeration companies of the 20th century and this installation was the largest of its kind anywhere in the world at that time (*ACR News* 2009, 12). For nearly 60 years much of this machinery was vital in the production of ice for the Grimsby fishing industry.

3.5.5 Community and Social Significance

The consultation has revealed that the machinery is generally considered to be of greater significance than the buildings. Thus comments from Great GIFT included '*The machinery inside represents an important stage in the development of refrigeration processes*'. It '*is the last surviving example of early 20th Century refrigeration equipment. This includes five massive J & E Hall four-cylinder compressors now laying silent and rusting, still in place in the decaying plant rooms*'.

Comments from a selection of refrigeration specialists include:

'The J & E Hall refrigeration compressors still in place at the Grimsby Ice Factory are a reminder of the early years of refrigeration. They are the oldest of their type still in existence and amongst the largest ever made. As a record of the history of the modern world, the ice-making equipment within the Grimsby Ice Factory is an essential and irreplaceable artefact' (Neil Everitt – Editor, *Air Conditioning Review*).

'The installation represents the peak of development of large industrial ice making equipment and includes the only known surviving examples of large size J & E Hall ammonia compressors of this type. From this point on the refrigeration industry developed smaller, faster running machines and following the depression of the 1930s and the Second World War the fishing industry moved away from shore-made ice towards large freezer trawlers' (Guy Hundy, Technical Consultant - Emerson Climate Technologies Ltd and past President of the Institute of Refrigeration).

'I am a refrigeration engineering consultant and worked in the refrigeration industry for around 35 years now. I recall visiting the Ice Factory during my time training at Grimsby College in the early 1970's and the impression of age and size and quality it made on me has remained with me. During my working life I have seen many examples of early refrigeration plant replaced or scrapped and now there is very little left that dates from before 1970. It is unique and therefore valuable' (Alan Jackson, bja Refrigeration Consulting Engineers Ltd).

3.5.6 Educational and Academic Significance

Grimsby has a strong tradition of excellence in refrigeration training, and the Grimsby Institute is today the UK's leading education provider for technicians in the refrigeration and air-conditioning industry. This tradition is built, in part, on the back of the fishing industry, which was a major user of refrigeration a century ago.

The historic refrigeration equipment in the Grimsby Ice Factory is probably unique in the UK and the Factory has a specific link to the local area's history. If preserved it could act as a focal point for historical presentations about industry in the area.

An amateur film by the Cleethorpes Camera Club (July 1990), commissioned due to the imminent closure of the facility, provides an excellent record of the function of the facility. It gives details of the operating conditions of the plant, showing the suction and discharge pressure gauges and ammeters of the plant during operation. If the site is to be developed as a museum or heritage centre this would be a valuable resource in the exhibit.

3.5.7 Formal and Aesthetic Qualities

The ice making machinery has the potential to be very impressive given the size and rarity of much of it. However, this is compromised by the fact that it no longer works, has been vandalised with the theft of copper from the compressors, is dirty and much is covered in pigeon droppings. Thus in its current state the formal and aesthetic qualities are none - moderate depending upon the individual machines.

3.5.8 Group Value

Individual machines are enhanced through being part of a wider complex of machinery that helps unravel the historic processes and operation of ice production. Their location within their original context, i.e. the factory buildings where they operated, also provides them with a high group value.

4 ISSUES, CONSTRAINTS, VULNERABILITIES AND OPPORTUNITIES

In October 2010 the Victorian Society, a national charity campaigning for the Victorian and Edwardian historic environment, placed Grimsby Docks Ice Factory on a list of 10 buildings drawn up using nominations from members of the public that it considers to be the 10 most threatened Victorian / Edwardian buildings in England and Wales. These buildings are considered to be at risk from demolition, insensitive development or years of neglect. The following section highlights the issues, constraints, vulnerabilities and opportunities that currently (or are likely to imminently) affect the cultural significance and heritage asset of the buildings and machinery at the Ice Factory and the future management / use of the Factory. These are well recognised on-going issues and the rectification of them has been on hold until this opportunity to collect them together and in particular to assess the significance of the machinery.

4.1 Economic Decline

The Ice Factory ceased production in 1990 and has remained vacant since this period. This has resulted in a lack of subsequent maintenance / repair and vandalism and theft considerably affecting the condition of the buildings. These are dealt with separately in the following sections. Relevant to this issue is that whilst the buildings remain unused there is little incentive for repairs and maintenance to prevent the buildings from deteriorating to the point where it is increasingly uneconomical and unviable to repair them.

The closure of the Ice Factory forms part of the wider economic decline of Grimsby's fishing industry in the late 20th century and negative impacts upon the wider local economy. This is because the fishing and fish-processing industries were responsible for a large part of the growth and success of Grimsby as noted for example by Sather & Associates (2002). This contributed to the closure and demolition of a number of historic, largely Victorian and early 20th century, buildings associated with its heyday. These included the demolition of an ice factory and cold storage unit marked on the 4th edition OS map which fronted onto Robinson Street East and East March Street and an ice factory shown on the 1st edition (1887-1889) OS map fronting onto Freeport Wharf and Victoria Street. Prior to demolition, the ice factory in Robinson Street East was converted by the Grimsby Cold Storage Company into a low temperature cold store appropriate to the growing popularity of quick freezing using different processes to ice factories. An ice factory / cold store on Victor Street (closed 1971) appears to survive albeit without its machinery or distinguishing characteristics.

Other heritage assets that have been demolished, at least in part due to economic decline, include a number of churches such as All Saint's Heneage Road (1905), St Paul's West March and surroundings (1888), St John's Cleethorpes Road (1877), St Luke's Heneage Road (1912), Hainton Square Primitive Chapel (1875), Ebenezer Primitive Chapel on Cleethorpes Road and George Street Wesleyan (1847). Other historic buildings now demolished include several historic buildings of local heritage merit within the Dock area, the Bull Ring, most of the Old Market Place, the Grimsby General Hospital (1874), The Palace Theatre (1904), banks, cinemas, hotels such as the Ship, Flottergate, the Clee Park, the Corn Exchange (1854), the Fisher Lads' Home for fishing apprentices (1880), Hewitt's Brewery, the Masonic Hall Bethlehem Street (1877), the Doughty Road cemetery (1855) and numerous public houses.

The cumulative effect of this loss on the town's character has been dramatic as many of these buildings were landmarks making a positive contribution to the local streetscape. A concern with the closure of the Ice Factory is that this building has also become vulnerable to demolition, such demolition resulting in a further loss of the heritage of Grimsby but also, given the rarity of the building type and machinery, a substantial loss to the wider national heritage.

4.2 Ownership, Location and Use

4.2.1 Ownership

The Ice Factory is owned by ABP. The historic function of the buildings has ended and there is no realistic prospect that this can be reinstated. New uses therefore need to be found if the future of the site is to be secured. ABP is a commercial organisation whose main concern is the efficient operation of port related activities. ABP is not a property developer nor in the business of proper restoration. The company recognises that the Ice Factory is a Grade II* Listed building and being on Port Operational Land the buildings also suffer from a conflict with current port-related activities and a consequent lack of public access.

4.2.2 Conflict with Port-Related Activity / Lack of Public Access

The Ice Factory is situated within a working Port and is located on Port Operational Land in use for cargo handling. Consequently any redevelopment project that could result in the building being opened to the public is made very difficult for reasons of health and safety and operational security and efficiency. The Port has to operate in line with the International Ship and Port Facility Security Code (ISPS). Control of access to the eastern areas of the Port has been improved in recent years to comply with the ISPS Code. ABP own the whole of the Docks and access is required for tankers, HGVs and so on as part of port activities requiring road access.

The current use of the Port Operational Land in the immediate vicinity of the Ice Factory is considered to adversely impact on the setting and character of the historic buildings by partially masking them from public view, particularly the lower parts of the buildings. The location should lend itself to open public access being close to public transport routes and town infrastructure which in some ways is assisted by the recent changes to the road layout.

4.2.3 Visibility

The building is also in a visible location – in particular from the A180 flyover – and its poor exterior provides a negative impression to residents, tourists, and of course those conducting business in the docks, in particular national and multi-national companies.

4.3 Condition of the Buildings and Machinery

The buildings and machinery are in a very poor condition in part due to the poor condition of the roof covering and they are not safe for public access. The abrasive nature of the process of ice making - with lots of water throughout the building and large quantities of brine which is corrosive - created a fairly aggressive environment for both the exposed steel structure and those steel elements built into the external walls and roof. Combined with the lack of

maintenance and repairs in recent years, and episodes of vandalism such as the theft of a number of the roof slates, this has resulted in the current poor condition of the buildings and their contents. The level of maintenance undertaken by the last tenants (Grimsby Exchange Limited) is uncertain, although the condition of the building would indicate that when the building closed in 1990 there were existing issues as a result of insufficient maintenance and repair and the aggressive environment from the ice making processes. From 1990 as expectations of viable proposals for the future of the buildings have diminished, and they continued to remain unused, it is not surprising that the maintenance regime was reduced. The main areas of concern flagged up in Alan Baxters & Associates report (2010) which are seen in a number of areas are presented below. Fortunately the buildings were designed to withstand aggressive environmental processes and are on the whole well built.

4.3.1 External Condition

- ◇ Evidence of cracking in the load-bearing external brick walls will require repair.
- ◇ Extensive areas of the pointing for the brickwork have been washed out and will require repointing.
- ◇ Areas of brickwork are saturated and supporting moss and fern growth.
- ◇ The parapets, clock turret and brick cornices are in a poor condition in places and will require repair and possibly partial rebuild.
- ◇ The areas of concrete on the 1950s block frontage are badly spalling and may need to be renewed. The end wall of this section was originally a party wall and will need to be protected.
- ◇ Many windows have lost their glazing and their frames will require repair.
- ◇ All the roof finishes are beyond repair due to the high degree of collapse / removal of roof coverings. Their poor condition is allowing considerable water penetration. The slate and asphalt roofs will require new and/or renewed finishes, replacement roof lights and louvres.
- ◇ The steelwork to gantries, conveyors, water tanks etc is in a poor condition and will require treatment.

4.3.2 Internal Condition

- ◇ The basement contains water that will need to be pumped out.
- ◇ There is a large amount of corroded steelwork – steel roof trusses, steel framing – that should be de-rusted, treated and redecorated.
- ◇ Rotten roof timbers will require replacement.
- ◇ The iron staircases will all require de-rusting and redecorating.
- ◇ Many timber floor panels and the lids of the tanks will require repair / replacement as they are rotten.
- ◇ Rainwater penetration in the upper floors.
- ◇ Pigeon access and droppings.
- ◇ If the building is to be reused it is likely to require fully upgraded electrics, drainage, fire detection, alarms and so on in addition to the installation of new support facilities (WCs, kitchen area etc) and redecoration throughout.

4.3.3 Condition of the Machinery

The equipment is at first sight in poor condition, apparently due to the combined effects of the ice making process, water ingress into some areas within the buildings, vandalism and pigeons. However, under the dirt and mess the basic mechanical equipment in the Compressor House seemed upon a rapid investigation to be in a relatively good condition. However the electrical components of the equipment have suffered more significantly from vandalism, with the exposed copper ends of the motors having been hacked away. All of the pressure gauges and electrical dials have been vandalised, with the glass faces broken.

The wooden and steel fabric in the area of the brine tanks in the Tank House is in remarkably good condition considering the corrosive nature of calcium chloride brine and the recent exposure to the weather through roof damage. The pipe grids in the Ice Store are, however, badly corroded in some places, and some of the walkways in the Condenser Room are heavily corroded. The ice harvesting area with the draining boards, conveyor and ice crushers are better preserved at ground floor level than first floor, where weather damage is more severe.

If decay is not halted soon and the buildings are not repaired, then viable repair and refurbishment of the machinery will become increasingly expensive. Due to the poor condition of the Factory and its contents, it has been placed on the *Heritage at Risk Register* by English Heritage who monitor this register. In 2010 only 3.1% of Grade I and II* buildings (a total of 977) were on this register. The Ice Factory is registered as a category A building. This is defined by English Heritage as a site in '*immediate risk of further rapid deterioration or loss of fabric with no solution agreed*' (2008, 11). The condition is described as '*very bad*', the highest category available. This is defined by English Heritage as '*a building where there has been structural failure of 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*' (2008, 12). The *Heritage at Risk Register* 2009 records the Ice Factory as a '*1900 ice works with extension factory of 1907-8 and later alterations. Closed in 1990, it is thought that this is the earliest surviving ice factory in Britain, and the sole survivor from this period to retain its machinery. Window damage. Roof is now deteriorating rapidly.*'

4.4 Vandalism

The most noticeable results of vandalism are the broken windows, theft of copper from compressor electric motors, damage to electrical equipment, theft of copper from the dome, and the theft and slippage of many of the roof slates and results in partial collapse of the sarking timbers.

4.5 Potential for Development

The future of the Ice Factory is uncertain and differing viewpoints have been expressed, for example in the public meeting organised by Grimsby, Cleethorpes & District Civic Society on 24 September 2009 some participants argued that the building should be demolished freeing up land for other uses, the machinery (or some of it) could be relocated and saved as a monument to the past. Removing the machinery presents considerable difficulties as much of the ice making machinery is integral to the building and cannot be separated without a loss of both context and meaning making interpretation very difficult and thus losing considerable evidential value. It is also the ice making machinery in its original location that makes the building unique and worthy of its Grade II* Listing.

The issues described in 4.1-4.4 above all negatively affect the potential for development. Taken together the main issues can be summarised as follows:

- ◇ Location within the Docks area and Port Operational Land and proximity to the sea and port related activities are likely to preclude uses of the site involving full public access to roads and the Ice Factory itself.
- ◇ The poor condition of the Factory makes it both difficult and expensive to repair and refurbish, particularly in the present uncertain financial climate. *The Appraisal of the Existing Structure* by Alan Baxters (2010) included 'ballpark' cost estimates for bringing the buildings back to a standard where they could be converted to a different use. These did not include any costs associated with the repair and/or refurbishment of any of the machinery. It should be expected that these costs could be considerable. It was not possible to provide accurate costs for conversion to a particular use because the feasibility of different uses has yet to be assessed. Nevertheless the report does provide a good indication of the figures likely to be associated with repairing the buildings even if the costs associated with the machinery and conversion to a different use are not yet available to give an indication of likely overall capital costs associated with any future use of the Ice Factory. There is no allocated sum of money for the building works and the current poor financial climate is likely to exacerbate this problem.
- ◇ The presence of machinery, of which some is a significant heritage asset and should be retained, may place some limitations with regard to future uses of the site. The structure itself presents further issues as some of the machinery forms part of the structure of the building and vice versa. This complicates removal of machinery and plant. Major structural work is likely to be required to move the main compressors, for example, via opening up the roof to allow crane access. The six large vertical shell and tube condensers are also too large to lift away without removing a large part of the structure. Removing the main tanks and conveyor system would be possible – by cutting them up – but this might affect the rest of the structure and so could potentially be too hazardous without some remedial work to stabilise the lower structure first. The solutions would be very dependent on what condition the owner and key stakeholders want that part of the building to be in following any removal.
- ◇ There is little prospect of making any part of the machinery / plant functional for museum or specialist interest purposes at a reasonable cost and in a manner which retains their authenticity. Apart from the difficulty of sourcing spare parts and the cost of operation it should be noted that the facility would not comply with current CEN safety standards (introduced in 2000 and revised in 2008), and to make it compliant would mean that it would not look authentic. It would also not be possible to provide public access to the Compressor House or other areas if they were in operation for health and safety reasons.

4.5.1 Potential Options: General Observations

The above issues do not preclude development and there are options that can beneficially be explored:

Firstly, an options appraisal could be commissioned to examine the feasibility of various uses informed by this report and the *Appraisal of the Existing Structure* by Alan Baxters and Associates. The Grimsby, Cleethorpes and District Civic Society and newly formed Great GIFT reveal a degree of public interest and enthusiasm that could be channelled to seek future options for reuse. Meetings between members of the Civic Society, Great GIFT, ABP, English Heritage and the local authority may result in a consensus way forward.

Secondly, English Heritage have indicated that in order to facilitate future use, some machinery could be removed from the Ice Factory and this report has highlighted the most significant machinery for retention and that which we believe could be removed without considerable loss to the significance of the heritage asset. Moreover, the 1910 building is a shell which should be amenable to conversion for alternative appropriate uses.

Thirdly, although the equipment is at first sight in poor condition, under the dirt and mess much of the basic mechanical equipment seemed to be in relatively good shape given the environmental conditions and lack of recent maintenance. The fabric of the buildings is in a far worse state than the equipment, and if this were repaired then the basic equipment could be restored to a presentable condition relatively easily. Fortunately the video record taken in July 1990 gives a clear picture of what the Compressor House looked like. The superstructure of the building in this area has suffered most damage, with both the supervisor's office at high level in the Compressor House and the Engineer's Office, at first floor level between the Compressor House and the New Compressor Room, having been comprehensively damaged. However, it would be relatively easy to recreate these rooms as they are lightweight wood and glass partitions.

The wooden and steel fabric in the area of the Ice Tanks is in remarkably good condition considering the corrosive nature of calcium chloride brine and the recent exposure to the weather through roof damage. The pipe grids in the Ice Store are, however, badly corroded in some places, and some of the walkways in the Condenser Room are heavily corroded. Likewise the equipment in the Condenser Room (the condensers, high pressure receivers and Drysdale pumps) could be cleaned and painted to make them look operational. The ammonia pump stations, could be restored visually, although not functionally, but in their working condition they were completely covered in insulation and therefore not very interesting to look at. The ice harvesting area with the draining boards, conveyor and ice crushers, are better preserved at ground floor level than first floor level where weather damage is more severe and could be repaired.

Fourthly, the buildings have a large floor area which increases their suitability for a range of uses.

Fifthly, the buildings have a large open space around them, following the alteration to the road layout, and this would be suitable for ancillary needs such as a car park.

Finally, there is the potential to interpret in-situ a unique heritage asset and, if part of an area wide regeneration, to seek ways of linking or illustrating the shared history with Freeman Street and Dockside areas. Reuse of this heritage asset could bring to life part of Grimsby's heritage.

4.5.2 Future Uses

As part of the consultation phase the respondents to the questionnaire raised a number of possible future options. All the comments focused on sustainable re-use and renovation of the site, many viewing it as an opportunity for a larger regeneration programme for the area in which it lies. Ideas included:

- ◇ Moving the Fishing Heritage Centre to the Ice Factory as it is a '*very appropriate setting. The move would also provide the opportunity to refresh the existing exhibits*'.
- ◇ Museum including a display relating to the story of the buildings and their impact on Grimsby with machinery cleaned and forming part of the display. The wider collection would have a maritime theme.
- ◇ Restoration of one of the production lines.
- ◇ Small display or archive storage by the refrigeration industry.
- ◇ Restaurant / café.
- ◇ Conference facilities / meeting rooms.
- ◇ Art gallery which could '*become very significant if the regeneration of nearby buildings included provision for artists' studios and craft workshops*'.
- ◇ House for the Grimsby archives currently in the Town Hall, the photographic archive in the Library and the Cosalt archive.
- ◇ Small theatre / cinema.
- ◇ Indoor activity centre (ice skating, roller skating, wall climbing, BMX circuit etc).
- ◇ Flagship office for ABP or shipwrights, or large open offices.

Use as an Industrial Museum

As a guide to potential future use, in the example below the site incorporates a fishing or industrial museum, the following information provides an indication of what may and may not be acceptable. This report is not a feasibility study and the following information should be treated as a general guide only, one that may apply also to other uses. An overarching recommendation is to show the ice making process from start to finish i.e. retain a complete set of ice making equipment. As regards individual elements the following is recommended:

The following equipment should be retained for display:

- ◇ Four compressors, motors and switchgear in the Compressor House.
- ◇ Control panels at the north end of the Compressor House.
- ◇ Water and brine pumps in the Compressor House.
- ◇ Gantry Conveyors and Chutes
- ◇ Two 2-stage compressors in the Reciprocating Compressor room.
- ◇ Valve box in the Reciprocating Compressor room.
- ◇ Condensers and four dock water pumps in the Condenser House.
- ◇ An ice crusher and bucket conveyor.
- ◇ A representative selection of the ice cans, filling nozzles, lifting frames etc in the Tank House.

The following might also be retained:

- ◇ Compressor No. 5 in the New Compressor Room.
- ◇ Desuperheater and Oil Separators on the Compressor House roof.
- ◇ Some of the ammonia pump sets in the Tank House.
- ◇ Some of the ammonia grids in the Ice Store.

The following are not worth retaining:

- ◇ The salt water tank ("oil tank").
- ◇ Most of the ice cans.
- ◇ Most of the ammonia pump sets.
- ◇ The internal content of the north (1910) building.
- ◇ The water tank on the roof.
- ◇ The "Switchroom" contents.

The following elements of the building could be refurbished and reinstated as part of the display:

- ◇ The Superintendent's Office in the Compressor House.
- ◇ The Engineer's Office.
- ◇ The electrical workshop.
- ◇ The internal gentries in the Condenser Room.

Other areas of the building could be used as follows:

- ◇ Ice Tanks (upper floor) – restaurant or cafeteria with period features retained.
- ◇ Ice Tank 7 (upper floor, above Ice Store) – kitchens.
- ◇ Ice Tanks (lower floor) – display area for heritage exhibits related to Grimsby fishing, ice making, refrigeration.
- ◇ Ice Store – retain as part of the exhibit.
- ◇ Boiler House / Garage / Flake Ice area – part of display area or shop.
- ◇ Condenser Room – part of display.
- ◇ Compressor House – part of display.
- ◇ Engineer's Office and electrical workshop – part of display.
- ◇ New Compressor Room – display or convert to office accommodation for staff.

The north building (1910) could be completely cleared and converted to a function hall, activity area, performance area or IMAX cinema etc., making best use of the unusual shape of the building and retaining all of the external features.

It is not possible to bring any of the existing refrigeration equipment back into use, but if required an ice feature could be incorporated into the display, using custom built equipment. This has been done in several other tourist attractions including The Deep (Hull), Our Dynamic Earth (Edinburgh) and The Ice Factor (Kinlochleven).

Refrigeration is an important part of our national heritage. The United Kingdom led the development of many of the major innovations in mechanical refrigeration. Getting young people interested in careers in refrigeration is a major challenge and is the focus of several government and private initiatives. If the development of the Ice Factory also provided a means of supporting these initiatives, for example by including information for school parties on careers in refrigeration, using material from the Institute of Refrigeration or the Grimsby Institute and tapping in to industrial sponsorship then it might have wider support and greater chances of success.

4.6 Conflicts of Significance

A feature can be intrusive to one set of values while simultaneously contributing to another specific element of significance. Such conflicts are common on heritage sites and need to be identified and where possible resolved. It is important to balance the conservation of each aspect with an informed knowledge of its impact on the overarching significance of the site.

At Grimsby Ice Factory the main potential conflict of interest arises between the machinery and the 1901 building that houses it. The significances, and indeed physical fabric of the two, are at times intertwined. However, as part of establishing future uses of the building and returning it to a good state of repair, (assuming this is viable), some of the machinery will need to be removed, whether for storage and display elsewhere, or for dismantling. The desire to retain the majority of the machinery may need to be compromised as part of repairing and finding new uses for the building to ensure its long term future. Alternatively if the challenges that the building faces are considered to be too severe then the building may need to be demolished in which case the machinery becomes very vulnerable and serious consideration should be given to re-housing the most important examples in the local area and displaying them to the public.

4.7 Potential Sources and Levels of Funding Support

4.7.1 Potential Costs

The following costs for temporary works and proposed remediation work to the buildings are based upon Alan Baxter & Associates (2010) *Appraisal of Existing Structure* and, as regards the machinery, from informal advice from Andy Pearson, Star Refrigeration.

Options	Factory Buildings (£)	Building Alterations/ Machinery (£)
Option A – Temporary Works	1,516,000	Not yet known
Option B – Minimum Repair of Structure / Envelope	3,691,000	Not yet known
Option C – Full Repair and Upgrading Structure and Envelope	4,750,000	Not yet known
Removal of machinery ¹		25,000 (for machinery)

It would be very challenging to remove compressors 1 – 4 and associated motors from the Compressor House without considerable localised damage to the building. If they are

¹ The crane hire for this scope of lifting (compressor 5, motor 5, oil separators and desuperheater) would cost in the region of £7,000 - £10,000. The labour and materials for strip out of the smaller items and boxing in the larger ones would be a similar figure, perhaps up to £25,000 in total. This does not include any civils, taking down or reinstatement of builders work. It also does not include any preparatory cleaning but it would be a wise precaution to hose the area down thoroughly before starting any significant disruptive work.

required to be protected during civil engineering works then it would be more appropriate to construct a scaffold or wooden crate around them and leave them *in-situ*. Compressor 5 in the New Compressor Room could be removed but this would need to be done either by dismantling what remains of the roof structure and lifting the unit out with a crane or removing the front wall of the building and taking the compressor out that way. Alternatively it could be broken up and taken out through the door at the rear of the room. The major part of the cost of this exercise would be the crane to lift the compressor through the roof.

As with compressors 1 - 4, it does not seem feasible to remove the six vertical shell and tube condensers from the Condenser Room. Likewise it would be more appropriate to cover over the four dock water pumps in the pits in that room.

Smaller equipment that could easily be removed includes the cold store compressors (in the Reciprocating Compressor Room), the salt tanks and pumps (in the Salt Water Tank Room) and the ammonia recirculation pumps (in several locations alongside the ice making tanks, Tank House). However we would not recommend trying to remove the main ice making tanks from the original building. The pipe grids in the Ice Store could also be stripped out relatively easily.

The rectangular water tank on the roof of the Compressor House could be removed, as could the oil separators and the desuperheater on the roof. These would require a large crane to lift them off the roof. There is no equipment of any significance from a refrigeration point of view in the 1910 building.

4.7.2 Funding Opportunities

Sources of funding will be dependent upon any proposed future uses of the buildings and the availability of matched funding (see <http://www.ffhb.org.uk/> the funds for historic buildings website). Many sources will require public access to the buildings and options vary depending upon ownership. For example local authorities, commercial businesses and building preservation trusts can access alternative sources of funding. Sources are likely to include:

- ◇ Architectural Heritage Fund.
- ◇ English Heritage grant aid.
- ◇ European funding - EU Culture Programme (2007 - 2013), European Regional Development Fund (ERDF) and the European Social Fund (ESF).
- ◇ Heritage Lottery Funding – Heritage Grants.
- ◇ Yorkshire Forward Regional Development Agency – expected to be replaced shortly by various Local Enterprise Partnerships (LEPs).

Multiple funding streams and sources are likely to be required and it may be possible to link with other regeneration initiatives in East Marsh and Freeman Street as part of a holistic co-ordinated regeneration plan.

5 CONSERVATION MANAGEMENT POLICIES

5.1 The Vision for Grimsby Docks Ice Factory

The following text *presents an ideal view* regarding the future of the Grimsby Docks Ice Factory, a view which is supported by a series of aims, policies and recommendations. However, it must be noted that the Factory faces a number of serious issues (explored in Chapter 4) and thus it is not certain at this stage whether viable uses, and the necessary funds, can be secured. Unlike the recommendations and policies, the vision has the benefit that it can move beyond practical constraints of resource management, legislative influences and operational and management difficulties and issues. The vision can be used to inspire others, foster support and encourage those involved with the site to work together to achieve long term benefits and common goals.

The character of the Ice Factory has evolved throughout the 20th century. It is hoped it will continue to evolve in the 21st century and new uses be found that can be supported by the current owners and other stakeholders. The recommended way forward is for the owners, in consultation with key stakeholders such as English Heritage, NELC and perhaps also the Civic Society and Great GIFT, to actively consider potential alternative uses and possible repair strategies for the buildings and the most significant machinery. The aim should be to endeavour to secure their future, and to direct and foster the development and enhancement of all aspects of the heritage asset, to take the property forward in the 21st century in a financially self-supporting and sustainable way.

Use this Conservation Statement as a guide to the most significant elements, as a positive document to assist future planning and potential reuse.

5.2 The Conservation Framework: Aims and Objectives

Every historic building and site presents a complex set of challenges and opportunities which are unique to that site and change over time according to their context. Rigid adherence to any one conservation approach can ultimately lead to detrimental effects, simply because there will be specific situations which could not have been anticipated. Therefore, the first principle of good conservation practice is to remain focused and aware of the significances of the place, including where these conflict with one another, and make conservation decisions with a clear understanding of their impact on the significances.

Conservation is a dynamic process which allows for managed change that protects the significance of a site. As an unused deteriorating building with highly significant machinery, there is likely to be an opportunity at Grimsby Docks Ice Factory to create an economically and environmentally sustainable site within a conservation framework. The overarching aim must be to maintain, conserve and where possible enhance the industrial, architectural, historic and other significances of the site have a sustainable future.

To achieve this, the following objectives are recommended:

- ◇ Commission a feasibility study and options appraisal to investigate possible future uses appropriate to the current character, contents and significances of the site.
- ◇ Negotiate with ABP to secure the opportunity for repair of the buildings with an allowance for some removal of machinery in order to foster an alternative appropriate sustainable and viable use in relation to the feasibility study and options appraisal.
- ◇ Investigate the feasibility (including problems and costs) of separating the Ice Factory from its immediate setting as Port Operational Land and the likelihood of selling the Ice Factory as a separate entity which may increase the range of future options for reuse.
- ◇ Allow targeted consultation between the owners, English Heritage, North East Lincolnshire Council and funding bodies to assess what funding streams are available and how relevant these may be to the needs of the site.
- ◇ Aim to halt any decline of the buildings by making them weatherproof and increase security until decisions about their future have been agreed.
- ◇ If the long term future of the site is to be secured then it will be necessary to complete a full programme of repair and refurbishment to support future uses. This will involve the removal and dismantling of much M&E and some (less significant) machinery and other equipment with the restoration of more significant machinery *in-situ* to ensure that the site retains its significance.

Assuming that the long-term future of the buildings and most significant machinery is secured then:

- ◇ Upgrade access and facilities whilst minimising the impact on the historic fabric.
- ◇ Encourage the use and enjoyment of the site whilst generating an income stream.
- ◇ Consider a long term strategy for the maintenance and repair of the buildings.
- ◇ Consider the best possible way to mitigate the impact of the development where two significances conflict with each other, or where necessary activities adversely affect the site, and document the decision making process.
- ◇ Seek to improve the landscape context for the buildings, for instance through necessary landscaping and management to provide an attractive setting for the buildings.
- ◇ Develop a maintenance plan, reviewed and updated on an annual basis, to maintain and improve the site in a sustainable way which safeguards the heritage value.
- ◇ Inform design solutions by reference to this Conservation Statement to help ensure that any developments carried out on site are based on an understanding of their impact on the significances and historic character of the built environment.
- ◇ Regularly review and update this Conservation Statement to reflect any changes in the understanding or management of the site.

5.3 Conservation Management High Level Policies and Recommendations

5.3.1 Introduction and Implementation

The following section details the high-level policies and recommendations that have been developed following consultations, historical and fabric analysis and a review of the significances and vulnerabilities. These objectives and policies have been grouped under specific themes and categories.

The policies are designed to promote the conservation and enhancement of the special qualities of the site, and are intended to provide the framework within which this can be taken forward for the benefit of the buildings, machinery, setting, owners, local community and the wider public. They assume the ideal view that the buildings and machinery will be secured for the benefit of future generations. They should be implemented by the owners in consultation with key stakeholders:

POLICY	RECOMMENDATIONS	REASONS
General Philosophy		
POLICY 1: Conserve and where possible enhance the industrial, architectural and other significances at Grimsby Docks Ice Factory.	Implement programmes of conservation repair, regular inspection, maintenance and refurbishment.	Securing the fabric of the buildings, restoring the machinery and bringing the site back into a productive economic use for the enjoyment of future generations will help halt the loss of Grimsby's industrial heritage and safeguard the future of this exceptionally significant site.
Legislation and Consultation		
POLICY 2: Develop any works which would affect the significance of the site in consultation with the Local Planning Authority and the appropriate statutory consultees.	This will include pre-application consultation on works requiring statutory approvals.	Legislation provides a useful tool in recognising and protecting the significance and special interest of a site. It is important to conserve the character of Listed buildings.
POLICY 3: Consult with key stakeholders as a focused part of a process of continued engagement.	Consultation will include non-statutory interest groups such as Great GIFT.	Targeted consultation will help to build a consensus regarding the future of the Ice Factory and will facilitate any applications for Consent. Consultation will foster a sense of shared participation and will enhance our understanding and appreciation of the site.

POLICY	RECOMMENDATIONS	REASONS
Building Repair and Conservation		
<p>POLICY 4: Implement a programme of repair and future regular maintenance.</p> <p>POLICY 5: Improvements to the Ice Factory should incorporate improved access to areas that need regular maintenance – in particular roof access.</p> <p>POLICY 6: Once in a good state of repair, continue to regularly monitor the condition of the fabric; repair when necessary.</p>	<p>In undertaking any works it is important to respect the historic evolution of the Ice Factory and retain wherever possible all significant clues relating to its development.</p> <p>All maintenance, repair, alteration and conservation work should be undertaken to the appropriate standard by suitability qualified and skilled staff and contractors.</p> <p>Day to day maintenance should be carried out by ABP or other directly employed staff who will have the skills appropriate to the task. Training and/or supervision will be provided where necessary. Planned maintenance will be undertaken by specialist contractors with the relevant skills in the maintenance and repair of historic buildings.</p> <p>Once the fabric has been secured, a maintenance plan should be drawn up and reviewed annually to ensure that any changes at the site are suitably represented in the maintenance strategy.</p>	<p>Over and above the significance of the buildings identified in the assessment of significance, the owners have a duty of care to all Listed buildings in their ownership.</p> <p>The historic fabric of the buildings and machinery is deteriorating. In order to safeguard the buildings and machinery for the benefit of future generations, following necessary repairs, the owners will need to be committed to the long term management and maintenance of the site. The process of producing a long term maintenance plan that is reviewed and updated annually provides the opportunity of putting the maintenance of the site on a properly structured basis.</p> <p>A regularly reviewed and integrated maintenance plan will ensure a united approach to the buildings and their upkeep with maintenance to the same high standard.</p> <p>Regular inspections and maintenance will conserve the historic fabric and trigger the reminder for frequent repair work to avoid the buildings falling again into a state of disrepair involving expensive works.</p> <p>Frequent repair work prevents any defects in the fabric accelerating over time through neglect, hence avoiding expensive large scale repairs.</p>
Condition, Alterations & Recording		
<p>POLICY 7: Implement, review and update Condition Inspection of the buildings and machinery approximately every five years.</p> <p>POLICY 8: All evidence exposed in the course of carrying out inspections or alterations should be recorded.</p>	<p>A management strategy for unforeseen emergency repairs that might arise out of sudden alterations of the condition of the buildings is recommended.</p> <p>Any future repair or alteration to the buildings will be adequately researched and the work planned to ensure that the original materials are understood and that subsequent changes have been investigated and documented. Detailed records should be kept in a log book of all alteration works to the buildings and machinery including drawings of the completed work, a clear description of the work completed, the cost, and the persons who undertook the work.</p> <p>Appropriate professional advice will be taken as required where any significant change to the fabric of the buildings is being considered.</p>	<p>Recording change is an important part of understanding the development of heritage assets.</p> <p>Principles of minimum intervention and reversibility, and use of appropriate materials and methods, help protect the character and significances of Listed buildings.</p>

POLICY	RECOMMENDATIONS	REASONS
Condition, Alterations & Recording (continued)		
	<p>In seeking to make any alterations to the site or its setting, the principles of minimum intervention and reversibility should be followed wherever possible and historic fabric and features retained wherever possible. This will require a comprehensive understanding of the area(s) affected in addition to consultation with key specialists and organisations.</p> <p>Ensure that appropriate materials, methods and details are used by all individuals undertaking any maintenance, conservation and/or restoration works. There will be a presumption that materials used for repairs or alterations will match original materials as closely as possible unless there are compelling reasons why this would be detrimental to the building fabric itself.</p> <p>The buildings should be redecorated at appropriate intervals.</p>	
Appropriate Future Uses & Public Access		
<p>POLICY 9: Commission a Feasibility Study and Options Appraisal to explore potential future uses.</p> <p>POLICY 10: Any proposals to introduce changes that will impact on the fabric of the elevations, interior or contents of the buildings should take into account the wider effect of the changes on their character.</p> <p>POLICY 11: Any proposal to remove fabric from a later building phase and to reinstate that of an earlier phase, as a facsimile should be adopted only after giving a thorough evaluation of the existing building. This evaluation to consider elements such as its rarity, its quality and its historic significance.</p>	<p>Any Feasibility Study should be informed by this Conservation Statement and Alan Baxter's Structural Appraisal document to ensure that the significances, issues and associated costs are fully understood.</p> <p>Future uses are likely to involve the removal of some machinery, ancillary plant and equipment and M&E. This is likely to be acceptable providing that any scheme is properly justified so that the heritage benefits outweigh the costs.</p> <p>Future uses should encourage public access.</p>	<p>If the long term future of the buildings and machinery are to be secured and appreciated then it is imperative that appropriate future uses can be secured and public uses / access encouraged.</p>

POLICY	RECOMMENDATIONS	REASONS
<p>POLICY 12: In spaces of exceptional or high architectural, industrial or historic significance there should be a presumption against constructing a false space(s) within.</p> <p>POLICY 13: In spaces of exceptional, high or moderate significances any essential intervention relating to the installation of services must be subservient, discreet and reversible.</p>	<p>The 1910 building is more amenable to subdivision compared to the 1901 building.</p>	<p>"False" spaces are created by inserting new partitions to create smaller rooms. This would disrupt the historic floor plan and compromise our understanding of historic operations and should therefore be avoided.</p>
Capacity for Change		
<p>POLICY 14: In respect of the exterior elevations and fixtures (such as the Gantry Conveyors), the capacity for change is limited and the embellishments and detailing (pediments, iron plates etc), should all be retained <i>in situ</i>.</p> <p>POLICY 15: Internally there is greater scope of alteration.</p> <p>POLICY 16: Ancillary machinery has a greater capacity for change or removal compared to primary ice making machinery.</p> <p>POLICY 17: Machinery with an exceptional or high significance should remain in-situ.</p>	<p>Principles of reversibility, minimal intervention and matching / complementary materials are an important part of the conservation planning of the buildings. They will help ensure future conservation and safeguard historic and architectural character by helping to preserve the historic fabric and allow the original fabric to be recovered and repaired. However these need to be balanced with a recognition that managed change is sometimes necessary for the enhancement and conservation of buildings and to ensure that they have a sustainable future.</p> <p>Multiple examples of less significant machinery will have a greater capacity for removal or alteration than more significant machinery.</p> <p>Any machinery that is removed should be recorded in advance.</p>	<p>Capacity for change is variable across the site and this should be acknowledged when considering future uses to ensure that the essential character and significance of the site is retained.</p> <p>Given the importance of the machinery to the building's special interest, sufficient machinery should be retained <i>in-situ</i> to aid understanding of the original purpose of the building and its functions.</p> <p>It may be necessary to balance the benefits of retaining as much machinery as possible with the merits of some removal to ensure the viability of a future use.</p>
Setting		
<p>POLICY 18: Any new buildings in the vicinity of the Ice Factory should respect its scale, design and massing.</p>	<p>Aim to keep the area in the immediate vicinity of the Ice Factory clear of tall buildings or structures.</p>	<p>The Ice Factory is currently a prominent landmark in the area with an important architectural, townscape and group value with other historic industrial Dockside buildings, if obscured behind other buildings / structures these significances could be compromised or lost.</p>
Security		
<p>POLICY 19: Regularly review, and where possible enhance, security.</p>	<p>Review and maintain security in and around the buildings.</p> <p>Consider installing alarms and external lighting sensors necessary for safety and security. These should be non-intrusive and have regard to the character of the heritage asset.</p>	<p>At present, despite the existing security arrangements, there is unauthorised access into the buildings. This is both unsafe and often results in the theft of materials contributing to the declining condition of the buildings and negatively impacting upon the significances of the buildings and machinery.</p>

POLICY	RECOMMENDATIONS	REASONS
Further Information		
POLICY 20: All works to the site will be based on a sound understanding of the site and its significance and a record should be kept of any conservation and management work.	Distribute this Conservation Statement to necessary parties and keep a record 'log book' of works.	Regularly reviewing significance before, during and after any works to the site is an important part of maintaining the significance of the heritage asset, and where possible enhancing this. This is also likely to be a prerequisite of any funding.
Implementation		
POLICY 21: This Conservation Statement must be used to inform future decision making on the Ice Factory.	The significance of the site, how this is vulnerable, and the proposed conservation policies should be reviewed prior to key decision making.	This report contains a considerable amount of information essential to conservation planning.

6 BIBLIOGRAPHY

- Anon (1932). Report of Trails at the Grimsby Ice Co. Ltd, Centre for Kentish Studies
- Alan Baxter & Associates (2010). Ice Factory, Grimsby – Appraisal of existing Structure.
- Chapman, P. (2007). *Grimsby the Story of the World's Fishing Port*.
- English Heritage (2008). *Heritage at Risk Register 2008*.
- English Heritage (2009). *Grimsby Fish Docks: An Assessment of Character and Significance*, M. Whitfield, April 2009.
- English Heritage (2001). *The Grimsby Ice Company Factory*, I. Goodall.
- English Heritage (2010). *Heritage at Risk Register 2010: Yorkshire and The Humber*.
- Fleming, F. A. (1932). *Description of 1,100 Tons Ice Plant of The Grimsby Ice Co. Ltd*, Centre for Kentish Studies.
- Lincolnshire Life (2007). Talk of the Town: Cleethorpes & Grimsby, *Lincolnshire Life*, November 2007, pp27-28.
- Kerr, J. S. (1996). *Conservation Plan*.
- Miller, H. (1985). *Halls of Dartford 1785-1985*.
- Milner, L. (2009). 'Historic Refrigeration Factory in Danger of Demolition', *Condenser*, International Institute of Ammonia Refrigeration, November 2009 pp21-22.
- Rigby, S. H. (1993). *Medieval Grimsby: Growth and Decline*.
- Ritchie Leask, A. (1901). *Refrigerating Machinery – Its Principles and Management*.
- Sather, K. & Associates (2002). *Rapid Survey of Fish Smoking Houses and Associated Buildings in Hull and Grimsby*, June 2002.

Newspapers, Websites and Videos

- 'Grimsby's Real Ice Age Mammoth Factory Inaugurated', *Grimsby Daily Telegraph* (16 December 1931).
- 'New 5,000-Ton Cold Store for Grimsby', *Grimsby Evening Telegraph* (21 March 1958).
- 'Cold Store Is Closing – Nowhere To Expand', *Grimsby Evening Telegraph* (19 March 1971).
- www.acr-news.com - ACR News (2009). 'Battle to save historic ice factory', ACR News, November 2009.
- <http://www.rcahmw.gov.uk/HI/ENG/Search+Records/Explore+Coflein> - historic environment sites in Wales.
- <http://grimsbycleecivic.co.uk/Ice> - Grimsby Cleethorpes & District Civic Society (2009). Grimsby Ice factory – Public Debate FacotryDebate.html.
- www.ffhb.org.uk/ - the funds for historic buildings website.
- www.localhistories.org/Grimsby.html - Lambert, T. *A Brief History of Grimsby*.
- www.swanseadocks.co.uk - remains of an ice factory in Swansea.
- Cleethorpes Camera Club – Video Section "Grimsby Ice Factory".
- A selection of historic photographs, Centre for Kentish Studies, U2835 Bx4/35/237.
- ### Archives
- Centre for Kentish Studies
Grimsby Central Library
Historic Environment Record, North East Lincolnshire Council
National Monuments Record, Swindon
North East Lincolnshire Archives, Town Hall, Town Hall Square

Appendices

Statutory Listing Description and Heritage at Risk Entry (English Heritage)

Building Details:

Building Name: THE GRIMSBY ICE FACTORY INCLUDING RAILINGS
Parish: GRIMSBY
District: NORTH EAST LINCOLNSHIRE
County: LINCOLNSHIRE
Postcode: DN31 3LW

Details:

LBS Number: 479276
Grade: II*
Date Listed: 12/09/1990
Date Delisted:
NGR: TA2779910694

Listing Text:

GRIMSBY

TA2710NE GORTON STREET, The Docks 699-1/7/121 (West side)
 12/09/90 The Grimsby Ice Factory including railings
 (Formerly Listed as: FISH DOCK ROAD, The Docks
 (East side) The Grimsby Ice Factory)

Ice factory. 1900-1 with extension factory of 1907-8 and later alterations. By WF Cott, consulting engineer, for the Great Grimsby Ice Company Limited. Red brick with blue brick and ashlar dressings. Slate and glazed roofs; copper domes on north unit. Chamfered blue brick plinth. Approximately rectangular on plan, comprising 2 linked factories separated by a passage (formerly carrying a railway), cutting across at an angle. Factory has frontages to Gorton Street, Fish Dock Road, Stuart Wortley Street and the railway passage. EXTERIOR: main front to Gorton St., facing Fish Dock Number 2: 2-storey 12-bay range to the left, and a single-storey 8-bay range to the right. Left range is divided into 3 sections: to the left are two 4-bay pedimented fronts with a narrow linking bay between topped by a short square tower, and to the right is a 3-bay parapeted section. Plinth to the sections on the left carries a narrow cantilevered balcony with plain iron railings. Pedimented sections have angle pilasters, the outer ones rising to small square turrets, the inner ones flanking the linking bay which has a central full-height keyed round-arched blind panel. The pedimented fronts form a handed pair, each with a full-height pilastered blind arcade of 4 arched panels with ashlar keystones and rubbed-brick impost mouldings, the outer panels round-arched, the wider twin central panels with elliptical arches, one of which in each section has been replaced by a first-floor loading door beneath a lintel. Ground floor: central 2 bays to each section have segmental relieving arches and single sliding loading doors, the outer bays have round-headed glazing-bar windows. Large square cast-iron tie-bar ends at first-floor level with lettering "G G I Co Ld". Round-headed blind first-floor openings. Moulded

brick cornices and friezes, that to right with painted inscription "THE GRIMSBY ICE CO LTD"; traces of former painted lettering to left frieze. Both pediments have a blind keyed oculus, stone coping with central finial. Central tower has

angle pilasters with blind slits, small central opening with a bracketed wooden bell-frame below, and a moulded and dentilled brick cornice. Angle turrets have panelled sides, moulded cornices and pyramidal ashlar caps. 3-bay section to right also has a full-height pilastered blind arcade of recessed panels, the outer bays round-arched, the inner bay elliptical-arched, each containing keyed arched openings with moulded imposts: a blind opening to ground-floor centre, the openings to the left bay with glazing-bar windows, the others partly blocked and with various inserted C20 openings. Rebuilt coped parapet. These left-hand ranges have first-floor iron balconies and walkways, and a pair of overhead gantries with ice conveyors crossing the street to the dockside.

The lower 8-bay range to the right has a chamfered plinth and recessed panels to each bay, the 2 left bays rendered and with inserted C20 ground-floor doors, the 5 bays to the right with round-headed windows with glazing bars, stone sills and flush sill band, moulded brick imposts and impost band; blind panel to far right with sill and impost band.

The north factory unit, beyond the railway passage, has an angled 2-storey section with fronts to the passage and to Stuart Wortley Street (described below). Behind this is a taller section facing Gorton Street, with a 3-bay pedimented section with a tower adjoining to the left, both with angle pilasters.

The tower has a narrow round-headed blind panel to each side with an elongated keystone, moulded brick cornice, coped parapet; central copper dome surmounted by a flagpole, flanked by 4 small domes. Pedimented section has pilastered arcade with moulded brick imposts, round-headed keyed arches containing round-headed recessed panels, those to right with an inserted door and window. Tympanum has central blocked round-arched opening with keystone, stone coping with central ball finial; angle pilaster to right capped with small square turret.

Secondary front to Fish Dock Road: north factory unit, from left, has 2-storey 5-bay section and slightly taller 2-bay section with coped parapets, and a symmetrical 3-storey 5-bay section to right with central 3 bays topped with a pediment. Sections to left have full-height recessed panels to each bay; the first 5 bays with round-headed blind openings to ground floor and square-headed blind openings to first floor beneath cambered brick arches, all with sills. 2 bays to right have round-headed glazing-bar windows to ground floor, similar openings to first floor with lunettes above blind panels. Pedimented section, flanked by pilasters, has 3 recessed segmental-arched panels below containing 3-light ground-floor windows with glazing bars beneath heavy steel lintels,

chequered brick panels above and 3-light first-floor windows with sills and glazing bars. Above is a pilastered blind arcade of narrow round-headed panels with moulded brick impostes and ashlar keystones, containing recessed round-headed glazing-bar windows with sills. Moulded brick cornice and frieze with painted lettering "THE GRIMSBY ICE COMPANY LTD". Pediment has moulded brick cornice, small oculus with elongated keystones, stone coping with central ball finial. Flanking pilasters capped with square turrets with blind panels, moulded cornices and pyramidal caps. Single flanking bays have continuation of cornice and frieze and pilasters capped with turrets: bay to left has a round-headed ground-floor entrance with double doors beneath a steel lintel, chequered brick tympanum and keyed arch; bay to right forms one side of an angle turret beside the railway passage. South factory unit, to right of the railway passage: has front of 2 builds to Fish Dock Road. Earlier section to left has 1:3:1 bays with recessed panels to each bay. Wider outer bays have keyed round-headed ground-floor openings with glazing-bar windows, that to right incorporating a central door; single circular windows above with glazing bars. 3 narrower central bays have recessed round-headed panels containing ground-floor windows beneath lintels, and round-headed first-floor windows, all with stone sills and glazing bars. Coped parapet. Section to right has 2 large glazed panels, each of 6 lights, with 3 tiers of windows; copied parapet.

Stuart Wortley Road front of north factory unit: 2 storeys, with a tall 3-bay central section flanked by lower 6-bay sections. Recessed panels to each bay. Left section has 2 full-height blind panels and a wide ground-floor entrance to the right beneath a steel lintel, with 4 recessed panels above containing round-headed first-floor windows with glazing bars; parapet with later C20 concrete coping. Central 3-bay section has pilasters between bays and angle pilasters capped by square turrets. Ground floor: pair of tall keyed round-arched openings to left, one with loading door, the other partly blocked and with an inserted window, both with steel lintels at impost level and chequered brick tympana. Round-headed glazing-bar window to right. Above, recessed round-headed panels with keystones and moulded brick impostes, containing blind round-headed openings with sills, that to left with a small inserted door and iron balcony. Coped parapet ramped up to pedimented front to Gorton Street to left.

Railway passage elevations: northern factory unit, from left, has 20-bay section of 2 and 3 storeys, a single-bay tower, and a low 2-storey range with 5 irregular first-floor openings. 20-bay section has blue brick to ground floor, recessed panels to each bay. 4 bays to left have 3-light ground-floor and

first-floor windows with glazing bars beneath steel lintels, separated by chequered brick panels. Above are round-headed openings containing lunettes with sills above blind panels,

one with a door to an iron gantry walkway linked to the southern factory unit. 15 bays to right have round-headed openings to ground floor, one with a blind panel, another with an inserted door, the others with glazing-bar windows, some beneath louvres. Above, round-headed blind panels with blind lunettes with sills. Stepped brick eaves cornice (for turret see Gorton Street front). Section to right has blocked ground-floor door to left of centre and wide 4-light wooden first-floor window with glazing bars and boarded apron beneath steel lintel; to left, a pair of blind square-headed first-floor openings; to right, 2 bays with recessed panels containing round-headed windows to each floor; copied parapet. Railway passage elevation of southern factory unit has 5 2-storey parapeted sections of varying height, with 4, 5, 3, 2, and 5 first-floor openings. 3 sections to left have 3 square-headed doors, one blocked, and a blocked round-headed door, round-headed and segmental-headed glazing-bar windows to ground and first floor. Taller 2-bay range to right of centre has recessed panels containing round-headed glazing-bar windows, that to first-floor right with a door and gantry walkway to northern factory unit. 5-bay section to right has full-height recessed round-headed panels with ground-floor and first-floor glazing-bar windows similar to adjoining Fish Dock Road front.

INTERIOR: massive girder construction supports 6 rows of refrigeration tanks on 2 floors complete with machinery for producing blocks of ice. The factory was converted to electricity in 1933 and compressors remain in the Compressor Room. The northern unit has been partly cleared but massive girder construction remains.

HISTORY: built following the amalgamation of the Grimsby Ice Company with the Co-operative Ice Company. The factory supplied ice for fish packing. The overhead gantries on the Gorton Street front carried ice into the dockside fish-landing building opposite. Ceased production 1990. The Grimsby Ice Company was one of Grimsby's leading fishing companies, and also built the Fisherlads' Home, for fishing apprentices, in Connamore Road (qv).

This ice factory illustrates Grimsby's importance as the world's foremost fishing centre in the earlier C20. This building is understood to be the earliest remaining ice factory in the UK. Furthermore it is believed to be the sole survivor, complete with its machinery, from this period. (Ambler R W: Great Grimsby Fishing Heritage - a brief for a trail: Grimsby Borough Council: 1990: pp34-35; National

Fishing Heritage Centre: Great Grimsby Heritage Trail: 1991-).

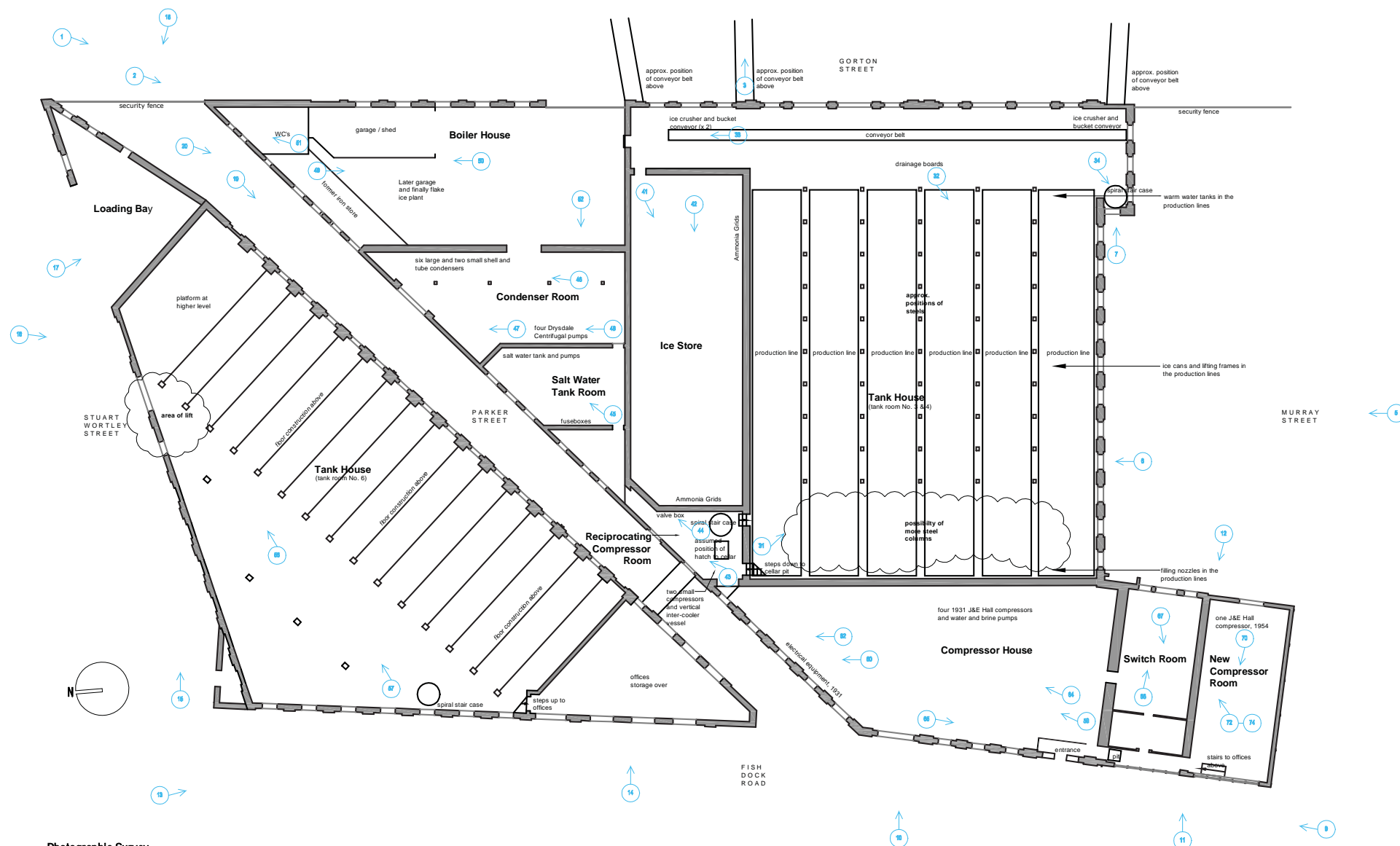
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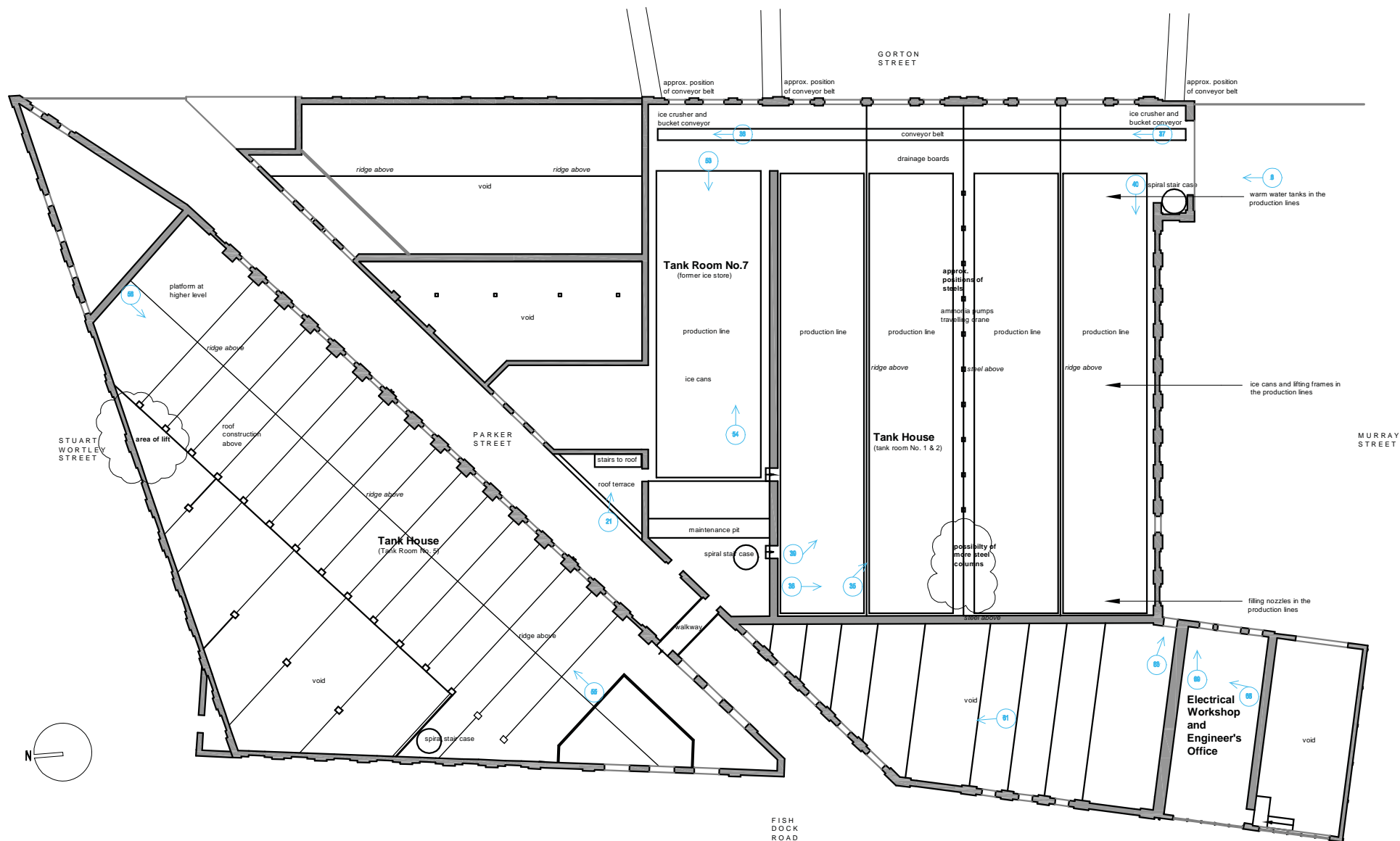
Heritage at Risk Register Entry: Grimsby Docks Ice Factory

1900 ice works with extension factory of 1907-8 and later alterations. Closed in 1990. It is thought that this is the earliest surviving ice factory in Britain, and the sole survivor from this period to retain its machinery. Window damage. Roof is now deteriorating rapidly.

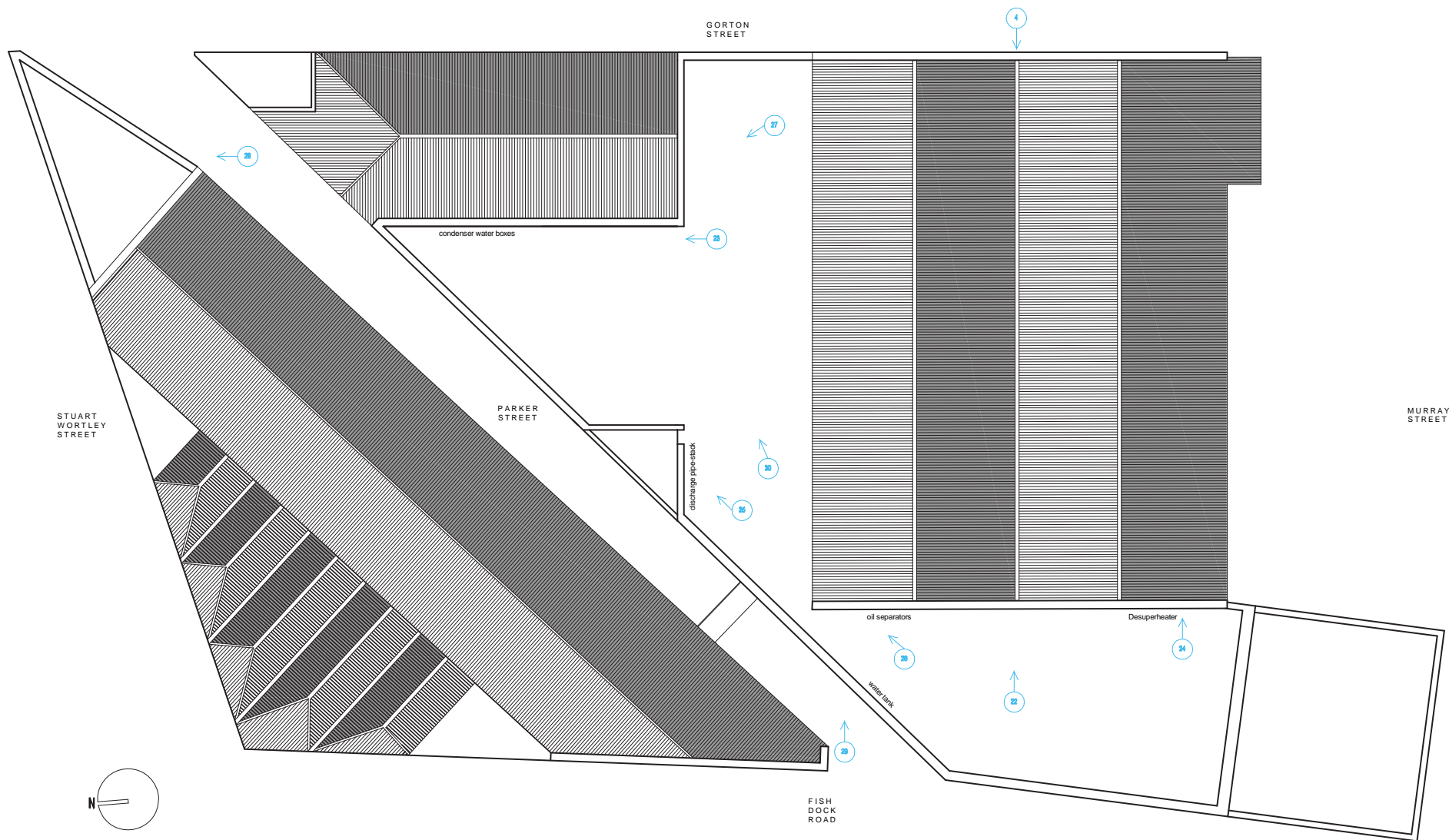


Asset Type:	Building at Risk
Name:	The Grimsby Ice Factory
Street:	Gorton Street
Parish:	Grimsby
Unitary Authority:	North East Lincolnshire (UA)
Parliamentary Constituency:	Great Grimsby
Region:	Yorkshire and the Humber
Designation:	Grade II* listed building
New Entry:	No
Condition:	Very bad
Occupancy:	Vacant
Priority:	A
Previous Priority Category:	A
Owner Type:	Company
Contact:	Catherine Dewar 01904 601972





Photographic Survey
 First Floor Plan, Grimsby Docks Ice Factory
 Not to scale
 Base plan provided by Hodson Architects



Photographic Survey
 Roof Plan, Grimsby Docks Ice Factory
 Not to scale
 Base plan provided by Hodson Architects

External Elevations



1 East elevation, Gorton Street (courtesy of Hodson Architects)



3 Detail of conveyor, east elevation



2 Boiler House, east elevation



4 Detail of clock tower, east elevation



5 South elevation (courtesy of Hodson Architects)



7 Detail of original/historic opening on three bay projection (later enlarged), south elevation



6 Detail of company initials on bolt plates, south elevation



8 Detail of first floor opening left when adjacent building demolished, south elevation



9 West elevation, former Fish Dock Road (courtesy of Hodson Architects)



11 Switch Room and New Compressor Room, west elevation



10 Compressor House, west elevation



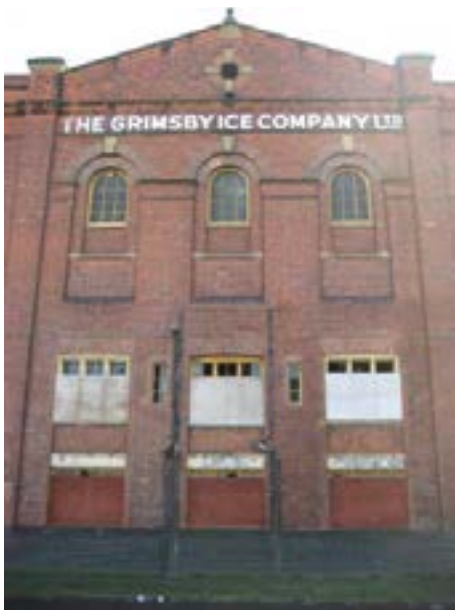
12 Rear of Switch Room and New Compressor Room



13 The 1907 - 1910 Extension



15 North elevation, former Stuart Wortley Street (courtesy of Hodson Architects)



14 Offices with company name on pediment, 'The Grimsby Ice Co Ltd', west elevation (courtesy of Hodson Architects)



16 North elevation, former Stuart Wortley Street (courtesy of Hodson Architects)



17 Loading Bay, former Stuart Wortley Street (courtesy of Hodson Architects)



19 Looking southwest, former Parker Street



18 Loading Bay, former Parker Street



20 Join between Boiler House and Condenser Room, note refacing, former Parker Street

Roofs



21 Stairs to roof on roof terrace



23 Condenser water



22 Double gable elevation of 1901 Tank House, now largely obscured by Compressor House



24 Desuperheater



25 Discharge pipe stack



27 Roofs of the 1910 Tank House and Boiler House, note the louvres and cupola



26 Oil separators



28 Cupola on tower by 1910 Tank House, note the theft of copper covering

Internal Spaces and Machinery: 1901 Factory



29 Water tank



31 Tank House, ground floor



30 Drain gulleys



32 Detail of an ice can and drainage board, Tank House, ground floor



33 Crusher, Tank House, ground floor



35 Tank House, first floor



34 Iron spiral stair to first floor Tank House. Note the blocked door and window openings



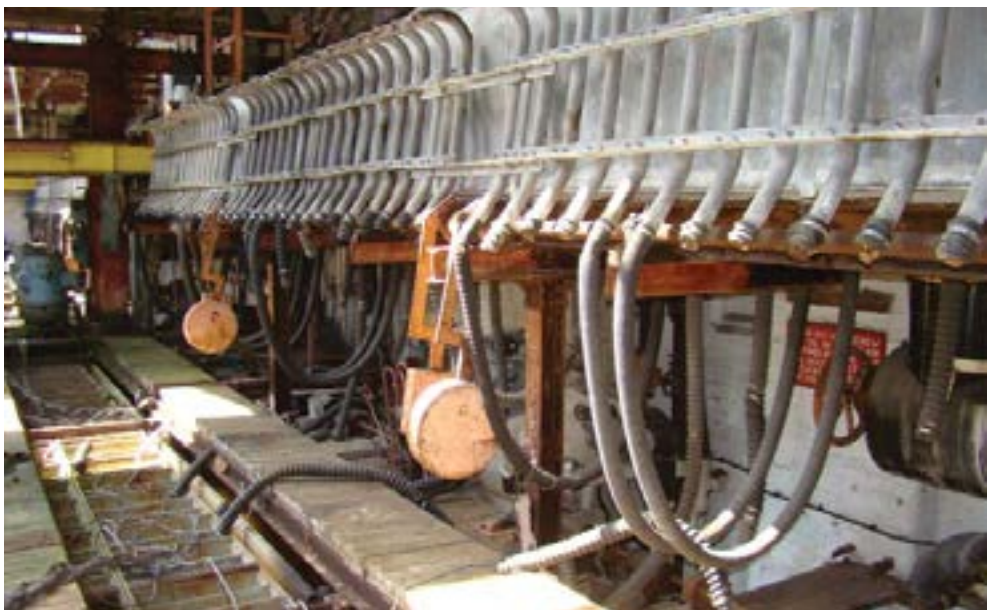
36 Bucket conveyor for crushed ice, Tank House, first floor



37 Conveyor, Tank House, first floor



39 Ammonia pumps, Tank House, first floor



38 Filling nozzles, Tank House, first floor



40 In-situ ice can in brine tank, Tank House, first floor



41 Ice Store, note ammonia grids



43 Reciprocating compressors, Reciprocating Compressor Room



42 Ice Store, note ammonia grids



44 Valve box, Reciprocating Compressor Room



45 Salt Water Tank Room



47 Blocked window openings, Condenser Room



46 Shell and tube condensers, Condenser Room



48 Four drysdale centrifugal pumps, machinery pit, Condenser Room



49 View towards Flake Ice Plant position, Boiler House



51 WCs replaced the chimney



50 View towards former garage and iron store. Note how the uneasy relationship between the internal wall and window i.e. the present location of the wall between the Boiler House and Condenser Room is not original.



52 Decoration added as part of the filming of 'Atonement'

Internal Spaces and Machinery: 1901 Factory



53 Tank Room No. 7, first floor



55 Tank House, first floor



54 In-situ ice can in brine tank, Tank Room No. 7, first floor



56 Tank House, first floor; view towards mid-late 20th century blockwork storage room and large open area of uncertain function

Internal Spaces and Machinery: 1901 Factory



57 Ground floor, large open area. Note elevator in background.



59 Compressor House



58 Detail of early mid-20th century elevator



60 White glazed brick internal elevation



61 Example of a travelling crane on runners



63 Window truncated by internal wall, presumably rebuilt on a slightly different alignment when the Switch Room was added between c.1935 and 1950



62 Electrical equipment installed in 1931



64 Motor for compressor no. 2



65 Small timber and glass office above entrance to Compressor House

Internal Spaces and Machinery: c.1935-1954 Switch Room & New Compressor Room Extensions



66 Switch Room, looking east



67 Switch Room, looking west towards modern blockwork internal wall



68 Entrance to Electrical Department



70 New Compressor Room, added c.1954 with stairs to Electrical Workshop & Engineer's Office



69 Workbench in Electrical Department



71 Fifth J & E Hall compressor



70. New Compressor Room, added c.1954 with stairs to Electrical Workshop & Engineer's Office



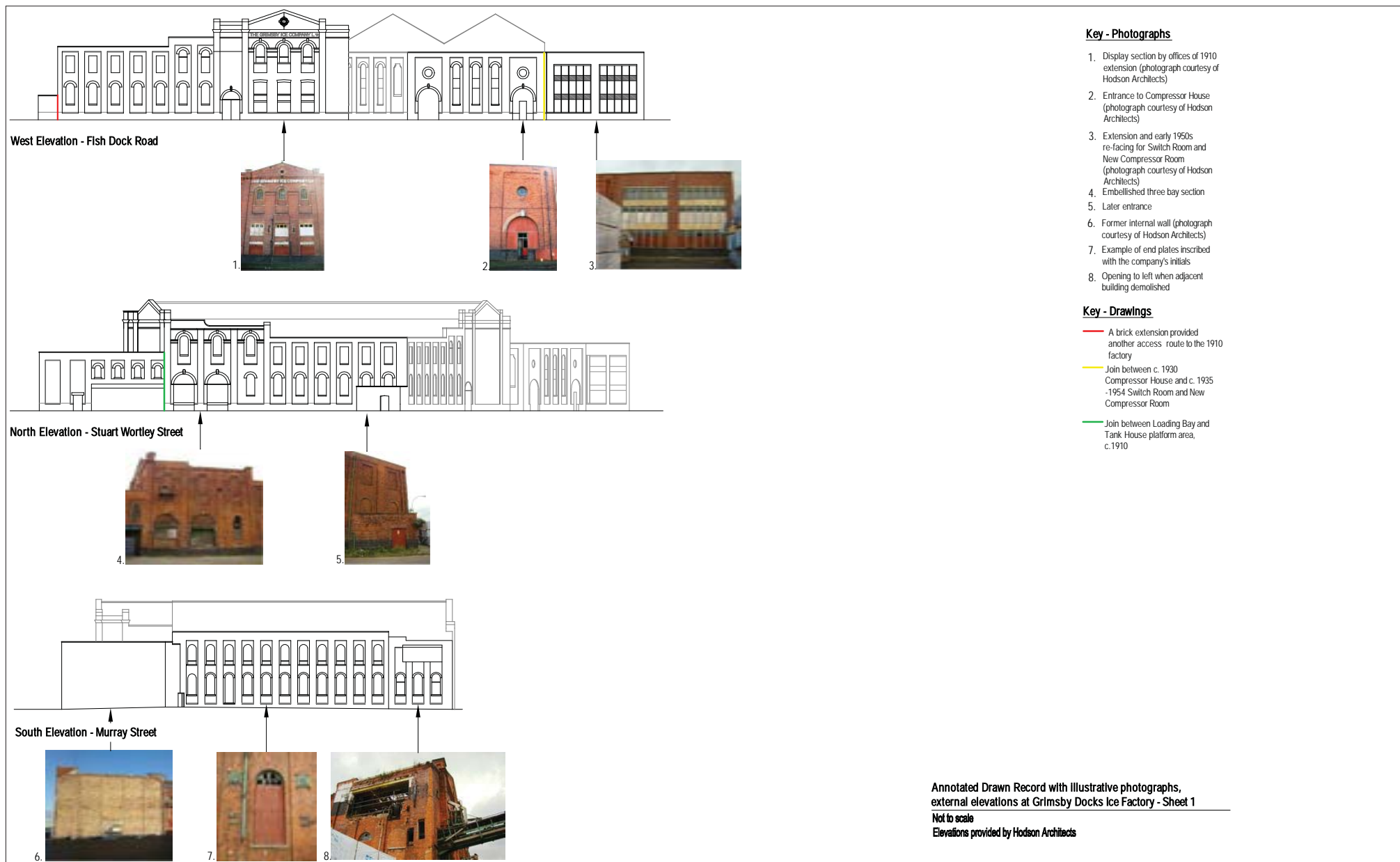
74. Compressor slip rings

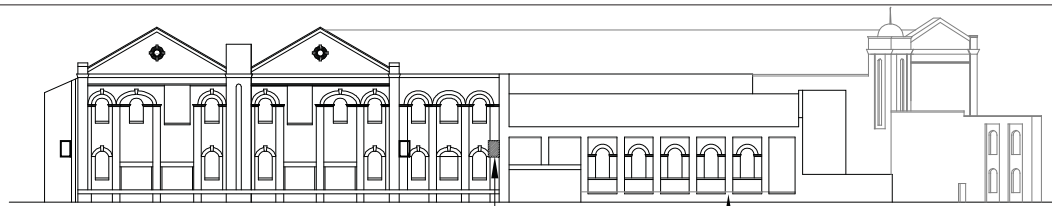


71. Fifth J & E Hall compressor

APPENDIX C

Drawn Record of Grimsby Docks Ice Factory





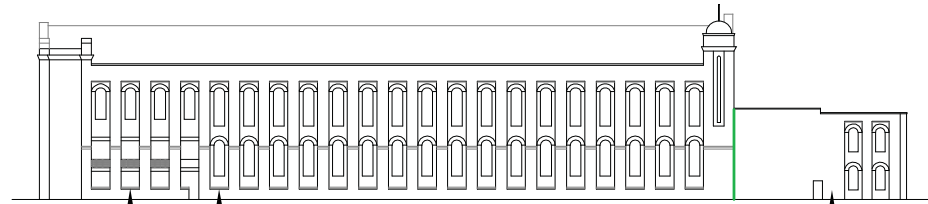
East Elevation - Gorton Street



9.



10.



North Elevation - Parker Street



11.



12.



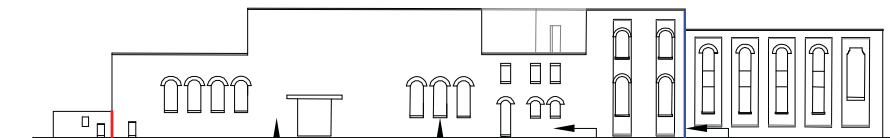
13.

Key - Photographs

9. Detail of conveyor added c. 1933 across Gorton Street. Note that it disturbs 1900 window surround
10. Former Boiler House
11. Decorative chequered brickwork marking office windows
12. Example of a ground floor glazed and louvred window with first floor blind and in-filled lunette
13. Loading bay extension
14. WC block replaced chimney of Boiler House
15. Example of refaced brickwork
16. Refaced brickwork and traveling crane runner through in-filled opening
17. Changes in character of openings, roof level, cornice etc
18. Building break between the 1901 and c. 1930 Compressor House extension

Key - Drawings

- WC's replace the chimney demolished in the early 1930s
- Join between 1901 factory and c. 1930 Compressor House
- Join between Loading Bay and Tank House platform area, c.1910



South Elevation - Parker Street



14.



15.



16.



17.



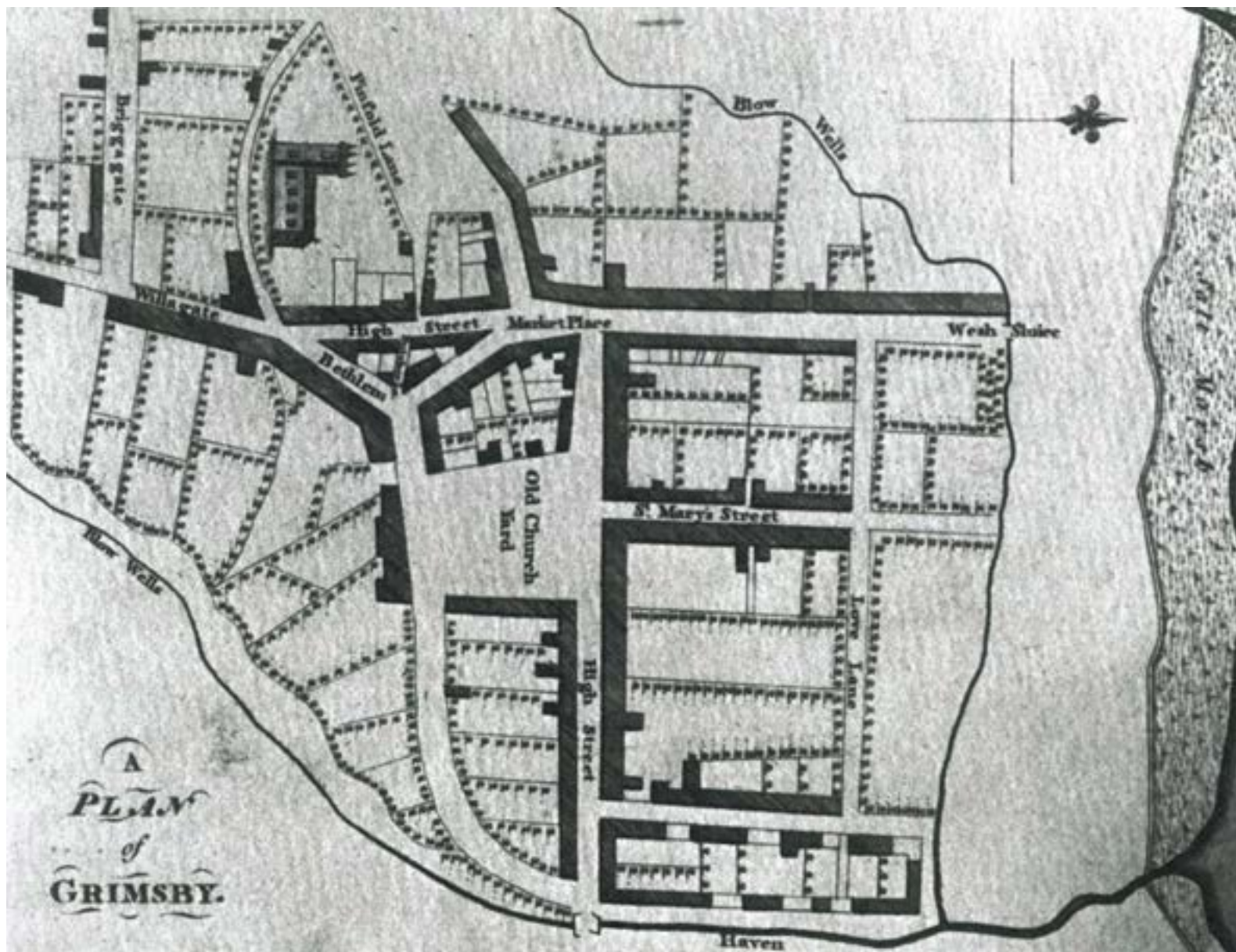
18.

Annotated Drawn Record with illustrative photographs,
external elevations at Grimsby Docks Ice Factory - Sheet 2

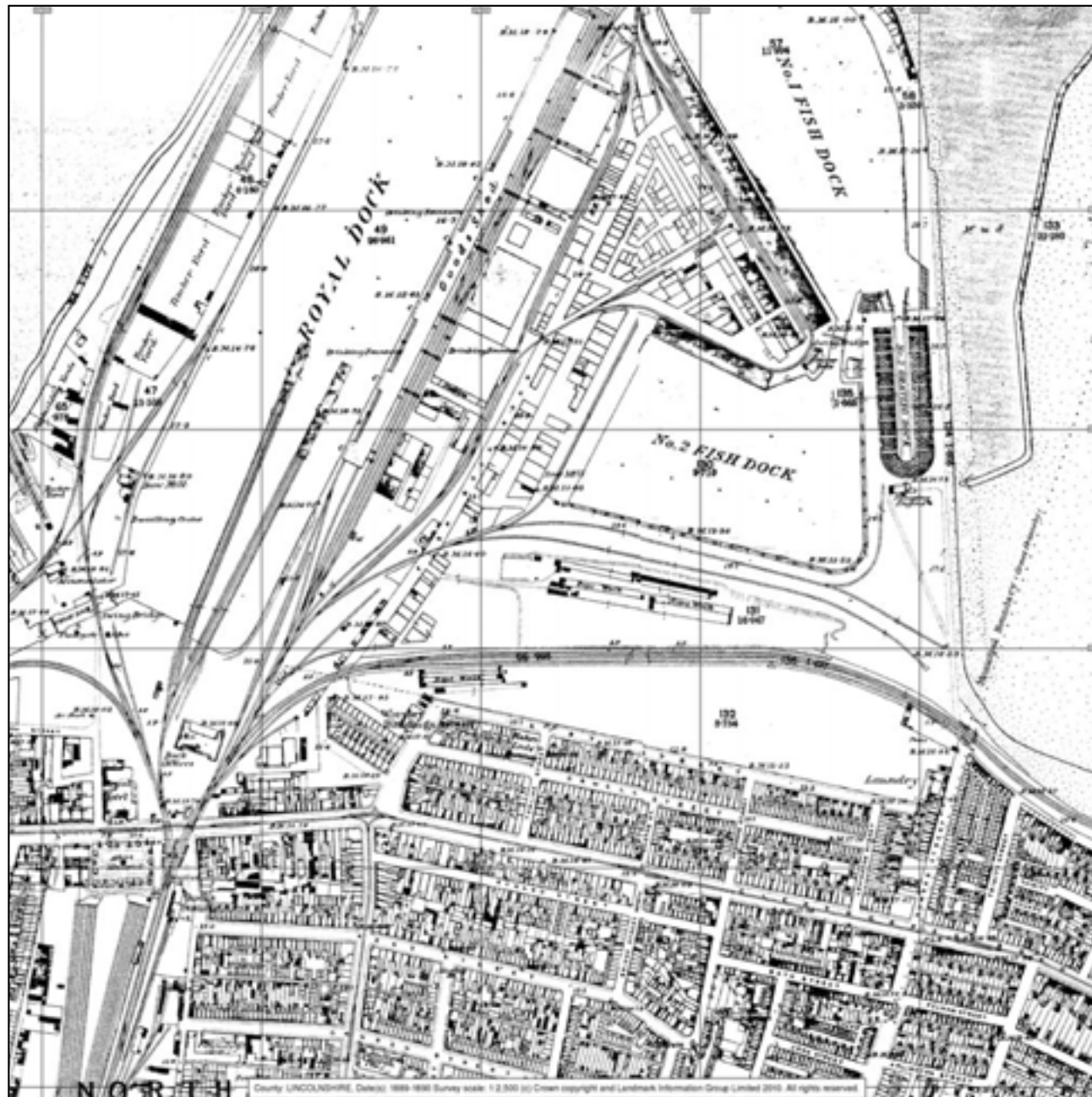
Not to scale

Elevations provided by Hodson Architects

Plan of Grimsby, 1789



Map of Grimsby, 1889 - 1890



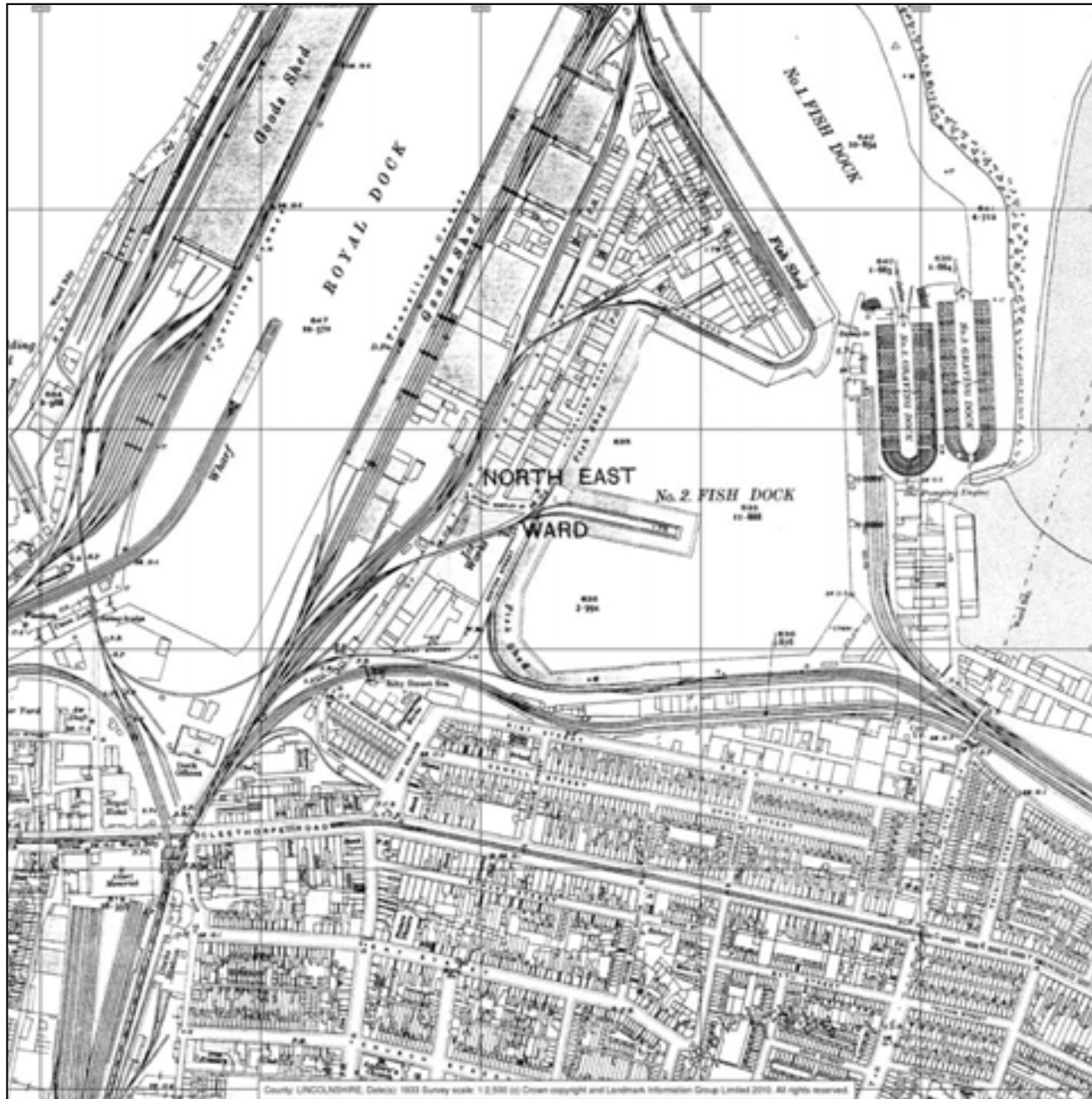
Landmark Historical Map
County: LINCOLNSHIRE
Published Date(s): 1889-1890
Originally plotted at: 1:2,500

OS Map of Grimsby, 1908



Landmark Historical Map
County: LINCOLNSHIRE
Published Date(s): 1908
Originally plotted at: 1:2,500

OS Map of Grimsby, 1933



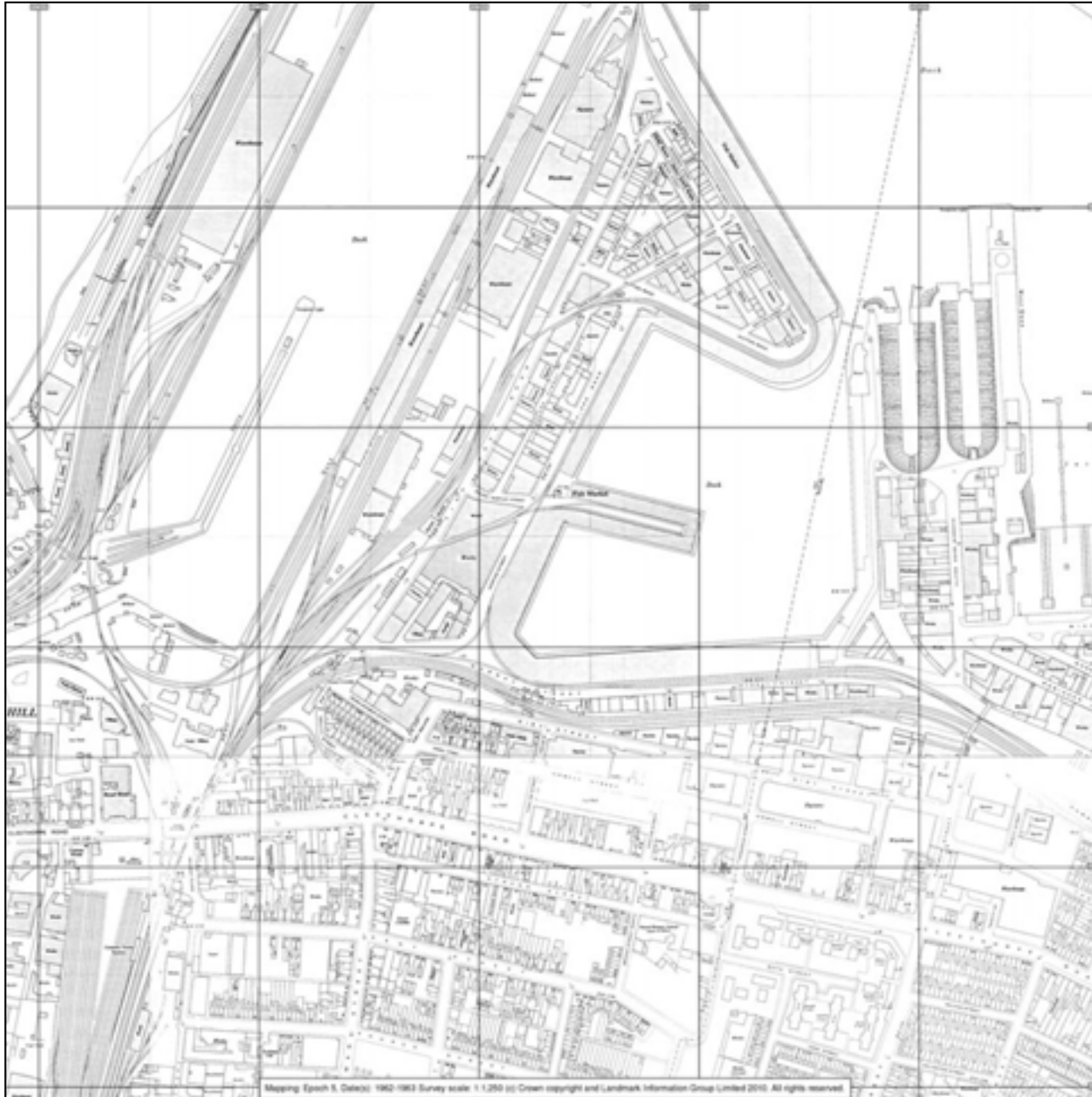
Landmark Historical Map

County: LINCOLNSHIRE

Published Date(s): 1933

Originally plotted at: 1:2,500

OS Map of Grimsby, 1962 - 1963

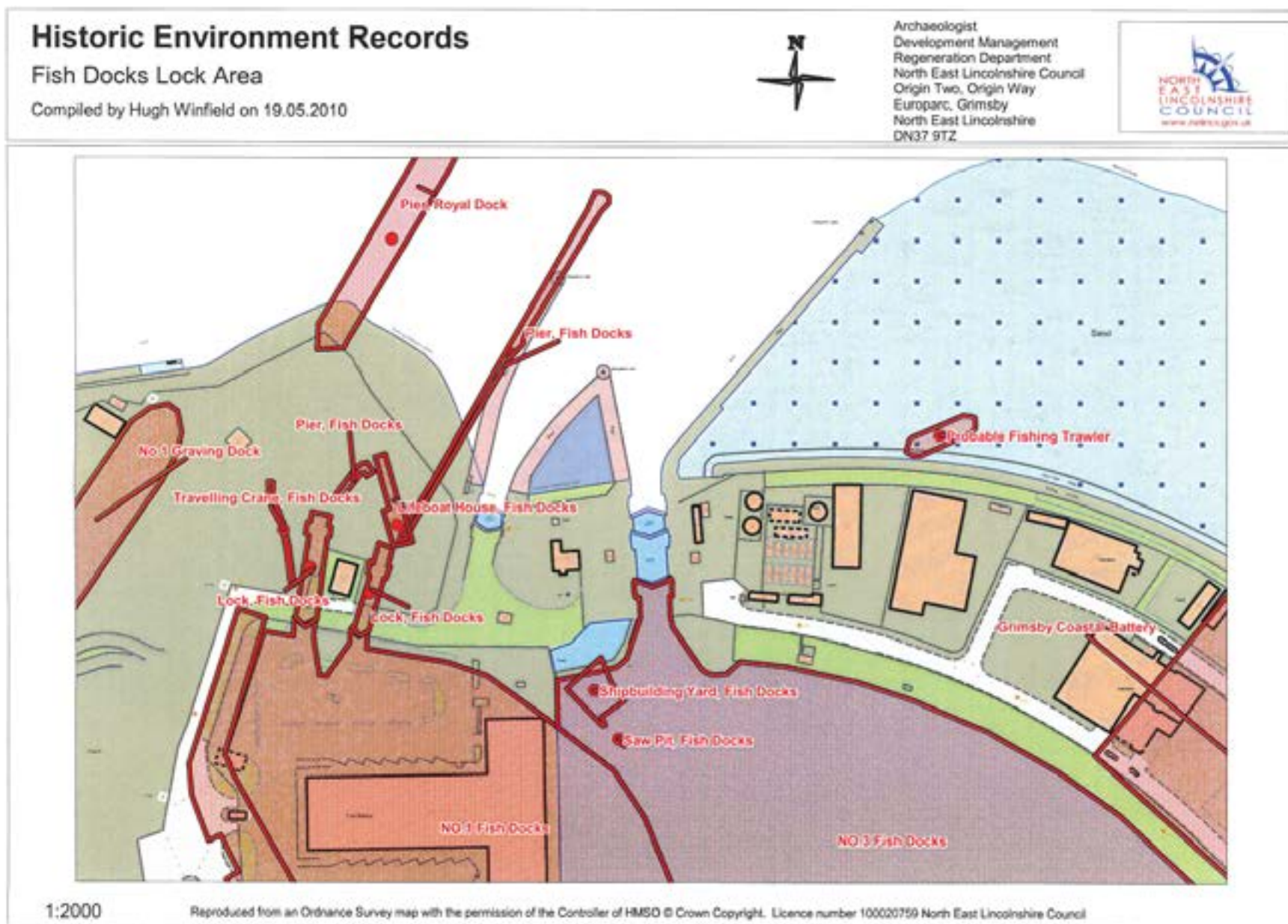


Landmark Historical Map
Mapping: Epoch 5
Published Date(s): 1962-1963
Originally plotted at: 1:1,250

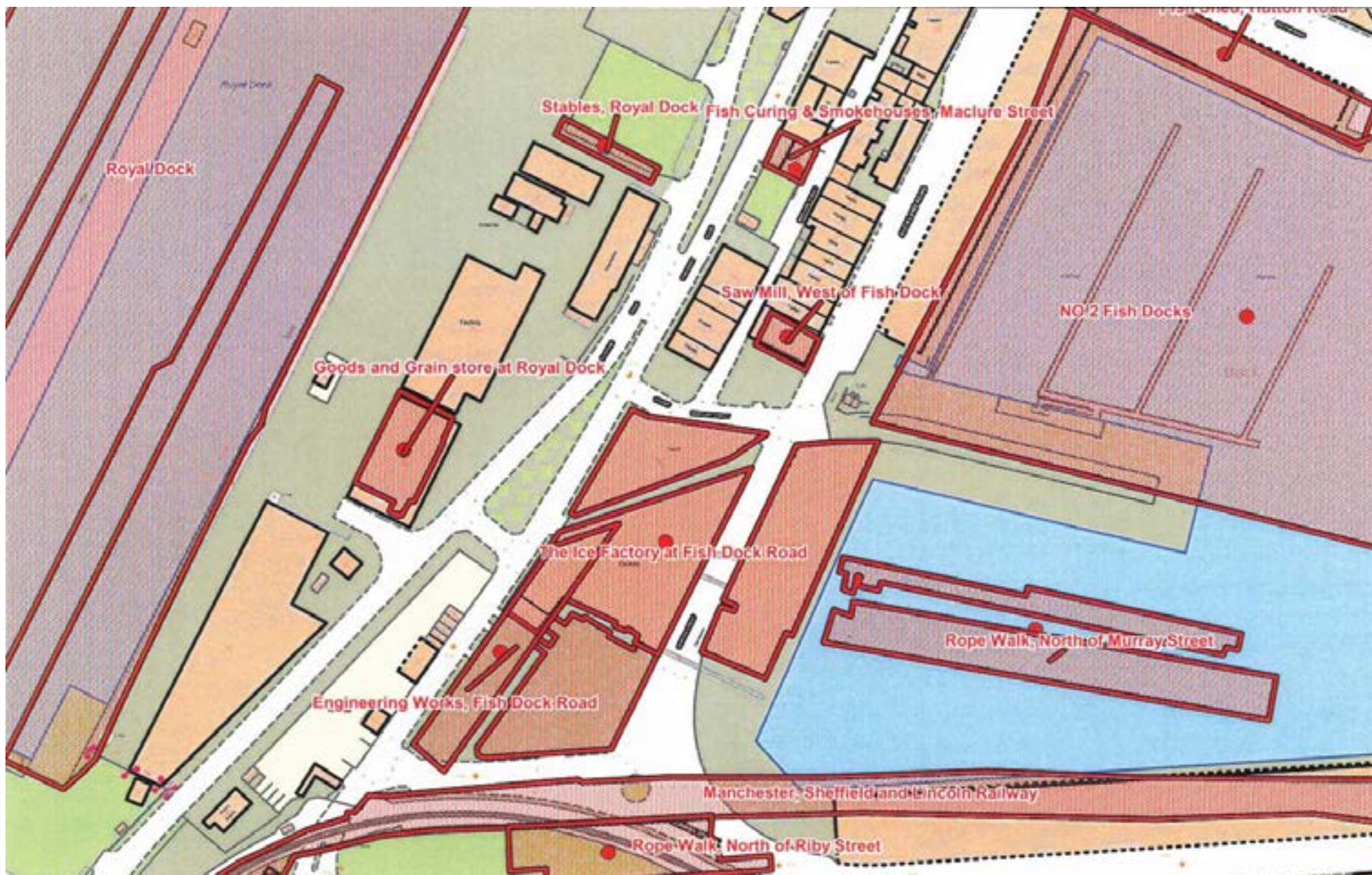
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APPENDIX E

HER Data (North East Lincolnshire Council)







North East Lincolnshire Council Historic Environment Record

19/05/2010

HER Number 0348/3/0
Old SMR/HER Number 15426
Record Type Building

Site Name Fish Dock Building, Wharnccliffe Road

Summary A fish processing building, marked on Ordnance Survey maps as a fish market.

Monument Types and Dates

FISH PROCESSING SITE (Twentieth Century - 1901 AD to 2000 AD)

Evidence DEMOLISHED BUILDING
Main Building CONCRETE
Material

Description and Sources

Description

Former Listed Building. Known locally as a "Pontoon".
Fish dock processing building. 1927. Built for the London and North Eastern Railway Co. Re-enforced concrete. 2 storey.
Road front has
Central 7 bay section with central single bay entrance ramp, flanked by single rusticated pilaster strips, upper floor has a central large window flanked by single windows in moulded surrounds, topped by an open pediment containing a circular clock face. Either side are 3 broad bays, open on the ground floor with cantilevered canopies, and above 2 pairs of metal frame windows to each bay above a moulded cornice and parapet. To the left 20 bays, and to the right 16 bays, all with open ground floors and cantilevered canopies, about 2 large glazing bar metal frame windows to each bay.
Interior: Has a central full height space, occupying the full length of the building. The upper floors contain offices and storage spaces, linked by a continuous balcony to the right, with iron spiral staircase access. The central roof is glazed. The whole building is raised up onto a platform to allow easy loading of lorries and carts (1).
Marked as a fish market (2)

Sources

- (1) Scheduling record: List of Buildings of Special Architectural or Historic Interest.. 5265
- (2) Map: Ordnance Survey. c.1950-80. Ordnance Survey 1:10,000 (Mid Twentieth Century).

Location

National Grid Reference

Centroid TA 2803 1107 (MBR: 178m by 360m) TA21SE Dispersed

Administrative Areas

Civil Parish (2005) Grimsby
Historic Township (Great Grimsby)

Designations, Statutes and Scorings

Associated Legal Designations

Listed Building (DL) - 5265? FISH DOCK PROCESSING BUILDING Revoked DNL342

Finds - None recorded

Associated Events/Activities - None recorded

HER Number 0348/4/0 - MNL12

Site Name The Ice Factory at Fish Dock Road

HER Number 0348/4/0
Old SMR/HER Number 15425
Record Type Building

Site Name The Ice Factory at Fish Dock Road

Summary An ice manufactory.

Monument Types and Dates

ICE WORKS (Post Medieval - 1540 AD to 1900 AD)
Evidence EXTANT BUILDING

Description and Sources

Description

Ice factory. 1900-1 with extension factory of 1907-8 and later alterations. By WF Cott, consulting engineer, for the Great Grimsby Ice Company Limited. Red brick with blue brick and ashlar dressings. Slate and glazed roofs; copper domes on north unit. Chamfered blue brick plinth. Approximately rectangular on plan, comprising 2 linked factories separated by a passage (formerly carrying a railway), cutting across at an angle. Factory has frontages to Gorton Street, Fish Dock Road, Stuart Wortley Street and the railway passage. Massive girder construction supports 6 rows of refrigeration tanks on 2 floors complete with machinery for producing blocks of ice. The factory was converted to electricity in 1933 and compressors remain in the Compressor Room. The northern unit has been partly cleared but massive girder construction remains.
Built following the amalgamation of the Grimsby Ice Company with the Co-operative Ice Company. The factory supplied ice for fish packing.
The overhead gantries on the Gorton Street front carried ice into the dockside fish-landing building opposite. Ceased production 1990. The Grimsby Ice Company was one of Grimsby's leading fishing companies, and also built the Fisher Lads' Home, for fishing apprentices, in Connamore Road (qv). This ice factory illustrates Grimsby's importance as the world's foremost fishing centre in the earlier C20. This building is understood to be the earliest remaining ice factory in the UK. Furthermore it is believed to be the sole survivor, complete with its machinery, from this period (1).
Southern range of garages and offices, including the possible structure of the late 19th century engineering works, was demolished sometime between 2000 and 2001 (2&3).

Sources

- (1) Scheduling record: List of Buildings of Special Architectural or Historic Interest.. 699-1/7/121
- (2) Aerial Photograph: Aerial Photo - General. Vertical Aerial Photographs. 2000.
- (3) Aerial Photograph: Aerial Photo - General. Vertical Aerial Photographs. 2001.

Location

National Grid Reference

Centroid TA 2780 1067 (MBR: 150m by 131m) TA21SE Dispersed

Administrative Areas

Civil Parish (2005) Grimsby
Historic Township (Great Grimsby)

Designations, Statutes and Scorings

Associated Legal Designations

Listed Building (II*) - 479276 THE GRIMSBY ICE FACTORY INCLUDING RAILINGS Active DNL262

Finds - None recorded

Associated Events/Activities - None recorded

HER Number 0350/5/0 - MNL16

Site Name Royal Dock

HER Number	Old SMR/HER Number	Record Type
0350/5/0	17270	Monument

Site Name Royal Dock

Summary A dock built in 1846-52 by the Manchester, Sheffield and Lincolnshire Railway.

Monument Types and Dates

DOCK (Late Post Medieval - 1712 AD to 1900 AD)
Evidence STRUCTURE

Description and Sources

Description

The dock, covering about 20 acres, measures 2200 feet (670 metres) north to south and 500 feet (152 metres) east to west, with a pair of locks (one now disused) at the seaward end, flanking the jetty on which the Dock Tower stands (qv). The dockside quays were built using the same vaulted construction system that John Rennie had devised and employed for the first time in 1798-9 at Grimsby Haven Dock, and which is still visible beside the disused Grimsby Haven Lock (qv). Here it is on a much larger scale. Behind the 8-foot thick stone quay walls of the

Royal Dock are a series of semicircular brick arched vaults spanning 33 feet (10 metres) between brick piers on piled foundations, resembling a concealed viaduct, with the vaults extending 72 feet (22 metres) back at right angles from the quayside. The quay wall, 32 feet (9.75 metres) high, is pierced by smaller round-headed openings below water level in order to equalise water pressure between the dock and the vaults behind (3).

The engineer was J M Rendel and the basin covered about 20 acres (2).

Sources

- (1) Journal: The Lincolnshire Local History Society. Lincolnshire History and Archaeology. Volume 21. Wright N R. 1986. Great Grimsby - A Town of Fishermen. Page 68.
- (2) Book: Wright, N R. 1983. A Guide to the industrial archaeology of Lincolnshire including South Humberside. Page 17
- (3) Scheduling record: List of Buildings of Special Arcitectual or Historic Interest.. 479302

Location

National Grid Reference

Centroid TA 276 109 (MBR: 422m by 690m) TA21SE Dispersed

Administrative Areas

Civil Parish (2005) Grimsby
Historic Township (Great Grimsby)

Designations, Statutes and Scorings

Associated Legal Designations

Listed Building (II) - 479302	QUAYSIDE WALLS AT ROYAL DOCK	Active	DNL287
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Finds - None recorded

Associated Events/Activities - None recorded

HER Number 0350/9/0 - MNL17

Site Name NO.3 Fish Docks

HER Number	Old SMR/HER Number	Record Type
0350/9/0	17275	Monument

Site Name NO.3 Fish Docks

Summary

Monument Types and Dates

DOCK (Twentieth Century - 1901 AD to 2000 AD)
Evidence STRUCTURE

Description and Sources

Description

Built in several stages as the fishing industry, previously unknown in Grimsby, expanded (1). It eventually partly obliterated Fish Dock No.1 (2&3).

Sources

- (1) Book: Wright, N R. 1983. A Guide to the industrial archaeology of Lincolnshire including South Humberside. Page 18
- (2) Map: Ordnance Survey. Ordnance Survey Landline and Mastermap. Digital mapping.
- (3) Map: Ordnance Survey. 1888. Ordnance Survey First Edition 1:2500.

Location

National Grid Reference

TA 28400 10800 (point) TA21SE

Administrative Areas

Civil Parish (2005) Grimsby
Historic Township (Clee)
Historic Township (Great Grimsby)

Designations, Statutes and Scorings

Associated Legal Designations - None recorded

Finds - None recorded

Associated Events/Activities - None recorded

HER Number 0350/8/0 - MNL18

Site Name NO.2 Fish Docks

HER Number	Old SMR/HER Number	Record Type
0350/8/0	17274	Monument

Site Name NO.2 Fish Docks

Summary A dock built in 1876-77 specifically for the fishing trade.

Monument Types and Dates

DOCK (Late Post Medieval - 1712 AD to 1900 AD)
Evidence STRUCTURE

Description and Sources

Description

A dock built in 1876-77 and extended in 1897-1900 (1).

Sources

- (1) Book: Wright, N R. 1983. A Guide to the industrial archaeology of Lincolnshire including South Humberside. Page 18
- (2) Journal: The Lincolnshire Local History Society. Lincolnshire History and Archaeology. Volume 21. Wright N R. 1986. Great Grimsby - A Town of Fishermen. Page 68.

Location

National Grid Reference

Centroid TA 27993 10732 (MBR: 313m by 306m) TA21SE Dispersed

Administrative Areas

Civil Parish (2005)	Grimsby
Historic Township	(Great Grimsby)

Designations, Statuses and Scorings

Associated Legal Designations - None recorded

Finds - None recorded

Associated Events/Activities - None recorded

HER Number 0350/7/0 - MNL19

Site Name NO.1 Fish Docks

HER Number	Old SMR/HER Number	Record Type
0350/7/0	17273	Monument

Site Name NO.1 Fish Docks

Summary A dock built in 1855-57 specifically for the fishing trade.

Monument Types and Dates

DOCK (Late Post Medieval - 1712 AD to 1900 AD)
Evidence STRUCTURE

Description and Sources

Description

A dock built in 1855-57 and extended in 1866 (1).

The first fish market directly associated with the new docks was held on a pontoon floating in this dock (2).

Sources

- (1) Book: Wright, N R. 1983. A Guide to the industrial archaeology of Lincolnshire including South Humberside. Page 18
- (2) Journal: The Lincolnshire Local History Society. Lincolnshire History and Archaeology. Volume 21. Wright N R. 1986. Great Grimsby - A Town of Fishermen. Page 68.

Location

National Grid Reference

Centroid TA 28103 11067 (MBR: 282m by 370m) TA21SE Dispersed

Administrative Areas

Civil Parish (2005)	Grimsby
Historic Township	(Great Grimsby)

Designations, Statuses and Scorings

Associated Legal Designations - None recorded

Finds - None recorded

Associated Events/Activities - None recorded

HER Number 0348/6/0 - MNL20

Site Name Goods and Grain store at Royal Dock

HER Number	Old SMR/HER Number	Record Type
0348/6/0	17272	Building

Site Name Goods and Grain store at Royal Dock

Summary Goods and grain stores built by the Great Northern Railway company.

Monument Types and Dates

COLD STORE (Twentieth Century - 1901 AD to 2000 AD)

Evidence DOCUMENTARY EVIDENCE

GOODS SHED (Twentieth Century - 1901 AD to 2000 AD)

Evidence DOCUMENTARY EVIDENCE

GRAIN WAREHOUSE (Twentieth Century - 1901 AD to 2000 AD)

Evidence DOCUMENTARY EVIDENCE

Description and Sources

Description

Goods and grain stores built in the nineteenth century by GNR on the East side of Royal Dock. Now a cold store (1). Dated 1902. Dock elevation of 4 storeys in red brick with blue brick dressings and ground floor. Tall ground floor with blocked round-headed openings. Brick parapet with legend "GREAT NORTHERN RAILWAY GOODS AND GRAIN WAREHOUSE". 9 windows, centre single flanked by pairs, flanked by singles, segmental arches and bands at impost height, inset between paired plain brick pilasters. Windows mainly blocked, some glazing bars. 4 windows to gable end (2).

Sources

- (1) Book: Wright, N R. 1983. A Guide to the industrial archaeology of Lincolnshire including South Humberside. Page 18
- (2) Unpublished document: RCHME. c.1974. Historic Buildings Survey Report.

Location

National Grid Reference

Centroid TA 2770 1071 (MBR: 37m by 47m) TA21SE Dispersed

Administrative Areas

Civil Parish (2005)	Grimsby
Historic Township	(Great Grimsby)

Designations, Statuses and Scorings

Associated Legal Designations - None recorded

Finds - None recorded

Associated Events/Activities - None recorded

HER Number 0669/3/0 - MNL25

Site Name Grimsby Coastal Battery

HER Number	Old SMR/HER Number	Record Type
0669/3/0	8181	Building

Site Name Grimsby Coastal Battery

Summary A coastal battery initially built while the rear guns of the sand forts were being upgraded. Decommissioned at the end of the war.

Monument Types and Dates

ANTI AIRCRAFT BATTERY? (World War 2 - 1939 AD to 1945 AD)

Evidence CONJECTURAL EVIDENCE

COAST ARTILLERY SEARCHLIGHT (World War 2 - 1939 AD to 1945 AD)

Evidence DOCUMENTARY EVIDENCE

COASTAL BATTERY (World War 2 - 1939 AD to 1945 AD)

Evidence DOCUMENTARY EVIDENCE

COMMAND POST? (World War 2 - 1939 AD to 1945 AD)

Evidence CONJECTURAL EVIDENCE

OBSERVATION POST? (World War 2 - 1939 AD to 1945 AD)

Evidence CONJECTURAL EVIDENCE

Description and Sources

Description

The battery was constructed to provide cover of the Humber behind the Sand Forts while their rear guns were upgraded. It was paired with Spurn point battery as aircraft deterrents, being fired at full elevation to deter low flying. The battery was armed with two 6" Mk7 Guns on Mk3 mounting from naval stock in 1940. They were encased in concrete and steel emplacements and were supplemented by two 90cm CASLs (searchlights). It was originally manned by 318th Coat Battery RA but was later manned by the home guard as part of a winding down of the inner Humber defences (1). Built as an emergency battery. There was also a four inch gun at the Fish Docks, and one on Alexandra Dock (1). Armed with 2x 6inch BL VII (Naval) guns on 9th October 1942, and 2x 6 inch (Naval) guns on 27th September 1944. From 29th October 1940 until 13 January 1943 it was manned by 318 battery. On 27 March 1941 a special regiment manned it, followed by 513 regiment on 1 April 1941 and 545 regiment on 13 January 1943 (3). Visible on 1945 RAF aerial photography. The two main emplacements are shown along with a possible command post, observation tower, light anti-aircraft gun emplacements, or searchlight emplacements, and various hutting (4).

Sources

- (1) Book: J Dorman. 1990. Guardians of the Humber. Pages 38-39
- (2) Monograph: C S Dobinson. 2000. Twentieth Century Fortifications in England: Coastal Artillery, 1900-56: Text. Volume VI.1. Page 131
- (3) Monograph: C S Dobinson. 2000. Twentieth Century Fortifications in England: Coastal Artillery: Appendices. Volume VI.2. Pages 297-299
- (4) Aerial Photograph: Aerial Photo - General. 6034/106G/UK849: Part II. 28 Sep 45. F/12//PRDU

Location

National Grid Reference

TA 28500 11200 (point) TA21SE

Administrative Areas

Civil Parish (2005)	Grimsby
Historic Township	(Clee)

Designations, Statuses and Scorings

Associated Legal Designations - None recorded

Finds - None recorded

HER Number 0669/3/0 - MNL25
Site Name Grimsby Coastal Battery

Associated Events/Activities - None recorded

HER Number 0379/2/0 - MNL852
Site Name Fish Smokehouse, Cross Street

HER Number	Old SMR/HER Number	Record Type
0379/2/0	403	Building

Site Name Fish Smokehouse, Cross Street

Summary A late post medieval fish smokehouse with later additions.

Monument Types and Dates

SMOKE HOUSE (Late Post Medieval to Twentieth Century - 1712 AD to 2000 AD)
Evidence EXTANT BUILDING

Description and Sources

Description

The older section of the building, with the gable end on to Cross Street, existed in 1896 and was used for stores, with oil stored on the first floor. The smokehouses were added to this building after 1955. The section of the building facing Cross Street was built in the past decade, on a site previously used for ships stores, including oil, nets and drugs, and for fish freezing and offices in 1955. The smokehouses were added after 1955.

Materials - Brick with street fronts colourwashed and part rendered

Type - Fish-processing building type A; Smokehouse type 2

Height - 3 storeys and attic

Roof - Tile

Smokehouses - 11 smokehouses, located to side wall, brick walls, cowls (1).

Sources

- (1) Monograph: Kathryn Sather & Associates for English Heritage. 2002. Rapid Survey of Fish Smoking Houses and Associated Buildings of Hull and Grimsby.
- (2) Scheduling record: List of Buildings of Special Arcitectual or Historic Interest.. 699-1/7/141

Location

National Grid Reference

Centroid TA 27951 10956 (MBR: 20m by 26m) TA21SE Dispersed

Administrative Areas

Civil Parish (2005) Grimsby
Historic Township (Great Grimsby)

Designations, Statutes and Scorings

Associated Legal Designations

Listed Building (II) - 479325	FISH PROCESSING AND SMOKING FACTORY (KEITH GRAHAM LIMITED)	Active	DNL309
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Finds - None recorded

Associated Events/Activities

ENL146 Rapid Survey of Fish Smoking Houses and Associated Buildings of Hull and Grimsby (Event -

HER Number 0379/3/0 - MNL853

Site Name Fish Smokehouse (MTL), Fish Dock Road

HER Number	Old SMR/HER Number	Record Type
0379/3/0	404	Building

Site Name Fish Smokehouse (MTL), Fish Dock Road

Summary A fish smoke house built of brick.

Monument Types and Dates

SMOKE HOUSE (Late Post Medieval - 1712 AD to 1900 AD)

Evidence	EXTANT BUILDING
Main Building	BRICK
Material	

Description and Sources

Description

The building was built before 1896 and is documented as a herring curer from that date.

Materials - Brick, rendered apart from smoke house; colourwashed to Fish Dock Rd. front

Type - Fish-processing building type A; Smokehouse type 5

Height - 3 storeys

Roof - Gable roof covered in concrete tile

Smokehouses - 6 smokehouses, located in southwest corner of building, pyramidal roof covered with corrugated metal, 1 central cowl, 4 vents to each side (1).

Sources

- (1) Monograph: Kathryn Sather & Associates for English Heritage. 2002. Rapid Survey of Fish Smoking Houses and Associated Buildings of Hull and Grimsby. Page 14-15
- (2) Scheduling record: List of Buildings of Special Architectural or Historic Interest.. 699-1/5/118

Location

National Grid Reference

Centroid TA 27949 11038 (MBR: 16m by 14m) TA21SE Dispersed

Administrative Areas

Civil Parish (2005)	Grimsby
Historic Township	(Great Grimsby)

Designations, Statutes and Scorings

Associated Legal Designations

Listed Building (II) - 479268	MTL MEDAL FISHERIES FISH PROCESSING AND SMOKING FACTORY	Active	DNL254
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Finds - None recorded

Associated Events/Activities

ENL146 Rapid Survey of Fish Smoking Houses and Associated Buildings of Hull and Grimsby (Event -

HER Number 0379/4/0 - MNL855

Site Name Fish Processing & Smoke House, Henderson Street

HER Number	Old SMR/HER Number	Record Type
0379/4/0	406	Building

Site Name Fish Processing & Smoke House, Henderson Street

Summary A brick built fish smoking works.

Monument Types and Dates

SMOKE HOUSE (Late Post Medieval - 1712 AD to 1900 AD)

Evidence	EXTANT BUILDING
Main Building	BRICK
Material	

Description and Sources

Description

In existence by 1896 as a fish-curing house with two smokehouses located in the centre of the rear wall. Between 1917 and 1928 the building

was internally altered with nine smokehouses built to rear of the building. The front façade was rebuilt at approximately the same time. The

10th smokehouse was added after 1955

Materials - Red Brick

Type - Fish-processing building type A; Smokehouse type 2

Height - 2 storeys

Roof - Gable roof with concrete tile

Smokehouses - 10 smokehouses, at the rear of the building, pyramidal shaped separate stacks, with 6 cowls remaining and individual

wooden vents to rear, evidence of earlier vents in brickwork below stacks (1)

Sources

- (1) Monograph: Kathryn Sather & Associates for English Heritage. 2002. Rapid Survey of Fish Smoking Houses and Associated Buildings of Hull and Grimsby. Page 18-19

Location

National Grid Reference

Centroid TA 28027 10944 (MBR: 25m by 30m) TA21SE Dispersed

Administrative Areas

Civil Parish (2005)	Grimsby
Historic Township	(Great Grimsby)

Designations, Statutes and Scorings

Associated Legal Designations - None recorded

Finds - None recorded

Associated Events/Activities

ENL146 Rapid Survey of Fish Smoking Houses and Associated Buildings of Hull and Grimsby (Event -

HER Number 0379/5/0 - MNL856

Site Name Quality Fish Company, Henderson Street

HER Number	Old SMR/HER Number	Record Type
0379/5/0	407	Building

Site Name Quality Fish Company, Henderson Street

Summary A fish smoking works built of yellow bricks with red brick dressings.

Monument Types and Dates

SMOKE HOUSE (Late Post Medieval - 1712 AD to 1900 AD)
Evidence EXTANT BUILDING

Description and Sources

Description

The present building is an amalgamation of three sites. The southern narrow plot, site of the existing smokehouse, was used for boxes in 1896, with fish curing on the other two sites. The smokehouses were located to the northeast wall of the single storey central section. The northern section had two storeys. The present smokehouse was built between 1917 and 1928, but was vacant in March 1928. In both 1937 and 1955 the smokehouse was noted for fish on the first floor and boxes on the second floor. Between 1937 and 1955 the two smokehouses were removed and the buildings used as a fish warehouse with offices on the second floor of the northern section. A small first floor area, used as offices, was created out of the previous smokehouse in the central section. Materials - Yellow brick with red brick dressings, part colourwashed and rendered
Type - Fish-processing building type B; Smokehouse type 2
Height - 1 and 2 storeys
Roof - Concrete tiled roof to lower section, corrugated metal roof to smoking tower
Smokehouses - 4 houses, timber vents, corrugated metal roof above vents, tile roof to gable, external stairs (1).

Sources

- (1) Monograph: Kathryn Sather & Associates for English Heritage. 2002. Rapid Survey of Fish Smoking Houses and Associated Buildings of Hull and Grimsby. Page 20-21

Location

National Grid Reference

Centroid TA 28047 10917 (MBR: 26m by 38m) TA21SE Dispersed

Administrative Areas

Civil Parish (2005) Grimsby
Historic Township (Great Grimsby)

Designations, Statutes and Scorings

Associated Legal Designations - None recorded

Finds - None recorded

Associated Events/Activities

ENL146 Rapid Survey of Fish Smoking Houses and Associated Buildings of Hull and Grimsby (Event -

HER Number 0379/6/0 - MNL857

Site Name Fish Curers, Lingard Monk Street

HER Number	Old SMR/HER Number	Record Type
0379/6/0	408	Building

Site Name Fish Curers, Lingard Monk Street

Summary A fish smoking works.

Monument Types and Dates

SMOKE HOUSE (Late Post Medieval - 1712 AD to 1900 AD)
Evidence DOCUMENTARY EVIDENCE
SMOKE HOUSE (Twentieth Century - 1901 AD to 2000 AD)
Covering Building IRON
Material
Evidence EXTANT BUILDING
Main Building BRICK
Material

Description and Sources

Description

The existing building dates from between 1937 and 1955. It is described as a fish curer with concrete floors and a steel truss roof in 1955, with sawdust storage in a section to the West and offices in a section to the East. The previous existing building on the site was also a fish curer and appears on the 1896 insurance survey with 7 smoke houses, expanding to 10 smokehouses by 1937. Materials - Brick Walls
Type - Fish-processing building type A; Smokehouse type 2
Height - 2 Storeys
Roof - Single pitch covered in corrugated metal
Smokehouses - 13 smokehouses in one row, located to rear of building, roof covered in corrugated metal, individual chambers, wooden vents to each smokehouse, 4 cowl (1).

Sources

- (1) Monograph: Kathryn Sather & Associates for English Heritage. 2002. Rapid Survey of Fish Smoking Houses and Associated Buildings of Hull and Grimsby. Page 22-23

Location

National Grid Reference

Centroid TA 28039 10919 (MBR: 20m by 28m) TA21SE Dispersed

Administrative Areas

Civil Parish (2005) Grimsby
Historic Township (Great Grimsby)

Designations, Statutes and Scorings

Associated Legal Designations - None recorded

Finds - None recorded

Associated Events/Activities

ENL146 Rapid Survey of Fish Smoking Houses and Associated Buildings of Hull and Grimsby (Event -

HER Number 0379/7/0 - MNL858

Site Name Fish Curing & Smokehouses, Maclure Street

HER Number	Old SMR/HER Number	Record Type
0379/7/0	409	Building

Site Name Fish Curing & Smokehouses, Maclure Street

Summary A fish smoking works.

Monument Types and Dates

BLACKSMITHS WORKSHOP (Late Post Medieval to Twentieth Century - 1712 AD to 2000 AD)

Evidence DOCUMENTARY EVIDENCE

SMOKE HOUSE (Twentieth Century - 1901 AD to 2000 AD)

Covering Building METAL

Material

Evidence EXTANT BUILDING

Main Building BRICK

Material

Description and Sources

Description

The existing building was built between 1896 and 1905 and was originally used as a smithy, part of a wider cluster of buildings used by

Letten Bros. The central skylights is noted. The building was converted for fish smoking between 1917 and 1928 with the addition of 10

smokehouses within the building. By 1955 only 7 smokehouses were in use and the building is described as having concrete floors and a

steel truss roof.

Materials - Brick walls, rendered South and West

Type - Fish-processing building type A; Smokehouse type 2

Height - 2 Storey

Roof - Gable covered with corrugated metal

Smokehouses - 7 smokehouses, in one row at rear of building, 7 pyramidal shaped separate stacks, with 6 cowls remaining and individual

wooden vents to rear (1).

Sources

- (1) Monograph: Kathryn Sather & Associates for English Heritage. 2002. Rapid Survey of Fish Smoking Houses and Associated Buildings of Hull and Grimsby. Pages 24-25

Location

National Grid Reference

Centroid TA 27848 10830 (MBR: 20m by 19m) TA21SE Dispersed

Administrative Areas

Civil Parish (2005) Grimsby

Historic Township (Great Grimsby)

Designations, Statutes and Scorings

Associated Legal Designations - None recorded

Finds - None recorded

Associated Events/Activities

ENL146 Rapid Survey of Fish Smoking Houses and Associated Buildings of Hull and Grimsby (Event -

HER Number 0379/15/0 - MNL867

Site Name G H Abernethie Limited, Sidebottom Street

HER Number	Old SMR/HER Number	Record Type
0379/15/0	418	Building

Site Name G H Abernethie Limited, Sidebottom Street

Summary A fish smoking works.

Monument Types and Dates

SMOKE HOUSE (Late Post Medieval - 1712 AD to 1900 AD)

Covering Building TILE

Material

Evidence EXTANT BUILDING

Main Building BRICK

Material

Description and Sources

Description

The site has been in use for fish curing since at least 1896 with the southernmost group of three smoke houses in existence. The additional

11 smokehouses, in two ranges, were built between 1917 and 1928. The third floor of the westernmost section of the building is described as

offices in 1955.

Materials - Red brick, street front part rendered and colour washed

Type - Fish processing building type A; Smokehouses types 2 & 3

Height - 2 and 3 storeys

Roof - Irregular hipped and gable covered with tiles

Smokehouses - 12 houses exist, 3 present in use, brick walls, timber vents and cowls (1).

Sources

- (1) Monograph: Kathryn Sather & Associates for English Heritage. 2002. Rapid Survey of Fish Smoking Houses and Associated Buildings of Hull and Grimsby. Page 42-43

Location

National Grid Reference

Centroid TA 27939 10956 (MBR: 20m by 16m) TA21SE Dispersed

Administrative Areas

Civil Parish (2005) Grimsby

Historic Township (Great Grimsby)

Designations, Statutes and Scorings

Associated Legal Designations

Listed Building (II) - 479324	FISH PROCESSING AND SMOKING FACTORY (GH ABERNETHIE LIMITED)	Active	DNL308
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Finds - None recorded

Associated Events/Activities

ENL146 Rapid Survey of Fish Smoking Houses and Associated Buildings of Hull and Grimsby (Event -

HER Number MNL1302

Site Name Manchester, Sheffield and Lincoln Railway - Cleethorpes to Barton

HER Number	Old SMR/HER Number	Record Type
MNL1302	8823	Monument

Site Name Manchester, Sheffield and Lincoln Railway - Cleethorpes to Barton

Summary A railway line opened in 1848 with the Cleethorpes extension added around 1863.

Monument Types and Dates

RAILWAY (Late Post Medieval - 1712 AD to 1900 AD)

Evidence STRUCTURE

RAILWAY CUTTING (Late Post Medieval - 1712 AD to 1900 AD)

Evidence EARTHWORK

RAILWAY EMBANKMENT (Late Post Medieval - 1712 AD to 1900 AD)

Evidence EARTHWORK

RAILWAY JUNCTION (Late Post Medieval - 1712 AD to 1900 AD)

Description and Sources

Description

Opened on 1st March 1848 as part of a transpenine route from Manchester via Sheffield. The New Holland to Grimsby section was the first

to be opened, on the same day as the Grimsby to Louth section of the East Lincolnshire Railway. The rest of the line to Manchester was

opened over the next thirteen months (1).

The Grimsby to Cleethorpes branch was opened around 1863 (2).

The line has many minor branches in the dock area, a major junction in Grimsby where it connects to the East Lincolnshire Railway line to

Louth and a major junction starting in Habrough where it splits to run to Immingham/New Holland and Lincoln/Doncaster (3)

Sources

- (1) Book: S Bennett and N Bennett. 1988. An Historic Atlas of Lincolnshire. Page 112
- (2) Scheduling record: List of Buildings of Special Arcitectual or Historic Interest.. Cleethorpes Railway Station - 164468
- (3) Map: Ordnance Survey. 1888. Ordnance Survey First Edition 1:2500.

Location

National Grid Reference

Centroid TA 22097 11364 (MBR: 17120m by TA21SW Dispersed 5035m)

Administrative Areas - None recorded

Designations, Statutes and Scorings

Associated Legal Designations

Local Listed Building - PAR037	Garden Street Signal Box	Active	DNL461
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Finds - None recorded

Associated Events/Activities - None recorded

HER Number 1000/12/0 - MNL1484

Site Name Probable Fishing Trawler

HER Number	Old SMR/HER Number	Record Type
1000/12/0		Maritime

Site Name Probable Fishing Trawler

Summary A dismantled vessel scuttled along side the sea wall of North Quay.

Monument Types and Dates

WRECK (Twentieth Century - 1901 AD to 2000 AD)

Evidence RUINED STRUCTURE

Evidence WRECKAGE

Description and Sources

Description

The remains of a steel hulled vessel next to the sea wall of the North Quay of Grimsby Docks. The remains appear to be the lower sections

of a fishing trawler in relatively good condition and with little corrosion. The remains are separated into twelve sections or compartments,

presumably to do with ballast and flotation (1).

Aerial photography appears to show the vessel part way through a salvaging operation as the upper deck is still mostly intact but has clearly

been stripped; there is also a large pile of what appears to be salvaged material next to the vessel on the dock wall. The vessel has

presumably been scuttled next to the sea wall in order to strip it for salvage (2).

Sources

- (1) Unpublished document: Site Visit. 11.12.2008
- (2) Aerial Photograph: Aerial Photo - General. Meridian Airmaps Ltd Photo No. 37.76.145 taken on 06.06.1976

Location

National Grid Reference

Centroid TA 2828 1133 (MBR: 32m by 18m) TA21SE Dispersed

Administrative Areas

Non Parish Area Humber Estuary - Intertidal

Designations, Statutes and Scorings

Associated Legal Designations - None recorded

Finds - None recorded

Associated Events/Activities - None recorded

HER Number 0348/26/0 - MNL1954
Site Name Fish Shed, Hutton Road

HER Number	Old SMR/HER Number	Record Type
0348/26/0		Monument

Site Name Fish Shed, Hutton Road
Summary A fish shed marked on the ordnance survey 1887-9 25 inch to 1 mile maps.

Monument Types and Dates

SHED (Late Post Medieval - 1712 AD to 1900 AD)
Evidence DOCUMENTARY EVIDENCE

Description and Sources

Description

A fish shed marked on the ordnance survey 1887-9 25 inch to 1 mile maps (1).

Sources

(1) Map: Ordnance Survey. 1888. Ordnance Survey First Edition 1:2500.

Location

National Grid Reference

Centroid TA 28010 10868 (MBR: 112m by 68m) TA21SE Dispersed

Administrative Areas

Civil Parish (2005)	Grimsby
Historic Township	(Great Grimsby)

Designations, Statuses and Scorings

Associated Legal Designations - None recorded

Finds - None recorded

Associated Events/Activities - None recorded

HER Number 0348/31/0 - MNL1975
Site Name Shop and Warehouse at Corner of Fish Dock Road, Hutton Road and Cross Street

HER Number	Old SMR/HER Number	Record Type
0348/31/0		Monument

Site Name Shop and Warehouse at Corner of Fish Dock Road, Hutton Road and Cross Street
Summary Brick built shop and warehouse with slate tile roof.

Monument Types and Dates

BUTCHERS SHOP (Late Post Medieval - 1712 AD to 1900 AD)
Covering Building SLATE
Material
Evidence EXTANT BUILDING
Main Building BRICK
Material

WAREHOUSE (Late Post Medieval - 1712 AD to 1900 AD)

Description and Sources

Description

Former butcher's shop and warehouses. 2 builds: 1890 range at corner of Fish Dock Road and Hutton Road, and earlier C19 adjoining range at corner of Hutton Road and Cross Street, with C20 alterations. 1890 range incorporating butcher's shop for Cosalt Ltd (the Grimsby Coal, Salt and Tanning Company), probably designed by HC Scaping of Grimsby. Red brick with ashlar dressings. Welsh slate roof. Low Countries Baroque style. Occupies corner site, with canted angle (1).

Sources

(1) Scheduling record: List of Buildings of Special Architectual or Historic Interest.. 479269

Location

National Grid Reference

Centroid TA 2789 1092 (MBR: 36m by 28m) TA21SE Dispersed

Administrative Areas

Civil Parish (2005)	Grimsby
Historic Township	(Great Grimsby)

Designations, Statuses and Scorings

Associated Legal Designations

Listed Building (II) - 479269	SHOP AND WAREHOUSE AT CORNER OF FISH DOCK ROAD, HUTTON ROAD AND CROSS STREET	Active	DNL255
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Finds - None recorded

Associated Events/Activities - None recorded

HER Number 0348/32/0 - MNL1976

Site Name Tom Taylor and Son's Shop and Warehouse

HER Number	Old SMR/HER Number	Record Type
0348/32/0		Monument

Site Name Tom Taylor and Son's Shop and Warehouse

Summary A clothes shop and warehouse built of brick with stone façade and slate roof.

Monument Types and Dates

SHOP (Late Post Medieval - 1712 AD to 1900 AD)

Covering Building SLATE

Material

Evidence EXTANT BUILDING

Main Building BRICK

Material

WAREHOUSE (Late Post Medieval - 1712 AD to 1900 AD)

Evidence EXTANT BUILDING

Description and Sources

Description

Fishermen's' outfitters shop and warehouse. Late C19 for J Bygrave Ltd. Red brick front with stone dressings to Fish Dock Road; yellow brick front with red brick dressings to Surtees Street. Welsh slate roof. Fish Dock Road front in Low Countries Baroque style (1).

Sources

(1) Scheduling record: List of Buildings of Special Arcitectual or Historic Interest.. 479270

Location

National Grid Reference

Centroid TA 2791 1096 (MBR: 15m by 14m) TA21SE Dispersed

Administrative Areas

Civil Parish (2005)	Grimsby
Historic Township	(Great Grimsby)

Designations, Statutes and Scorings

Associated Legal Designations

Listed Building (II) - 479270	TOM TAYLOR AND SONS SHOP AND WAREHOUSE	Active	DNL256
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Finds - None recorded

Associated Events/Activities - None recorded

HER Number 0348/33/0 - MNL1977

Site Name Quality Fish Company

HER Number	Old SMR/HER Number	Record Type
0348/33/0		Monument

Site Name Quality Fish Company

Summary A fish smoking and processing site built of brick with concrete tile roof.

Monument Types and Dates

SMOKE HOUSE (Late Post Medieval - 1712 AD to 1900 AD)

Covering Building TILE

Material

Evidence EXTANT BUILDING

Main Building BRICK

Material

Description and Sources

Description

Fish processing and smoking factory. Late C19. Yellow brick with red brick dressings, part colourwashed and rendered. Concrete tiled roof to lower section, corrugated metal roofs to smoking tower. Front to Henderson Street, rear to Brown Street (1).

Sources

(1) Scheduling record: List of Buildings of Special Arcitectual or Historic Interest.. 479281

Location

National Grid Reference

Centroid TA 2799 1100 (MBR: 8m by 7m) TA21SE Dispersed

Administrative Areas

Civil Parish (2005)	Grimsby
Historic Township	(Great Grimsby)

Designations, Statutes and Scorings

Associated Legal Designations

Listed Building (II) - 479281	FISH SMOKING FACTORY (QUALITY FISH COMPANY)	Active	DNL267
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Finds - None recorded

Associated Events/Activities - None recorded

HER Number 0348/34/0 - MNL1978

Site Name Peterson's Fish Processing and Smoking Factory

HER Number	Old SMR/HER Number	Record Type
0348/34/0		Monument

Site Name Peterson's Fish Processing and Smoking Factory

Summary Fish processing and smoking factory.

Monument Types and Dates

SMOKE HOUSE (Late Post Medieval - 1712 AD to 1900 AD)

Covering Building TILE
Material

Evidence	EXTANT BUILDING
Main Building	BRICK
Material	

Description and Sources

Description

Fish processing and smoking factory. Late C19 and early C20, with later alterations. Red brick with concrete tile roof (1).

Sources

(1) Scheduling record: List of Buildings of Special Arcitectual or Historic Interest.. 479282

Location

National Grid Reference

Centroid TA 2797 1103 (MBR: 14m by 18m) TA21SE Dispersed

Administrative Areas

Civil Parish (2005)	Grimsby
Historic Township	(Great Grimsby)

Designations, Statuses and Scorings

Associated Legal Designations

Listed Building (II) - 479282	PETERSONS FISH PROCESSING AND SMOKING FACTORY	Active	DNL268
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Finds - None recorded

Associated Events/Activities - None recorded

HER Number 0348/58/0 - MNL2042

Site Name Engineering Works, Fish Dock Road

HER Number	Old SMR/HER Number	Record Type
0348/58/0		Monument

Site Name Engineering Works, Fish Dock Road

Summary An engineering works marked on the ordnance survey 1906-8 25 inch to 1 mile maps.

Monument Types and Dates

ENGINEERING WORKS (Twentieth Century - 1901 AD to 2000 AD)

Evidence DOCUMENTARY EVIDENCE

Description and Sources

Description

An engineering works marked on the ordnance survey 1906-8 25 inch to 1 mile maps (1).

Sources

(1) Map: Ordnance Survey. 1906-8. Ordnance Survey Second Edition 1:2500.

Location

National Grid Reference

Centroid TA 27746 10647 (MBR: 77m by 93m) TA21SE Dispersed

Administrative Areas

Civil Parish (2005)	Grimsby
Historic Township	(Great Grimsby)

Designations, Statuses and Scorings

Associated Legal Designations - None recorded

Finds - None recorded

Associated Events/Activities - None recorded

2.7 Consultation

In order to ensure that various views are represented in the Conservation Statement and where possible a consensus emerges as regards the significances, issues and overall vision supported with conservation policies - the owners, local authority and English Heritage were be consulted and provided with a draft from which to comment. In addition Great GIFT and the Grimsby, Cleethorpes and District Civic Society were consulted via the distribution of questionnaires. These groups have been engaged with the site over the past months and / or years and have a keen interest in its future. The following individuals / organisations have been consulted August – September 2010:

- Andrew Findlay, Senior Estate Surveyor, Grimsby & Immingham, Associated British Ports.
- Catherine Dewar, Historic Areas Advisor, English Heritage.
- Gill Osgerby, Urban Renaissance Project Officer, North East Lincolnshire Council.
- Liz Mayle, Conservation Officer, North East Lincolnshire Council.
- Grimsby, Cleethorpes and District Civic Society via Pauline Lee, Secretary.
- Great Grimsby Ice Factory Trust (Great GIFT) via Vicky Hartung, Chairman.
- Society for Lincolnshire History and Archaeology, represented by Chris Lester¹.

The section below highlights the key points that emerged during consultation with the Civic Society, Great GIFT and the Society for Lincolnshire History and Archaeology which is a supporter of the Great GIFT. Where a point was made several times, it may only be mentioned once for ease of reference.

2.7.1 Responses from Great GIFT, Grimsby, Cleethorpes & District Civic Society and Society for Lincolnshire History and Archaeology

Q1: Do you consider Grimsby Docks Ice Factory to be an important building and if so why?

All respondents answered positively, commenting that they regard the Ice Factory as an important building. Responses can generally be grouped into those that identify the importance of the historic processes and contribution to the fishing industry (and therefore economic development of Grimsby), responses that comment on the size and scale of the factory and responses that comment on the rarity of the building type and its machinery.

¹ A supporter of the Great GIFT, the SLHA promotes an awareness and knowledge of all aspects of the history and heritage of the historic county of Lincolnshire. They have over 600 members including institutional and overseas ones and their roots go back to 1844. The Industrial Archaeology Team has a particular interest in industrial buildings and has been concerned about the future of the Grimsby Docks Ice Factory for many years. In 2001 they organised an East Midlands regional conference in Grimsby entitled 'Fish and Ships' to which over 90 industrial archaeologists came from as far away as Northamptonshire. The Ice Factory was a key site on the dock tour and many delegates expressed their concern about the state of neglect in which it was found.

- *'The Ice Factory was an essential supplier to the trawler fleet, replacing ice imported from Norway which could not keep up with the fleet's development. It was the trawler fleet which made Grimsby what it was, the foremost fishing port in the world. Today this is reflected in a thriving food industry, a busy port and a large and diverse town. For these reasons it has a local and regional importance'. The Ice Factory is 'part of the towns Industrial Heritage', 'it was a hub for the central commercial activity of its immediate environment. It is an important manifestation of Victorian working practices on the Docks'. It was also considered to be part of the Victorian ingenuity and engineering prowess that made Grimsby "Great" and enabled it to develop into the one of the world's largest fishing ports, 'without ice the fish could not be transported across the country. Later ice was central to the continuation of deep sea fishing in the 1950s/60s'. One respondent noted the importance of fish itself to the national diet stating, 'fish & chips were a staple food in years gone by and in a very poor area such as Grimsby maintained some nutritional level for the working class'.*
- *'The Ice Factory, together with its machinery, is believed to be the only survivor of its period which is substantially complete, and a rare example of any ice factory in the United Kingdom. This adds to its importance, making it nationally important'. The Ice Factory 'was the world's largest'.*
- *Opinion on the importance of the building was divided. One respondent commented that 'The building itself is architecturally important but the effect is currently lost owing to its poor condition', another that 'It was, and has the potential to be again, an iconic building. It dominates the skyline on the approach to Grimsby'. In contrast other respondents stated that 'It is not so much the building but the industrial ice making heritage that is important' or 'it has no real architectural significance but... it played a crucial part in Grimsby becoming the biggest fishing port in the world' or 'unique machinery although I concede building relatively mundane'.*
- *'The machinery inside represents an important stage in the development of refrigeration processes'. It 'is the last surviving example of early 20th Century refrigeration equipment. This includes five massive J & E Hall four-cylinder compressors now laying silent and rusting, still in place in the decaying plant rooms'.*

Q2: In your opinion, is the Ice Factory of value to the local community or wider amenity / civic societies and if so why?

All but two respondents answered that the Ice Factory is of value (some noted the reasons above). Furthermore:

- A few questionnaires referred to its past value and that it was a monument to that past, *'the fish industry was central to employment...13,000 people were employed by the fishing industry'*. Other responses referred to its future potential.
- In terms of its value to the local community many responses noted its potential for reuse. The building *'has potential to affect the town's regional importance. The building is a landmark which should form the focus for the regeneration of the area in which it stands and its size is large enough to permit multiple uses'*. *'The Ice Factory could be the focal point for the regeneration of the whole docks/Freeman Street area with facilities for businesses such as meeting rooms, educational and community*

facilities, and public heritage facilities.' 'Our industrial heritage...reaffirms who we are and where we have come from. As we are no longer a manufacturing nation, this kind of industrial heritage gives an insight to younger generations of what it was like to work in a factory, 24/7 with heavy machinery/engineering and the dangers involved. The science and engineering behind making ice in such a massive scale is a worthy topic for any museum to cover'. Looking at the wider setting, one respondent commented that 'The Fish Dock area and associated marina must be preserved and developed for: - (1) heritage value to the local community (2) potential income & jobs'.

- 'To the local community it has the potential for future development of heritage, tourist and business resources. To wider amenity societies it has value as a practical illustration of the history of refrigeration engineering'.

Two respondents commented that the Ice Factory is not of value to the local community / wider amenity societies due to its 'current state'. One commented that with 'appropriate restoration it can become an important civic / cultural hub and a focus for the regeneration of the broader docks area'. The other that 'my gripe is that, as a listed building, it is of huge historical / architectural importance – then why have the owners been allowed to let it fall into such a state?'

Q3: What do you consider to be the main problems / issues regarding the site?

An overarching problem was considered to be finding a sustainable use (or uses) for the site. Perceived obstacles to this included:

- Condition - the very poor condition of the buildings, for example, 'the building is not an attractive building and is in a very bad state of repair. It also has bad local PR' and 'it will fall down unless action is taken'. A number of the respondents blamed ABP for the poor state of the buildings.
- Ownership and Use - the owners were also viewed as an issue. This was in part because the location within a working dock created problems of access (and parking) – 'this could be overcome by re-defining boundaries and making new access points for dock traffic' and in part because of distrust of ABP, for example 'ABP are systematically removing any fishing heritage from the site that they can'. Another respondent commented 'Grimsby / Immingham Docks is one of ABP's most financially successful ports. ABP's success is based on the previous 100 years investment. ABP should look at the Ice Factory as a positive asset and not a problem'. Another comment stated 'ABP who have consistently obstructed any type of resolution in the hope that if the building fell down through lack of maintenance, they could get planning permission to do what they wanted. However, they have reckoned without PPS5'.
- Machinery - limitations imposed by machinery – 'in order to optimize the potential usage of the building it may be necessary to remove some machinery; this will create difficulties on two counts. Firstly, the Listing includes the contents of the building. However, there is duplication and English Heritage should adopt a realistic approach by allowing duplicate items to be removed where necessary. Secondly, there will be technical issues because some of the machinery is integral with the structure of the building. These issues can surely be resolved with the accumulated amount of skill and expertise in handling old buildings which we have in England, together with the flair and imagination of our architects'.

The concerns noted above were raised in a number of questionnaires. Another comment, raised by a single respondent, stated that there is a problem of apathy and misinformation in the town. 'The majority believe that their tax money will be used – if it is then expect massive opposition'.

Q4: What would you like to see happen to the former Ice Factory?

All the comments focused on sustainable re-use and renovation of the site, many viewing it as an opportunity for a larger regeneration programme for the area in which it lies. Ideas included:

- Moving the Fishing Heritage Centre to the Ice Factory as it is a 'very appropriate setting. The move would also provide the opportunity to refresh the existing exhibits'.
- Museum - including a display relating to the story of the buildings and their impact on Grimsby with machinery cleaned and forming part of the display. The wider collection would have a maritime theme.
- Restoration of one of the production lines.
- Small display or archive storage by the refrigeration industry.
- Restaurant / café.
- Conference facilities / meeting rooms.
- Art gallery – this could 'become very significant if the regeneration of nearby buildings included provision for artists' studios and craft workshops'.
- House the Grimsby archives currently in the Town Hall, the photographic archive in the Library and the Cosalt archive.
- Small theatre / cinema.
- Indoor activity centre (ice skating, roller skating, wall climbing, BMX circuit etc).
- Flagship office for ABP or shipwrights.

It was noted by a number of respondents that the buildings are large enough to accommodate a variety of uses and therefore a variety of potential visitors. Some of these visitors were identified by a few respondents and included:

- Marina users (who currently lack a visitor centre, showers and restaurant). 'Something else that could be incorporated into the Ice Factory is a yachts chandler there is no yachting chandler in Grimsby...yachtsman will not come into the Marina even though it is cheap because of the lack of facilities they go to Hull and Bridlington so this is a golden opportunity to get this lucrative business'.
- School parties.
- The local and wider communities, several respondents indicated that sustainable uses should include attractions within a cultural / civic hub which will appeal to a wider, national and even international, audience.
- Businesses attracted to a conference centre.
- Visitors to the coastal resort at Cleethorpes only two miles away from Grimsby Docks may be attracted to a museum etc at the Ice Factory.

In terms of achieving these kinds of outcomes, one respondent stated 'firstly an emergency repair to make the building watertight and give us time to come up with plans & funding to do something with the building' and another stated 'my plan in a nutshell is to create a building preservation trust and take ownership of the building (99 year lease – peppercorn rent). Then as a trust attract funds to restore the property using only local labour (wherever possible) under the instruction of restoration experts – use restoration to teach – bricklaying,

engineering, surveying, joinery, roofing etc – (with the help of the local college)’. A number of others envisage a holistic approach tied in to the regeneration of the Kasbah area, possibly with the old pontoon overlooking the marina developed to house small businesses such as cafes, bars, shops and galleries.

Q5: Is there anything you would not like to see happen to the former Ice Factory?

All respondents answered that they would not like to see demolition (one respondent said that demolition would be preferable to leaving it to fall down but both were regarded as options that the respondent would not support). Thus answers included *‘the continued neglect leading to decay must not be allowed to continue’*. One respondent commented that *‘only select, duplicated, items of machinery should be removed so that the whole process can be represented’* and another *‘It would be a great opportunity to save some of the town’s lost heritage. We have very little left and the town deserves better if it is ever to recover from the loss of its fishing industry and move on’*. One respondent commented that they would not support the conversion of the Ice Factory into flats, a football stadium or a nightclub. Another comment was *‘I would not like to see ABP successfully apply for de-listing and have it demolished on safety grounds’*.

Q6: Do you have any memories of the buildings that you would like to share?

The answers given to this question are shown below:

‘I will never forget aged 9 on a school trip seeing and hearing the ice crushers working’.

‘I was a teenager living in Grimsby by the Alexander Dock in the 60’s. A period of great opportunity – Great Grimsby. Most of my friends parents worked on the docks in the fishing industry. A time of full employment...The fish docks were an integral part of the town. I have fond memories of cycling around the dock area. The area has a future. Given the will’.

‘Like most people who worked on the docks in the 1960’s it was just part of the furniture, never considered it would go or that the fishing industry would cease it is all quite sad.’

‘My father was a shipwright...I also used to go there...That is when the Fish Dock was working’.

‘I have had very little connection with the Docks at Grimsby so have no memories of the building working. In October 2009 I attended a conference in Blackpool about the demise of the Civic Trust and the formation of Civic Voice. In one of the lectures about what Civic Societies should be doing a large picture of the Ice Factory appeared on the screen, [Grimsby, Cleethorpes & District] Civic Society were applauded for their concern & actions to set up a working body to fight for the building’.

Q7: Do you have any other comments?

The following provide a selection of comments:

‘The urgency of the situation cannot be over-emphasised. The building continues to decay and every winter increases the risk of structural failure’.

‘Current economic situation represents a good opportunity for selecting practical rather than over-ambitious solutions’.

‘If Grimsby genuinely wants to become a national hub for the offshore renewable sector it maybe needs to make a statement that reflects this to the wider UK audience’.

‘Something needs to be done with this building or it needs to be knocked down – the second worst option is for someone to restore it and it not be viable and then left to decay again. To make it succeed it needs to be taken out of the hands of politicians and be made self sufficient otherwise it will become a political foot ball. I believe the current trust have mentioned “Tate Grimsby” which is a ridiculous idea and will never work – it needs to involve the wider community to give it any chance of survival’.

‘Money obviously is the key...ABP somehow or other must be brought “on side”’.

‘Grimsby is a very run down town with very little pride in itself...This is a fantastic opportunity to push Grimsby into the heritage spotlight and give us something to show to the rest of the UK’.

‘Do not take the Ice Factory in isolation. There are several listed buildings surrounding the Ice Factory. As well as the European protected smokehouses. Could this be a conservation area? A world heritage site?’.

2.7.2 Responses from specialists in the Refrigeration Industry

‘It is easy to forget how reliant we are on mechanical refrigeration for our continued existence on this planet. Refrigeration is essential for food storage and distribution, indispensable in many industrial processes, and is vital in modern medicine for the preservation of organs for transplant, blood plasma storage and production and storage of drugs. The J & E Hall refrigeration compressors still in place at the Grimsby Ice Factory are a reminder of the early years of refrigeration. They are the oldest of their type still in existence and amongst the largest ever made. As a record of the history of the modern world, the ice-making equipment within the Grimsby Ice Factory is an essential and irreplaceable artefact’ (Neil Everitt – Editor, Air Conditioning Review).

‘The former Grimsby Ice Company factory is an irreplaceable piece of our industrial refrigeration history. The factory is an early link in the supply chain that insures safe, high quality perishable foods to developed countries. It is a reminder of the continuing effort to provide a secure “cold chain” in the developing world where the loss of harvested fruits, vegetables, meat and fish often exceeds 40% due to the lack of proper handling and continuous refrigeration. The Grimsby Ice Factory is the only remaining building of its type in the UK. It houses Britain’s last surviving samples of early 20th century refrigeration equipment. If the building is demolished, it will deprive us of a rare opportunity to see this equipment in its original setting’ (Bruce Badger – President International Institute of Ammonia Refrigeration)

‘The ice factory buildings are of interest because they offer an insight into the heart of the industrial activity in the docks in their heyday. The installation represents the peak of development of large industrial ice making equipment and includes the only known surviving examples of large size J & E Hall ammonia compressors of this type. From this point on the refrigeration industry developed smaller, faster running machines and following the depression of the 1930s and the Second World War the fishing industry moved away from shore-made ice towards large freezer trawlers’ (Guy Hundy, Technical Consultant - Emerson Climate Technologies Ltd and past President of the Institute of Refrigeration).

'The factory is unique in Britain, and in Europe as far as I know, in containing original refrigeration plant of such an age, of large size and in its original position. Because of this I believe it is vital that this plant is preserved or at least a portion of it.

Trying to be practical, preserving the whole building in its present form and with all plant left in place is highly unlikely to happen. However, using the compressor house as a site to preserve samples of the machinery and perhaps one freezing tank associated filling and crushing machinery in place would free up the largest part of the building for development.

I am not an architect or structural engineer, but it seems to me that the extensive and very heavily constructed steel frame, designed to carry the massive loads of several huge tanks full of cold brine and lots of machinery, could therefore be easily adaptable to further use. The external brick façade looks repairable and with a new roof fitted the building would then contain a large space suitable for virtually any possible future use. If the plant cannot be retained in its original building then it should be preserved somewhere else.

I am a refrigeration engineering consultant and worked in the refrigeration industry for around 35 years now. I recall visiting the Ice Factory during my time training at Grimsby College in the early 1970's and the impression of age and size and quality it made on me has remained with me. During my working life I have seen many examples of early refrigeration plant replaced or scrapped and now there is very little left that dates from before 1970. It is unique and therefore valuable.

This makes the Ice Factory an ideal location for a 'Museum of Refrigeration' which could be centred on the compressor room. Refrigeration is an essential for modern western life. Imagine what things would be like without it. Milk would have to be delivered and used the same day – it would not keep longer in warm weather. Any meat would have to be locally produced and killed and seasonal and would 'go off' quickly. There would be no bananas in the country. Fruit would have to be seasonal and grown close enough to be delivered unrefrigerated. Beers and wines would be quite different and warm! Mc.Donalds and their like could not exist. Imagine working in a modern glass covered skyscraper without air-conditioning. It is possible that supermarkets would not exist. We would not be able to move gas around the country to supply households and businesses. All foods would be considerably more expensive.

Refrigeration is taken for granted by the general public and is not something that stimulates interest but is essential and could be made interesting in a centre illustrating the development of refrigeration could be informative and interesting if presented correctly. The many Grimsby food industries form one of the most intensive uses of refrigeration plant in the country and I would hope they and others within the country would be willing to contribute [financially]' (Alan Jackson, bja Refrigeration Consulting Engineers Ltd).

2.7.3 Summary from Consultations

It is clear from the consultations with specialists and civic societies in the local area that there is great concern amongst those interested in heritage assets about the future of the Ice Factory. The site is regarded as important because of its role in the history of the fishing industry in Grimsby, the rarity of the machinery, or the landmark nature of the buildings. Whilst aware of a number of the key challenges – funding, sustainable uses and access issues – a variety of potential future uses were proposed and could be taken forwards to explore the viability of these in greater depth.



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