THE GRIMSBY ICE COMPANY FACTORY

FISH DOCK ROAD, GRIMSBY GREAT GRIMSBY NORTH EAST LINCOLNSHIRE

ARCHITECTURAL INVESTIGATION REPORT NBR INDEX NO. 99155 NGR: TA 2780 1007

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SUMMARY

Grimsby grew to be one of the foremost east coast fishing towns in England after the arrival of the railway in 1848, its first dedicated fish dock being built in 1855-7, followed by others in 1876-7 and 1934. The growth of the fishing industry was matched by that of the ice trade which provided the ice used to preserve fish at sea and during its journey to its internal destination. Local sources of ice were inadequate for the burgeoning fish trade, and in 1857 the first regular cargoes of Norwegian ice arrived in the port. A number of factories manufacturing ice were subsequently established in the town, the largest being the Ice Factory built in 1900-1901 by the Grimsby Ice Company, an amalgamation of the Great Grimsby Ice Company and the Grimsby Co-operative Ice Company.

The Ice Factory of 1900-1901 is brick built and combines restrained classical detailing on its display elevations with more utilitarian walls of pier and panel construction. Its principal component was a large two-storey building which contained two tank rooms, in which ice was manufactured, and an associated ice store, on each floor. A steam plant, compressor house and condenser room were among the buildings attached to it, and ancillary buildings, including offices, stores, workshops and garages, were built nearby. Extra ice-making capacity was provided in an extension containing two tank rooms built north of the original factory in 1907-10. The extension, stylistically similar to the original factory, took its power and other services from the existing building.

In 1930-33 the Ice Factory was modernised, the steam plant and existing compressors being scrapped and replaced by electrically-driven compressors. An initial output of 300 tons of ice per day in 1901, raised to 500 tons in 1910, and to 720 tons in 1926, was now 1100 tons. A new compressor was installed in the early 1950s, which is probably when one of the ice stores was converted into another tank room. Ice making subsequently declined and successive tank rooms were closed. A flake ice plant was installed in the original boiler house, but the Ice Factory finally closed in 1990, the ice tanks and all their associated fittings still remaining in the original tank house.

HISTORY

THE FISHING INDUSTRY AND ICE TRADE OF GRIMSBY

Fish has been predominant in the economy of Grimsby since the medieval period, but it was not until the coming of the railway in 1848, and the subsequent construction of new docks, that the town and the fishing industry grew and established Grimsby as one of the foremost east coast fishing towns.¹ The Manchester, Sheffield & Lincolnshire Railway built the Royal Dock, a commercial dock, in 1849-52, fishing smacks using it and the Old Dock, the former Haven, until the company's new dock, No 1 Fish Dock, was built in 1855-57. This new dock was enlarged in the late 1860s and the company built No 2 Fish Dock in 1876-77, extending it in 1897-1900. No 3 Fish Dock was built in 1934.

In the first year of the use of No 1 Fish Dock the tonnage of fish dispatched by rail more than doubled, and landings of fish soared thereafter. The growth of the fish trade was matched by that of the ice trade which provided the ice needed to preserve fish at sea and during its journey to its internal destination. A thatched ice-house was built beside No 1 Fish Dock at the time of the latter's construction, the Deep Sea Fishing Company advertising for carters, labourers and bagmen to collect pond-ice. Local sources, however, could not provide the quantity of ice required by the burgeoning fish trade, and in March 1857 two barques arrived with the first of the regular cargoes of Norwegian ice. A number of factories manufacturing artificial ice were subsequently established in Grimsby, the largest being built on Fish Dock Road in 1900-1901 by the Grimsby Ice Company, an amalgamation of the Great Grimsby Ice Company and the Grimsby Co-operative Ice Company. Imports of Norwegian ice had risen steadily during the late 19th century, rising in the 1890s from 61,406 tons in 1891 to 84,325 tons in 1899. However, after reaching a peak of 86,685 tons in 1900, this steadily fell as a result of the existence of the ice factories, and in 1912 it was just 6,600 tons.³ The ice factories in turn gradually closed, the Grimsby Ice Company factory closing in 1990, replaced by UK Ice (Grimsby) Ltd. on North Wall.

ICE FACTORY, GRIMSBY ICE COMPANY

The Grimsby Ice Company's factory on Fish Dock Road was built next to No 2 Fish Dock in 1900-1901, opening on 9 October 1901, and it was extended between 1907 and 1910. The consulting engineer was W F Cott.⁴ The factory was modernised in 1930-33 to meet the increasing demands for ice, the reason for further changes in the early 1950s. It closed in 1990.

The Ice Factory, 1900-1910

The original ice factory was built in 1900-1901 on land bounded by Fish Dock Road on the west and Gorton Street on the east, its obliquely-set northern boundary running up to the edge of a branch line of the Manchester, Sheffield & Lincolnshire Railway, now the site of Parker Street. The main building, which housed the ice-making



Fig 1. General view from south east of Fish Dock No 2, fish quay and the Ice Factory. (NMR: AA006349)

machinery, was built across the road from No 2 Fish Dock (Fig 1), and occupied a substantial trapezoidal block of land at the north end of the site, much of which is shown clear of buildings on the 1887 Ordnance Survey map⁵ and on a map of 1899,⁶ but was occupied by the ice factory by 1906 (Fig 2).⁷ To the south, where the land is bounded by Murray Street, the evolution of site is less clear. In 1906 the buildings facing Fish Dock Road, with William Street at their rear, are identified on the map as an 'Engineering

Works', although a site plan of 1954 (Fig 17) shows that the Ice Company later moved into some of them, one being a calcium and machinery store. Behind this range, the 1954 plan shows that all the buildings on the land bounded by William Street, Fox Street, Gorton Road and Murray Street were then in the ownership of the Ice Company, functioning as a repair shop, engineers store, joiners shop, garages, etc. The buildings correspond well with those depicted on the 1906 map, and many may have been built by the ice company, particularly the turreted offices at the



Fig 2. 1906 OS map.

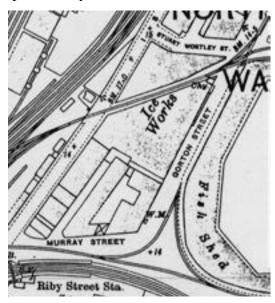


Fig 3. 1933 OS map.

junction of Murray Street and William Street. The extension of 1907-10 was built immediately north of the railway line, now Parker Street, on a triangular site which was bounded on the north and west by Stuart Wortley Street and Fish Dock Road. The land was fully occupied by single-storey sheds erected by the Great Grimsby Coal Salt and Tanning Company Limited, that to the west being a smithy and store whose plans were sanctioned in 1894, that to the east being an extension approved in August 1897. Both these buildings were demolished in order to build the ice factory extension, which is shown occupying their site on the 1933 map (Fig 3). 10

No designs for the Ice Factory of the Grimsby Ice Company are known to have survived, but a description of it published in 1933,11 after the completion of a modernisation programme, includes some information about its early years. The original building had plant with an output of 300 tons of ice per day, the equipment consisting of four ice tanks run in conjunction with four Pontifex horizontal doubleacting ammonia compressors driven by vertical triple-expansion engines. Six Lancashire boilers generated steam, and condensers of the atmospheric type, seated on the roof of one of the buildings and utilising dock water for circulation, were also part of the original plant. The four ice tanks were of two types, two for 'can' ice and two for 'cell' ice. In 'can' ice tanks, the ice was formed in separate vessels immersed in brine, the vessels being afterwards transferred to a warm bath for a short period in order to release the ice, whereas in 'cell' system the ice was formed in a number of fixed cells in the walls of which the brine was circulated, the ice being released by replacing the brine flow by warm water. The latter system required that a hook be frozen into each block of ice for lifting purposes, each block being separately handled. 'Cell' ice was clear, which was of no particular importance for the fishing industry, but it was no doubt the more labour intensive aspect of the system which led to the two 'cell' ice tanks being converted to 'can' tanks, one in 1914, the other in 1926. In order to meet an increasing demand for ice, the factory was extended in 1907-10, two additional 'can' ice tanks with an output of 200 tons of ice per day being installed in this extension. The new tanks were served by two Linde double-acting ammonia compressors driven by vertical Cole, Marchant and Morley steam engines supplied with steam from the original boilers which were equipped with superheaters at this time. The surface area of the condensers was increased to meet the needs of the additional compressors. The two plants had a nominal capacity of 500 tons of ice per day, but by increasing the revolutions of the compressors, and by the addition of the last 'can' tank in 1926, an output of 720 tons per day was achieved.

Alterations to the Ice Factory in 1930-33

The increasing demand for ice from the trawler fleet led the Grimsby Ice Company to decide, in 1930, to scrap the steam plant and existing compressors entirely and to replace them with modern high-revolution electrically-driven compressors. At the same time, in a programme of work which was completed in 1933, they modernised the factory, modifying the cooling surfaces in the tanks, and the brine and ammonia circulation, all in accordance with the most recent practice. 12 The new plant was required to give an output of 1,100 tons of ice per day utilising the existing number of cans. Four compressors of the four-cylinder vertical type were installed in the compressor house, and on leaving them the ammonia gas passed into a heat exchanger on the roof of the building and removing the superheat from the gas, the released heat being utilised for thawing the ice from the cans. After leaving the heat exchanger the ammonia gas entered two oil separators and then two sets of atmospheric condensers which were cooled by circulating water from the docks. One condenser formed part of the old plant, the other being new but replacing an existing condenser; both were on the roof of the building. From the condensers the ammonia, now converted to a liquid, passed to each individual ice tank. The contract for the refrigerating equipment was entrusted to Messrs J and E Hall Limited of Dartford, Kent, and for the electrical

equipment to Messrs The Metropolitan-Vickers Electrical Company Limited, Manchester.

The factory had six ice tanks, Nos 1-4 in the original building and Nos 5 and 6 in the extension, and during the modernisation of the plant the evaporation coils in five of the six tanks were replaced, those in the sixth, the most recent, merely being altered. The evaporator coils were arranged in trunks along the side of each tank, the brine in which was circulated through the trunk and then amongst the cans in the tank, absorbing the heat from the water in the cans and turning it to ice. Tanks Nos 1 and 2 on the first floor of the original tank house were located directly above tanks Nos 3 and 4 on its ground floor, the steel stanchions which supported the steel beams carrying the upper tanks separating each of the lower tanks into three independent units. Tanks Nos 1 and 2 each had 37 rows of 45 cans per row, each of the three sections of tank No 3 had 36 rows of 14 cans per row, and each of the three sections of tank No 4 had 36 rows of 16 cans per row. Tanks Nos 5 and 6, respectively on the first and ground floors of the later tank house, each had 39 rows of 42 cans per row. The cans in tanks Nos 3 and 4 were of 2.5 cwt. capacity each, the remainder being all of 2 cwt. capacity. In all six tanks each row of cans was supported in a frame. The freezing process, as described in 1933, continued unchanged in principle until the closure of the ice factory, 13 and it began with drawing the frame, whose ice cans had just been lifted and emptied of their blocks of ice, to the filling end of the tank room. The frame was carried in a travelling crane which spanned the full width of the tank. The cans were then filled with water, derived from wells on the site, by swinging down a row of nozzles connected to a corresponding row of measuring vessels, the frame then being lowered until the cans were submerged in the brine, rollers on the frame ends resting on rails running the full length of the tank. The frame with its filled cans occupied the space between the previously inserted frame and a long pusher bar at the extreme end of the tank, and except for this space and a corresponding one at the other end, the whole of the tank was covered by a wooden floor. The pusher bar was connected to two screwed shafts which, driven by electric motors, pushed the frame which had just been inserted, together with all the frames in front of it, towards the other end of the tank. At the completion of its stroke the pusher gear was automatically reversed and the frame at the other end of the tank, its cans now full of ice, was in a position to be lifted out by the crane which had traversed the length of the building to accomplish this task. The cans, still in the frame, were then lowered into the thawing tank immediately beyond the main tank for about three minutes, after which the frame was lifted out and dropped into a tipping cradle which was swung over until the ice blocks slid out of the cans down a short incline on to a distribution platform. The empty cans in their frames were then returned to the other end of the tank to be refilled, the passage through the tank having taken about 27 hours. The blocks of ice, once on the distributing platform, were either passed directly to a crusher in the factory or were delivered down a chute to one of two crushers located above the trawler guays of No 2 Fish Dock. From the crushers the broken ice was delivered into the trawlers. The great bulk of ice manufactured was used by the fishing fleet, but a certain amount, crushed in the factory, was used for the land transport of fish and for other purposes.

The later history of the Ice Factory

In the early 1950s, in response to the yet greater demand for ice by the trawler fleet, a new compressor room was created in an existing building fronting Fish Dock Road¹⁴ and the last of three wells was sunk on the site. It is at this time that No 7 tank room was created in the first-floor ice store, as is shown on the 1954 site plan. The subsequent decline in the size of the fishing fleet led to less demand for ice, Nos 5, 6 and 7 tank rooms being taken out of use, the machinery in the first two being removed in 1976. The Ice Factory closed in 1990, replaced by the two flake ice machines worked by UK Ice (Grimsby) Ltd in their premises on North Wall.

ARCHITECTURAL DESCRIPTION

The Grimsby Ice Company's Ice Factory was built immediately west of No 2 Fish Dock, its buildings at their fullest extent bounded by Fish Dock Road, Stuart Wortley Street, Gorton Street and Murray Street, and bisected by Parker Street, in origin the line of the Manchester, Sheffield & Lincolnshire Railway. The buildings were further divided by Fox Street and William Street. Figure 16 is a block plan which shows the buildings which survived in 2000, Figures 17 and 18 being plans of 1954 and after 1976.

THE BUILDINGS OF 1900-1901

The original buildings of the Ice Factory, erected in 1900-1901, were built south of the railway line which ran to the Fish Docks along what is now Parker Street. At their north end, occupying a trapezoidal-shaped plot of land running up to the railway line, was the ice production block, a large two-storey building which contained the tank rooms and associated ice stores and had buildings which contained the steam plant, condensers and compressors attached to its north and west sides. Ancillary buildings further south, which included offices, stores, workshops and garages, are likely to have originated at this time but have all been demolished.



Fig 4. Original Ice Factory. Gorton Street elevation of tank house and ice store. (NMR: AA006353)

The tank rooms, which together form the tank house, and the associated ice stores, are all part of the same large two-storey brick-built structure. The tank house, which contains tanks rooms Nos 1-4, occupies the greater part of this building. It is rectangular in plan and has elevations to Gorton Street and Fox Street on the east and south, with ice factory buildings built against its other sides. It has a slated, double-gabled roof which has roof lights in its slopes and a pair of short, louvred ventilators on each ridge. The elevation to Gorton Street (Fig 4), through which ice originally, as

later, left the building, was treated as a display elevation. It has been much altered, but above a blue-brick plinth, topped by shallow full-length staging level with the access doorways, its red-brick front has two four-bay wide pedimented gable fronts, each flanked by pilaster strips. The central pair of pilaster strips link at the top and support a clock tower which originally had a projecting clock face and a slated pyramidal roof. Each gable front is divided by piers into four shallow recessed bays which rise through two storeys, the outer bays with round-arched heads with keystones with moulded brick heads, the wider inner ones with similarly detailed segmental-arched heads. The inner bays originally had full-width segmental-arched ground-floor doorways with round-headed windows in the flanking bays and in all

four first-floor bays. 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 L^{TD}', while the gables are treated as pediments with keyed-in oculi in their tympanums and moulded brickwork supporting stone coping. Stone ball finials have been lost from each gable apex. The central clock tower, square in plan, has sunk-panelled angle pilasters at the front and a deep, moulded brick cornice. The two timber brackets which project forward originally supported a clock, but both it and the original pyramidal roof have been lost.

The side elevation of the tank house to Fox Street (Fig 5) is more utilitarian in its detailing than that to Gorton Street. Fourteen bays long, the three at the east end stepped out around an internal ice stage, it is of pier and panel construction, the round-headed ground and first-floor windows with their stone sills all set

within the recessed panels. The panels have chamfered brick bases and stepped brick tops, the wall head above having moulded brick eaves.



Fig 5. Original Ice Factory. Fox Street elevation of tank house with rear of 1950s compressor room on left. (NMR: AA006345)

The windows have been variously altered, as has the only original doorway in the elevation, in the west return wall of the projecting three bays at its east end. A wide opening inserted in the first floor of the south face of this projection linked with the upper floor of a now-demolished building to its south.

The north and west walls of the tank house are shared with other parts of the ice factory and are largely internal: they have the same basic structure with thickened piers which alternate with thinner walling. The west gable-end walls each have square-headed windows close to their apex.

The interior of the tank house has two floors, the upper one open to the roof. The ground floor contained Nos 3 and 4 tank rooms, Nos 1 and 2 tank rooms being on the first floor. The form of the interior was dictated by the need to support the heavy iron tanks on the first floor as well as the central gutter between the two roofs, and a row of full-height steel stanchions rise to the underside of the gutter, brackets riveted to their sides supporting the inner ends of the steel beams which carry the first-floor tanks as well as the distribution platform east of the tanks. The outer ends of these steel beams were set in cast-iron boxes in the walls of the building. On the Fox Street and Gorton Street elevations these boxes have end plates with corner bolts, the plates cast with the initials 'G G I C^O L^D' for the Great Grimsby Ice Company Limited. In both ground-floor tank rooms they were also supported from below by two rows of steel stanchions which in consequence separated each of the lower tanks into three independent units. On the first floor there was a single tank in each tank room, each of which was a large uninterrupted space spanned by thirteen roof trusses of triangulated angle-iron construction, the iron T-shaped or rectangular in section



Fig 6. Original Ice Factory. Ground floor of tank room, from NE. (NMR: AA006371)



Fig 7. Original Ice Factory. Tipping cradles and distribution area on ground floor of tank room. (NMR: AA006374)



Fig 8. Original Ice Factory. First floor of tank house from NE. (NMR: AA006384)

according to whether it was in compression or tension. The six individual tanks on the ground floor and the two larger ones on the first floor each had their own sets of nozzles to fill their cans, their own travelling cranes to lift the frames of cans, and their own tipping cradles (Figs 6-8). The I-section steel girders on which the travelling cranes ran are supported on castiron brackets which are either bolted to the outside walls or to the steel stanchions, according to their position. On the Fox Street elevation pairs of double-bolted narrow rectangular iron plates secure the ground-floor brackets and deener rectangular plates with four corner bolts secure those on the first floor. Internally the first-floor brackets down the side walls also sit on projecting corbel blocks. The nozzles, tanks and tipping cradles on the first floor differ from those on the ground floor and appear to belong to a refitting undertaken in the early 1960s. Designs for an ice tank and ice tip or cradle were prepared by J & E Hall of Dartford in July 1960 and were stamped by the Ice Company's Engineer's Office in July 1961.¹⁵ The guide rails of the travelling

crane, and the crane itself, are made of steel bearing the name 'LANARKSHIRE STEEL COY LTD SCOTLAND' and the symbol and name of 'BRITISH STEEL'. After being frozen, the ice was tipped out on to inclined timber decking and thence to the distribution platforms along the east end of the building. The nature of the original fittings here is uncertain: there are now crushers with revolving drums set with spiked teeth, bucket elevators, and chutes running across to the Fish Dock. The chutes, which run from the first floor of the building, were first installed as part of the remodelling undertaken in the early 1930s.

The distribution platforms of the tank house extend as landings along the east end of **ice stores** which are attached to its north side on both its ground and first floors. The three-bay wide front wall of the landing area towards Gorton Street (Fig 4) is in the

style of the adjacent tank house frontage: the blue brick plinth continues on, as does the loading stage. Three shallow recessed bays with round-arched heads rise through two storeys, the central one with a ground-floor doorway, the remainder fenestrated. The wallhead, recently rebuilt, had a blind parapet in the 1930s, fronting condensers set on a flat roof. The north return wall has a semicircular window at first-floor level, squeezed in above the slope of the roof of the adjacent boiler house



Fig 9. Original Ice Factory. Ground-floor ice store. (NMR: AA006377)

and lighting the upper landing area. Inside, Nos 1 and 2 ice stores on the ground and first floors have blind walls. No 1 ice store retains the coils of cooling pipes along its south and west walls (Fig 9), and across the ceiling, as well as the remains of the conveyor used to move ice along the room. No 2 ice store was transformed into No 7 tank room some time after 1954.

The compressors of the original ice factory, as well as of those added after its extension in 1907-10, were steam driven, the steam being generated in a boiler house built along Gorton Street, north of the combined tank house and ice store. The **boiler** house, its interior stripped out when the site converted to electric power in the early



Fig 10. Original Ice Factory. Boiler house and site of chimney from NE with tank house and ice store beyond. (NMR: AA006354)

1930s, is a tall single-storey building with an eight-bay long wall (Fig 10) facing Gorton Street built of red brick in pier and panel construction, over a blue brick plinth. The angled north-west end wall to the railway, now Parker Street, lacks any panels. The two bays at the south end of the Gorton Street elevation incorporate a wide vehicle entrance, spanned by a steel girder, which must have given access to a storage place for coal. The six Lancashire boilers which the boiler house originally contained must have occupied the remaining six

bays, five of which are lit from tall round-headed windows in the front wall. The boilers must have been fired from the east, their exhaust gases passing along flues at their west ends, perhaps via an economiser, into the chimney which stood in the north-east corner of the boiler house. The roof of the boiler house, which is slated, has a louvred 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 north-west end wall, supporting the hip.

The **chimney** stood at the north-east corner of the boiler house. Demolished after the modernisation programme of the early 1930s, the bounding wall of the boiler house indicates that it had a square base.

The **compressor house**, which backs on to the west end wall of the tank house and ice store, is a tall single-storey building (Fig 11) which runs along Fish Dock Road and returns down the side of the railway line, now Parker Street. Its outer walls are built of red brick, in pier and panel construction, over a blue brick plinth. Both walls are five bays long,

every bay, except the wider ends bays of the Fish Dock Road elevation having windows at two levels, the lower flat headed, the upper round headed. The exceptional wider end bays each have large round-headed windows, one with a doorway cut into it, below oculi. The interior of the compressor house (Fig 12), none of its machinery original, has walls lined with white glazed bricks above a brown-glazed dado, and the piers in its outer walls rise to substantial sandstone blocks which support the ends of eleven steel beams (seven

box girders and four I-section beams over the shortest spans) which support a flat roof which formerly carried a substantial block of condensers.



Fig 11. Original Ice Factory. Exterior of compressor house from NW. (NMR: AA006358)

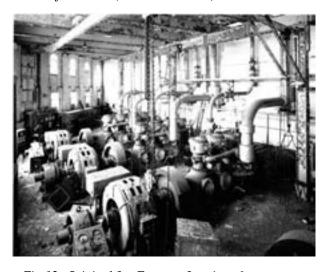


Fig 12. Original Ice Factory. Interior of compressor house. (NMR: AA006363).

A series of conjoined, irregularly-shaped **rooms** infill between the boiler house and the compressor house and contain pumps and a water tank. One is specifically called the condenser room. Their walls are lined with white-glazed bricks.

The **ancillary buildings** south of the ice-production block just described have all been demolished. It cannot be certain that they were all originally part of the Ice Factory, but they are shown on the 1906 map (Fig 1) and the site plan of 1954 (Fig 17) indicates that they then included a repair shop, engineers' store, joiners' shop and fitting shop as well as garages, a canteen, mess room and offices. The offices, identified as 'B. O. T. OFFICES', seem to have been sublet at this date, but are known to have been two storeyed with a polygonal, slate-roofed turret on the corner of Murray Street and William Street.

THE EXTENSION OF 1907-1910

The extension of 1907-10 was built north of the railway line, now Parker Street, on a triangular site bounded on the north and west by Stuart Wortley Street and Fish Dock Road. It was built to provide extra icemaking capacity, contained a twostorey tank house with offices and stores contrived around it, and took steam for power and other services from enhanced facilities within the original Ice Factory. It is built of brick with slated roofs, like original factory, the and



Fig 13. Ice Factory extension from NE, overlooking Stuart Wortley Street. (NMR: AA006356)

stylistically very similar, its elevations incorporating tall round-headed recesses and walls of pier and panel construction (Fig 13).

The tank house is two storeys high and contains tank rooms Nos 5 and 6 on its first and ground floors respectively. The tank rooms are rectangular, but because of the irregular shape of the site, access platforms and storage areas extend out to the site boundary on the north and west sides, presenting less than regular external elevations. The north-east gable-end wall of the tank house, which rises above the loading bay which abuts it, is three bays wide with a corner turret housing a cast-iron spiral staircase beneath its copper-covered dome. The first-floor round-headed recesses and windows of this elevation are repeated on the three-bay long return elevation down Stuart Wortley Street, two of the ground-floor bays of which contain wide roundheaded opening which act as loading bays. The twenty-bay long elevation to the former railway, now Parker Street, is of pier and panel construction, two levels of windows necessarily lighting the tank rooms, but the seven-bay elevation to Fish Dock Road is composite in appearance, containing motifs from all the other elevations. The five tallest bays, the central three under a gabled pediment with a keyed-in oculus and above a frieze painted with the name 'THE GRIMSBY ICE COMPANY L^{TD}', fronts a storage area and later ground-floor office, the lower two bays beyond an access area



which inside houses a cast-iron spiral staircase.

The machinery within the tank rooms was removed in 1976, but the basic structure survives (Fig 14). Steel stanchions run along its north side, between it and the storage area, supporting the ends of the box

Fig 13. Ice Factory extension. Ground floor of tank house from SW. (NMR: AA006359)

girders which supported the first-floor ice tanks as well as the ends of the roof trusses over both buildings. Brackets bolted to the stanchions, and through the outer south wall, support the runners of travelling cranes on both floors of the tank house, the roof of which has triangulated angle-iron trusses constructed of lengths of L-section steel. The steel runners bear the name 'CARGO FLEET ENGLAND'. The ground floor retains the grid of steel beams which supported the floor, and below it three separate concrete-lined pits which contained the brine tanks. The roof over the tank house continues on over the first-floor storage area which opens off its west end. The original use of the ground floor at this end, now two floors of offices, is uncertain since its fenestration has been altered. The storage area north of the tank house, which runs up to both Stuart Wortley Street and Fish Dock Road, is a simple full-height space with pitched roofs set at right angles to the tank house and supported on timber king-post trusses.

East of the tank house most of the rest of the site is occupied by an internal **loading** bay with a wide opening off the street and lit by four high-level windows above it. The tip of this end of the site had a bricklayers' store on the ground floor and offices over in 1954.

ALTERATIONS IN 1930-33 AND LATER

The modernisation of the Ice Factory in 1930-33 affected its machinery and fittings more than its fabric. The conversion of the factory to electric power enabled the boilers to be scrapped, their seating and flues removed, and the associated chimney to be demolished. In 1954 the boiler house was a garage with a repair bay and paint shop at one end, as well as an iron store which opened into the condenser room. The site of the chimney was occupied by lavatories. The garage subsequently became a flake ice plant and electricians' store. The insertion of four new compressors in the compressor house (Fig 12) involved the insertion of a steel girder framework to support the two cranes needed for the maintenance of the new machines, and the insertion of a guide rail above their motors to enable them to be maintained. The insertion of the guide rail led to the alteration of an external window, and the pipes associated with the new compressors cut some of the original glazed white bricks. An office in the corner of the compressor house may date from the early 1930s, the building to its south west the becoming the Switch Room with the Chief Engineer's and Electrician's offices above it. Two floors of offices in the west end of the 1907-10 extension may be part of this 1930s work: their front windows show some signs of alteration, and certain internal fittings are of this date.

In the early 1950s a new compressor room was built next to the building which included the Switch House. A single front wall was built across the Fish Dock Road facades of both buildings, but only across the rear of the new building. The front elevation (Fig 11) has a blue brick base, the main walling being in red brick, and two wide and tall windows which have a continuous concrete sill and are each six lights wide by three high. The rear elevation is more utilitarian, with a ground-floor doorway and first-floor window. The interior (Fig 15) is tall, rising to the ceiling. The compressor survives, as do some other fittings.



Fig 15. Interior of 1950s compressor room from SW. (NMR: AA006394)

Over the years the Gorton Street elevation of the original tank house and ice store was subjected to a number of changes, most of them involving the alteration of existing doorways and the insertion of openings to take the conveyors which carried the ice to the fish dock.

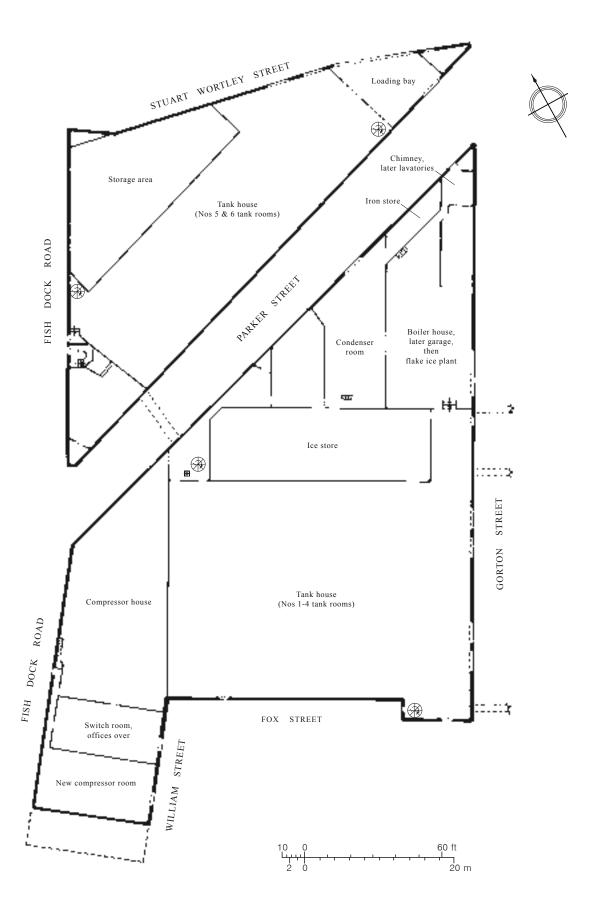


Fig 16. Block plan of surviving buildings, May 2000.



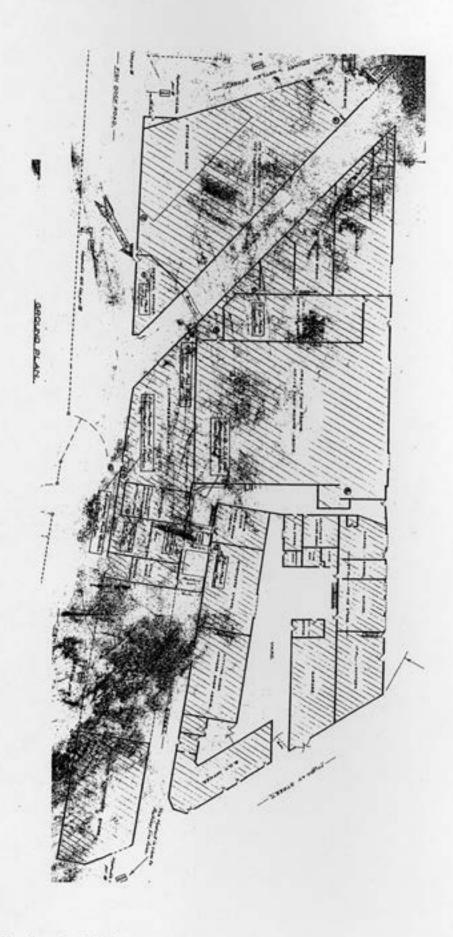
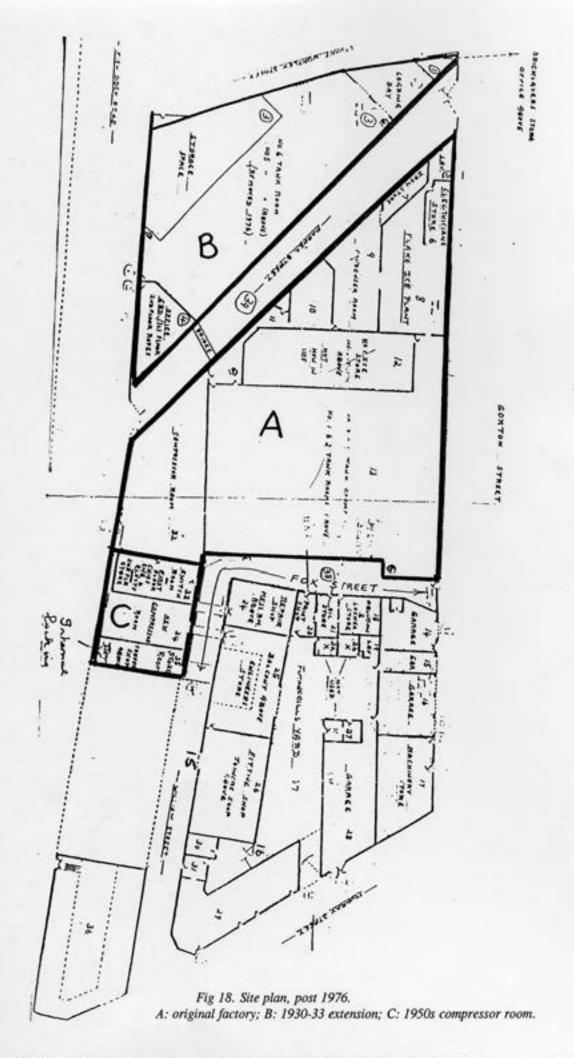


Fig 17. Site plan, dated 1954.



NOTES

¹Historical information, unless otherwise referenced, is derived from Edward Gillett, A History of Grimsby (Hull, 1970), esp 230-5, 264; Neil R Wright, A guide to the Industrial Archaeology of Lincolnshire including South Humberside, 17-18; David Kaye, The Book of Grimsby. The story of borough, town and port (Buckingham), 1981), 84-5; David Morton, 'The Grimsby Ice Factory. Report', (1995). Thanks are due to Bryon Caley, Estate Manager, Associated British Ports, for arranging access to the buildings, and to him and Garry Crossland for making historical information and plans available.

2 Kelly's Directory of Lincolnshire (London, 1900), 232.

3 Kelly's Directory of Lincolnshire with the City of Hull (London, 1913), 247.

Department of National Heritage, Listed Building description, amended August 1993; Kaye 1981, 85; Anon, 'Ice-making plant at Grimsby Fish Dock', Engineering News, 16 June 1933, 647.

Ordnance Survey 1:2500, Lincolnshire, Sheet XXII.7, surveyed 1887, published 1889.

⁶ Plan of Great Central Railway Company's Docks and Property at Grimsby. 1899.

Ordnance Survey 1:2500, Lincolnshire, Sheet XXII.7, revised 1906, published 1908.

⁸ Extent of the Grimsby Ice Co's Premises. The Grimsby Ice Co. Ltd. Fish Docks, Grimsby. Drawing No 207E. Date 26-9-54.

⁹ Grimsby Borough Byelaw Plans. Copies made available by the Estates Department, Associated British Ports, Grimsby.

Ordnance Survey 1:2500, Lincolnshire, Sheet XXII.7, revised 1933, published 1933.

11 Anon 1933, 647-50 and plates.

12 Anon 1933, 647-50 and plates.

¹³ A copy of a video of the ice-making process at the factory, taken by Martyn Bullock in July 1990, immediately before its closure, is held by the Estates Department of Associated British Ports in Grimsby.

¹⁴ Grimsby Ice Co Ltd. Drawings, including Nos LE 7980, 55789-3 and 56437-3, all by J & E Hall Ltd of Dartford, indicate that work on the compressor room was planned and revised between 1950 and 1953.

¹⁵ Grimsby Ice Co Ltd. Drawings, including Nos 72760-3 and 72789 by J & E Hall Ltd of Dartford, and Nos 73029/60/1-3 by the suppliers, United Steel Structural Co Ltd, Frodingham Works, Scunthorpe, date to 1960 and 1961.