H&W LOGISTICS BASE
Technical Specifications

SERVICES
"Full list of Services"
- 415/440v Electricity
- 240v Electricity
- 110v Electricity
- Salt Water
- Fresh Water
- Compressed Air
- Gasses
- Floodlighting
- Perimeter fence & CCTV
- Security Control & ISPS cert.

OFFICES
Offices for up to 30 people
Each office has the following:
- Fully Furnished
- Telephones
- Internet access
- Access to conference room
- Access to a photocopier
- Access to a kitchen

WORKER AMENITIES
Amenities for Client Workers
- 80 in Building Dock Amenities (No.1)
- 120 in Building Dock Amenities (No.2)

The Irish Sea Projects are a substantial work volume in a relatively short period
- The distance from H&W to the Irish Sea planned offshore Windfarms is comparable to other ports
- Irish Sea Prevailing Weather conditions – the site conditions are more critical than the voyage conditions
- Port Access – No tidal, lock or other Restrictions
- Fast Vessel Loading – Pre-marshalling of goods and access to multiple cranes
- Goods in storage can be lifted from anywhere in the crane envelope
- With pre-planning H&W, BHC, the installer and client can develop improved solutions

Craneage
Gantry Cranes 2 x 840t
Tower Cranes 2 x 60t
1 x 17t
1 x 9t
Substantial Mobile Plant

Storage Areas
Dock Floor 23,656m²
BAA 24,080m²
East side of dock 12,555m²
Storage outside of Gantry Crane >60,000m²

Quaysides
East side of dock 270m
West side of dock 270m
Commissioning Quay 170m
Steel Wharf 120m
# QUAYSIDES

## Technical Specifications

### Commissioning Quay

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Serviced Quayside</td>
</tr>
<tr>
<td>Location</td>
<td>Outside Building Dock on east side</td>
</tr>
<tr>
<td>Length</td>
<td>170m</td>
</tr>
<tr>
<td>Draft</td>
<td>8.4m Draft (relative to Harbour Datum)</td>
</tr>
<tr>
<td>Craneage</td>
<td>1 x Kroll Tower Crane</td>
</tr>
<tr>
<td>Capacity</td>
<td>- 20t @ 19.2m, 9t @ 35m, 4t @ 70m</td>
</tr>
<tr>
<td>Services</td>
<td>“Full List of Services”</td>
</tr>
<tr>
<td></td>
<td>Save saltwater by temporary supply</td>
</tr>
</tbody>
</table>

### Steel Wharf

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Layby Quayside (unserviced)</td>
</tr>
<tr>
<td>Location</td>
<td>Outside Building Dock on west side</td>
</tr>
<tr>
<td>Length</td>
<td>120m</td>
</tr>
<tr>
<td>Draft</td>
<td>8.4m Draft (relative to Harbour Datum)</td>
</tr>
<tr>
<td>Craneage</td>
<td>None</td>
</tr>
<tr>
<td>Services</td>
<td>Fresh Water &amp; 415v electricity only</td>
</tr>
</tbody>
</table>

### East Quayside

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Serviced Quayside</td>
</tr>
<tr>
<td>Location</td>
<td>East Wall of Building Dock</td>
</tr>
<tr>
<td>Length</td>
<td>270m</td>
</tr>
<tr>
<td>Draft</td>
<td>6.0m when at quay</td>
</tr>
<tr>
<td></td>
<td>Vessels with draft &gt; 4.5m will have entry over sill governed by tide,</td>
</tr>
<tr>
<td></td>
<td>Vessels with &gt; 6.0m and &lt; 7.5m will require detailed consideration.</td>
</tr>
<tr>
<td>Gantry Cranes</td>
<td>Samson &amp; Goliath</td>
</tr>
<tr>
<td>Tower Cranes</td>
<td>East Henson BD2</td>
</tr>
<tr>
<td>Services</td>
<td>Full List of Services</td>
</tr>
</tbody>
</table>

### West Quayside

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
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</tr>
<tr>
<td>Location</td>
<td>West Wall of Building Dock</td>
</tr>
<tr>
<td>Length</td>
<td>270m</td>
</tr>
<tr>
<td>Draft</td>
<td>6.0m when at quay</td>
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<tr>
<td></td>
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<tr>
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</tr>
<tr>
<td>Gantry Cranes</td>
<td>Samson &amp; Goliath</td>
</tr>
<tr>
<td>Tower Cranes</td>
<td>West Henson BD3</td>
</tr>
<tr>
<td>Services</td>
<td>Full List of Services</td>
</tr>
</tbody>
</table>
### Storage Areas

#### Technical Specifications

<table>
<thead>
<tr>
<th>Covered Storage</th>
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<th>Covered Storage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Length</strong></td>
<td>325m &amp; 140m</td>
<td>200m</td>
<td>200m</td>
</tr>
<tr>
<td><strong>Breadth</strong></td>
<td>27m</td>
<td>140m</td>
<td>140m</td>
</tr>
<tr>
<td><strong>Useable Storage Area</strong></td>
<td>12,555m²</td>
<td>28,000m²</td>
<td>28,000m²</td>
</tr>
<tr>
<td><strong>Location</strong></td>
<td>East side of Dock</td>
<td>Landward side of Building Dock</td>
<td>Landward side of Building Dock</td>
</tr>
<tr>
<td><strong>Gantry Cranes</strong></td>
<td>Samson &amp; Goliath</td>
<td>Samson &amp; Goliath</td>
<td>Samson &amp; Goliath</td>
</tr>
<tr>
<td><strong>Tower Cranes</strong></td>
<td>East Henson BD2</td>
<td>East Henson BD2</td>
<td>East Henson BD2</td>
</tr>
<tr>
<td><strong>Services</strong></td>
<td>Full List of Services</td>
<td>Full List of Services</td>
<td>Full List of Services</td>
</tr>
<tr>
<td><strong>Loading Capacity</strong></td>
<td>50t Point load</td>
<td>50t Point load in concreted areas</td>
<td>50t Point load in concreted areas</td>
</tr>
<tr>
<td><strong>Point Load</strong></td>
<td>7.5t/m²</td>
<td>5.4t/m²</td>
<td>5.4t/m²</td>
</tr>
<tr>
<td><strong>UDL</strong></td>
<td>325m &amp; 140m</td>
<td>200m</td>
<td>200m</td>
</tr>
</tbody>
</table>

Your future projects will have larger numbers of Turbine and foundation sets and whilst H&W can easily accommodate the planned loading:

- In the event of delays the H&W logistics base can provide additional storage area and methods.
- In the event an element of the work is delayed, H&W can also accommodate out of sequence operations.
- Through BHC, H&W have access to substantial additional storage areas.

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**Building Dock Floor**

- **Length**: 267m, 92.96m
- **Breadth**: 92.96m, 23,656m²
- **Useable Storage Area**: Dry area of Building Dock
- **Location**: East dockside
- **Gantry Cranes**: East Henson BD2
- **Tower Cranes**: East Henson BD3
- **Services**: Full List of Services
- **Loading Capacity**:
  - **UDL**: 5.4t/m²
  - **Point Load**: 200t at any keel block position, 150t per foot, 75 Ton per foot

**BAA**

- **Length**: 200m
- **Breadth**: 140m
- **Useable Storage Area**: 28,000m²
- **Location**: Landward side of Building Dock
- **Gantry Cranes**: Samson & Goliath
- **Tower Cranes**: East Henson BD2, Stothert & Pitt BD6
- **Services**: Full List of Services
- **Loading Capacity**:
  - **UDL**: 7.5t/m²
  - **Point Load**: 50t Point load in concreted areas

**Covered Storage**

- >1,000m² of Covered Storage Area also available adjacent to area (subject to agreement)
H&W GANTRY CRANES
Technical Specifications

Samson & Goliath
Number of 2
Type Gantry Crane
Coverage BAA, Dock Floor Storage, East quayside storage

Lift Capacity
Total Lifting Capacity on Beam 840 Tons
Beam carries two trolleys:
Upper Trolley 2 Hoists A&B 2 x 300t at main hook*
Lower Trolley 1 Hoist C 1 x 300t at main hook*
* with current rigging each hoist is reduced to 267t from the operating hook.

Permitted Difference in Load between ‘A’ & ‘B’
Samson 300t
Goliath 150t

Height
Samson from crane-rail to beam 80m
Goliath from crane-rail to beam 70m
Hook height can go up to 5m below crossbeam

Main Hoists Speeds
Gear Step 1:
Hoist Loads from 0 – 300 T up to 3.0 mpm "(metres/minute)"
Gear Step 2:
Hoist Loads from 0 – 100t up to 8.4 mpm

Travel Speeds
Cross Travel:
Trolley speed at up to 20 mpm

Long Travel:
Travel along the rails at up to 30 mpm

Note: - All speeds are taken from manufacturers manuals.
Speeds are also dependent upon the following factors:
wind speed and direction, the total weight,
the rigging configuration & the type of operation being carried out.
TOWER CRANES
Technical Specifications

WES T HENSEN BD2
Coverage
West Dock Floor Storage, West quayside storage, West Quayside

Lift Capacity
Close Capacity
60 tons at 7 radius
60 tons at 23.8 radius
36.5 tons at 35 radius
25.5 tons at 45 radius
18.5 tons at 54.8 radius
17 tons at 57.4 radius

Capacity at max reach

Height
Height above rail level
58.4m

Hoisting Speed
Low Speed with 0 - 60t
up to 6mpm
High Speed with 0 - 20t
up to 18mpm

Travel Speed
Long Travel
40mpm

EAST HENSEN BD3
Coverage
East Dock Floor Storage, East quayside storage, East Quayside

Lift Capacity
Close Capacity
60 tons at 7m radius
60 tons at 25m radius
39 tons at 35m radius
27 tons at 45m radius
20 tons at 54.8m radius

Capacity at max reach

Height
Height above rail level
53.8m

Hoisting Speed
Low Speed with 0 - 60t
up to 6mpm
High Speed with 0 - 20t
up to 18mpm

Travel Speed
Long Travel
40mpm

STOTHERT AND PITT BD6
Gene
General
East Dock Floor Storage, East quayside storage, East Quayside

Lift Capacity
Close Capacity
9t at 40 m
5t at 55m

Capacity at max reach

Height
Height above rail level
53.8m

These speeds are valid under normal working conditions. (Wind up to 38m.p.h.)
Note: - All speeds are taken from manufacturers manuals.
Speeds are also dependent upon the following factors: - wind speed and direction, the total weight, the rigging configuration, the type of operation being carried out.
MOBILE PLANT
Technical Specifications

Transporters
SCHEUERLE SELF ELEVATING TRANSPORTER
Lift Capacity 260t
Dimensions 12.6m Long x 6m Wide
M.E.W.P. 1 x 135 ft
M.E.W.P. 1 x 125 ft
M.E.W.P. 2 x 86ft
Forklift 1 x 42t
Forklift 1 x 25t
Forklift 2 x 7t
Telehandler 2 x 4t
This list is for the Logistics Base Plant, our Ship repair and
Manufacture areas have further M.E.W.P.s and forklifts which
can be made available if required.

KEY DRAFTS & LEVELS

Entry to the building dock requires clearance over the dock Sill

Levels related to Harbour Datum (Admiralty Chart Datum)

| Rail (Goliath and Auxiliary) | +5.30M |
| Steel angle at cope | +5.25M |
| Sill (Dock Gauge Zero) | -4.91M |
| Dock floor at centreline | -6.43M |
| **Tides related to Harbour Datum** | |
| Highest Astr. Tide (H.A.T.) | +3.90M |
| Lowest Astr. Tide (L.A.T.) | 0.00M |

![Diagram of dock levels](image)

SECTION ON DOCK LOOKING TO SEA

![Diagram of dock layout](image)

SECTION THROUGH GATE AND SILL LOOKING TO EAST SIDE

Building Dock Particulars
Dock Length = 958.37 M
Width of Dock = 92.05 M

Revision 2010-06-15
LOCATION & GENERAL INFORMATION

Harland and Wolff is located in the port of Belfast approx 2 miles from the centre of Belfast.

The entrance to the dock is off the Victoria Channel which is 16 miles from the start of Belfast Lough. Victoria Channel is 152m wide and has a water depth 8.6m Minimum and 12.5m Maximum (relative to Harbour Datum).

Information about Belfast

Belfast is the capital of and the largest city in Northern Ireland, a constituent country of the United Kingdom. Historically, Belfast has been a centre for the Irish linen industry, tobacco production, rope-making and shipbuilding. Today, Belfast remains a centre for industry, as well as the arts, higher education and business, a legal centre, marine industry and is the economic engine of Northern Ireland. Belfast city centre has undergone considerable expansion and regeneration in recent years, notably around Victoria Square and the Titanic Quarter. The city has many hotels and restaurants all within easy walking distance of the city centre. The city is rich in historical and cultural diversity. Locally there is a large range of B&B's, guest houses, rooms and houses for rent all within easy access to the site.

Adjacent Airports

Belfast is served by two airports: Belfast International Airport to the north-west of the city (Approx 13.2 miles from Harland & Wolff's Main entrance), and George Best Belfast City Airport in the east of the city (Approx 1.4 miles from Harland & Wolff’s Main entrance).

Additional Facilities & Services

H&W also operate other services and facilities such as:
- Engineering & Design Department
- Manufacturing Halls
- Paint Cells
- Ship Repair Dock & Quays
H&W FACILITY KEY PLAN
Technical Drawings