

ABLE Middlesbrough Port (AMP)

River Tees, North East Coast, UK



Information on AMP to Support the Attraction of Offshore Wind - 2019

Contents

3.	Introduction
4.	The ABLE Middlesbrough Port Site
5.	ABLE Middlesbrough Port
7.	AMP - Offshore Wind
9.	AMP - Lay-by, Berthing & Cargo
10.	River Tees - Key Locations
11.	AMP - Working Plan
12.	AMP - Marine Access
13.	AMP - Quays
14.	AMP - Land
16-17.	AMP - Buildings
18.	Location - Proximity to Market
19.	Location - Road & Rail
21.	Heavy Lift & Transport Services
22.	Workforce - Availability
23.	Workforce - Future Employees
24.	Incentives - to Secure Investment

Introduction

ABLE Middlesbrough Port (AMP). Large fabrication halls with large heavy load-out quays.



This document has been developed specifically to provide information on AMP.

AMP offers large fabrication halls with overhead cranes which could be modified and potentially extended to be appropriate for offshore wind tower manufacturing. Alternatively the 15 hectare site offers exciting potential for a new build construction. The site is served by large quays and a number of heavy load-out pads.

The sites city centre backdrop makes it easy to attract a large workforce to this site.

SITE HISTORY

AMP was developed in the 1970's and acquired by ABLE in 2000. It is the former base of a number of large scale offshore fabrication businesses including Davy Offshore, SLP and Odebrecht. The site has been synonymous with the offshore energy industries manufacturing activity and growth of Middlesbrough.

This site offers large fabrication halls with numerous gantry cranes and floor rails already installed. It has six strong and dependable quays (including a 220m quay) that have been used for a variety of routine heavy-lift projects in the past. Existing quays have a 50T heavy-load out pad with potential to increase this further (up to 1,000m can be provided). alongside heavy load-out quays (6,000T Quay 10 and 4,000T Quay 8 & 9) and a heavy lift pad of 25T/m² (Quay 1).

Sites of this nature with large craned fabrication halls, external storage and heavy lift quays are almost unique within the UK. ABLE understands that certain clients may require their own specific facilities and has planning permission to develop new facilities at Middlesbrough Port. The site qualifies for national and local financial assistance initiatives enjoying strong support from Teesside's public sector agencies.

A number of experts from the offshore energy industry have analysed AMP and provided very complementary feedback.



The ABLE Middlesbrough Port Site

Tees Turning Circle
4.0nm

AMP

ABLE Middlesbrough Port

A flexible port at the centre of the UK East Coast.



ABLE can offer the following to inward investors who wish to manufacture or assemble offshore wind components:

- Land and;
- Buildings (new-build or modification as required)
- Dedicated external storage land with direct access to quays
- Quay access for import / export raw materials and components
- Heavy lift and transport services for handling and pre-assembly of components if required

ABLE also has other riverside sites on the River Tees that could play a part in providing an overall solution to key stakeholders in the offshore wind sector.

Potentially an occupier of AMP can benefit from ABLE Seaton Port and the potential that it offers to be used as a deployment port by the offshore wind sector.

The MPI Adventure at AMP.



AMP - Offshore Wind

Strong potential to play a vital role in offshore wind energy.

AMP is suitable for manufacturing, storage and deployment of components, products and services to the marine renewables sector. Strong quays and deep water drafts provide a solution for clients who require terrestrial facilities with strong marine load out capabilities.

The site has external / internal storage should large inventories of stock need to be stored to maximise the weather windows and installation seasons.

The site is generating interest from the offshore wind sector and we believe it is suitable for the following activities:

- Blade manufacturing and testing
- Tower manufacturing and testing
- Nacelle manufacturing and testing
- Offshore wind turbine component pre-assembly and prototype manufacture
- Gearbox and bearings
- Cable manufacturing / storage / spooling
- Storage and outfitting of transition pieces
- Internal tower and boat landing system manufacturers / fitting
- Steel foundation manufacturing and assembly
- Storage and marshalling
- Operations and maintenance
- Repairs – re-powering
- Coatings / painting operations
- Port and support services
- Project teams / activity for offshore projects

Permanent and temporary office facilities can be provided at the port.



Container Ships using AMP main
quays for Lay-by & Berthing.



AMP - Lay-by, Berthing & Cargo

Lay-by, berthing & cargo facilities for all vessel types.



LAY-BY & BERTHING

The port provides a safe haven for vessels to berth being 6 nautical miles from the open sea. Security (24 hour) and normal services can be supplied i.e. water and electricity.

Due to the economic climate there is an increased demand for berthing facilities. ABLE Middlesbrough Port has previously had two 36,000T container vessels moored at the facility whilst awaiting re-deployment and is currently providing berthing facilities to the to Maersk's North Sea Producer FPSO.

In addition to this, ABLE Middlesbrough Port's quays were recently hired by Global Marine Energy (now Prysmian), the largest independent provider of subsea power cable installation, maintenance and related engineering services worldwide. Global invested in the refit and development of Cable Enterprise, a barge built specifically for the installation of power cables for offshore wind farms and upon completing the refit, the vessel was launched at ABLE Middlesbrough Port before going to work on the Gwynt-Y-Mor offshore wind farm.

CARGO

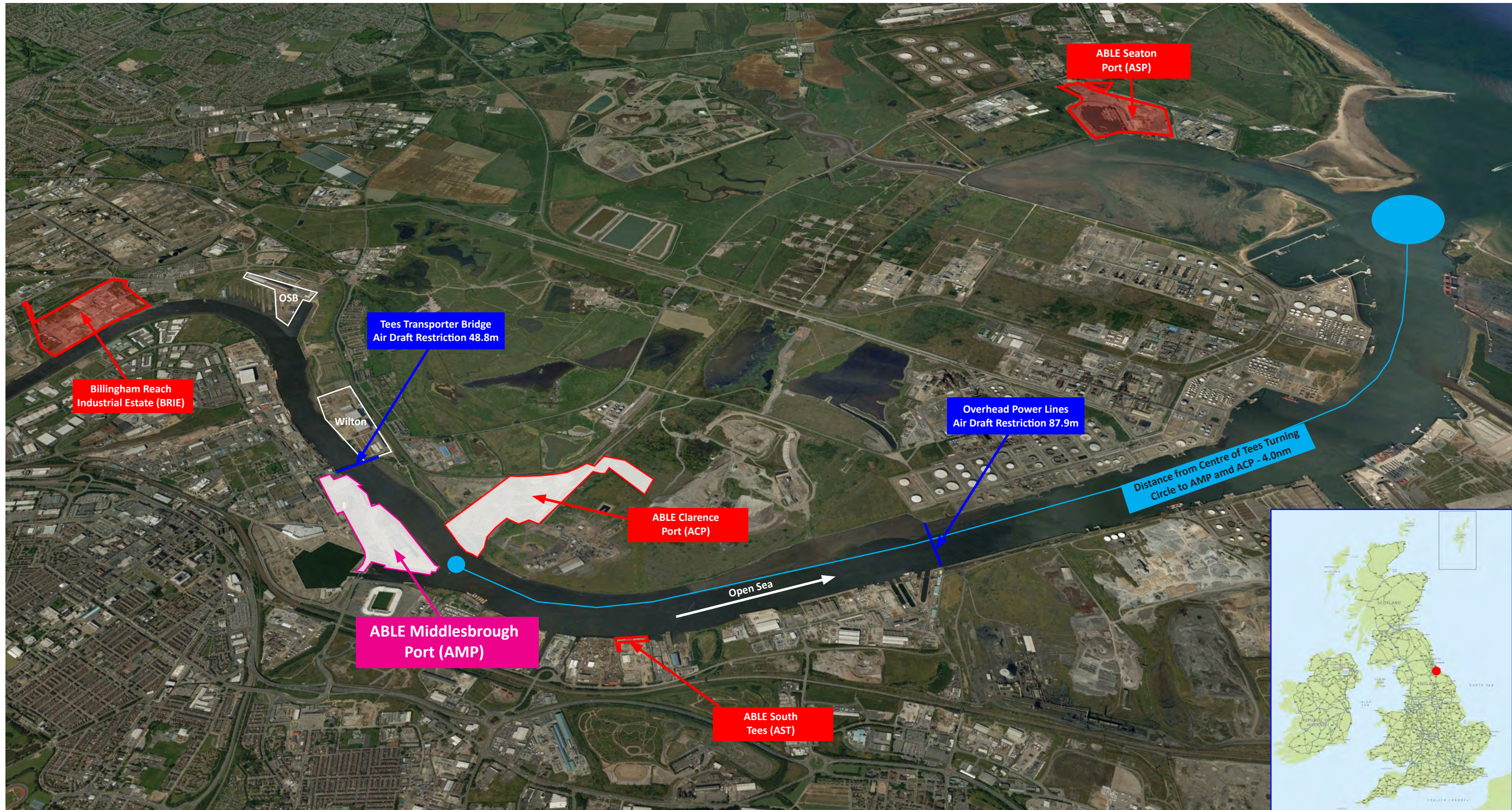
AMP is available for general port activity and offers outside and undercover storage to accommodate all types of bulk cargo including specialist products and raw materials. The site can provide a good logistic facility base, HMRC approved warehousing, flexibility on storage periods and highly secure premises with bespoke security services.

The port regularly handles conventional cargoes as well as bespoke components for a variety of sectors. ABLE also provides auxiliary services to ensure the smooth transit of materials such as:

- Slabs
- Beams
- Plate
- Scrap Cargoes
- Pipes – Coated and Uncoated
- Commodities
- Heavy Lift Machinery
- Sand
- Aggregates

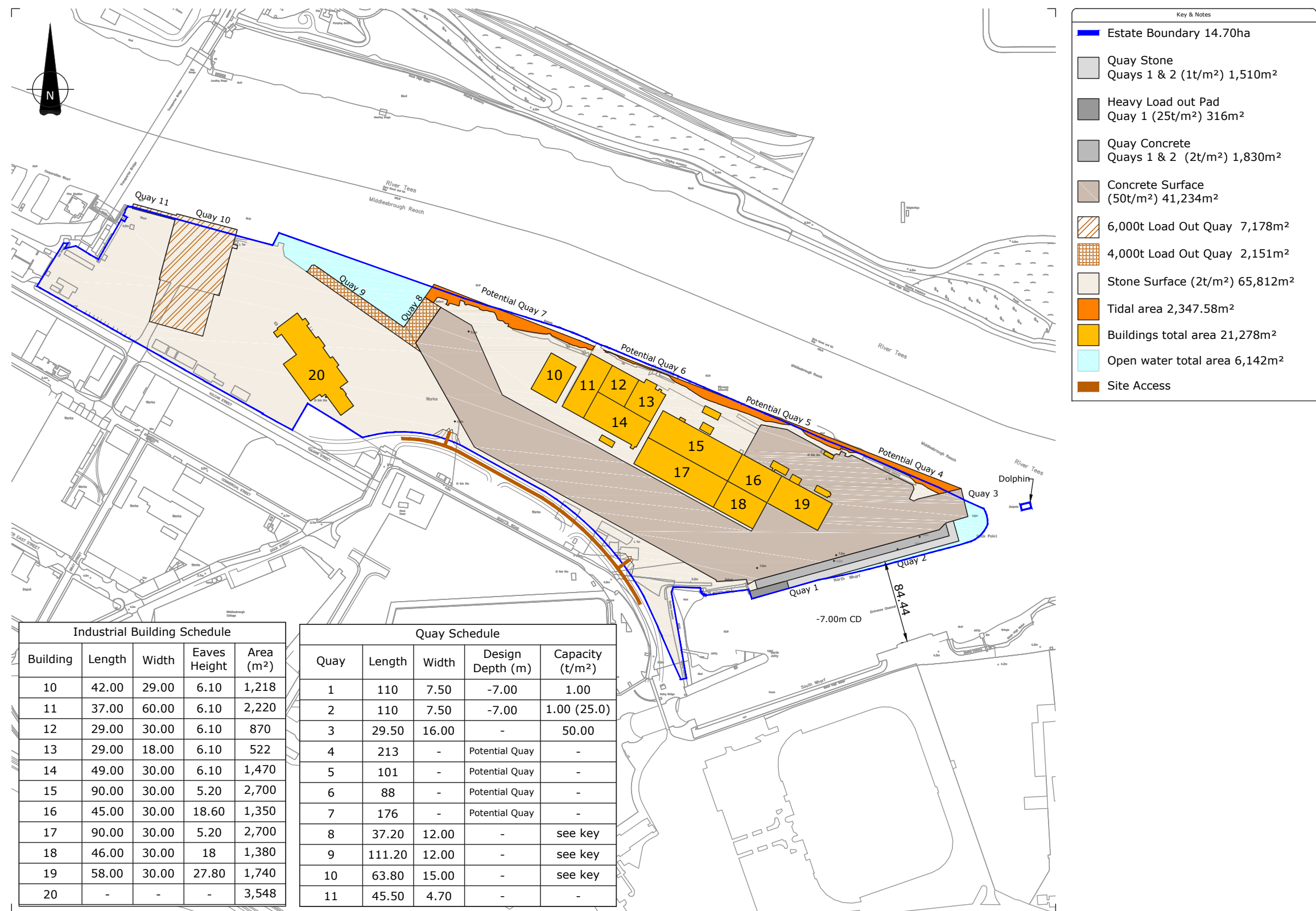
River Tees - Key Locations

ABLE's ports are not affected by the 47m air draft restriction caused by the Tees Transporter Bridge.



AMP - Working Plan

AMP is a flexible site. The plan below illustrates key infrastructure that is available for production facilities.



AMP - Marine Access

Easy marine access for Vessels and Supply Ships ensuring optimum utilisation.

Access & Egress to Port from Sea	
Locks:	None.
Fairway Buoy Depth:	-15.4mCD
Turning Circle Depth:	-14.1mCD
Turning Circle Diameter:	520m
Pilot requirement:	Ships up to 95m do not require a Pilot. If ships over 95m are regularly visiting it is possible to obtain a dispensation. Any further information can be obtained from PD Ports.

AMP Berth Facilities	
Locks:	None.
Ship size:	Subject to draft.
Distance from Open Sea:	5.1nm from open sea.
Channel width at AMP:	103.5m (Working Channel)
Water Depth:	Water depth -7m CD, quays will have -12.5m CD at Mean High Water Spring
Access Channels:	River Tees Entrance Channel dredged depth is -15.4m CD Channel depth at AMP entrance is -5.7m CD AMP Channel length is 200m Adequate navigation to AMP from fairway buoy
Distance from quay to waterline at HAT & LAT:	Quay top is 7.37m OD @ HAT = 1.07m HAT = 6.3m CD @LAT = 7.37m LAT = 0.00m
Tidal conditions:	Mean Low Water Spring (MLWS) is 0.90m CD Mean High Water Spring (MHWS) is 5.55m CD Spring Tidal range is 4.60m
Current conditions:	Negligible – less than 0.2m/sec.
Seabed conditions:	Clay
Restrictions on jacking up:	None, subject to detailed engineering assessment for the particular vessels by the vessel owner.
Seabed Profile:	Flat
Customs Duty:	The port can have an exemption in place.
General	Sheltered – no known historical weather issues. Wind information is available if required.

AMP - Quays

A wide range of quays with a maximum quay capacity of 50t/m²

AMP Quay Facilities	
Length x Width:	<ul style="list-style-type: none"> Quays 1 & 2 (both 110m): total length 220m x 27.5m – depth is (-7.0m CD) Contains a heavy load out pad at western end of quay 1 - 25t/m² UDL (316m²) Quay 3 30m x 16m @ 50t/m² (flat runway direct from facility with no gradient and dolphin quay to enable direct stern loading) Quays 4,5,6,7 Potential for 4 x 144m quays Quay 8 37.5m x 12m – 6,000t load out quay with 50t/m² UDL floor behind (running direct to main fabrication halls and adjacent quays) Quay 9 111m x 12m – 4,000t load out quay Quay 10 64m x 15m – 6,000t load out quay (7,178m²) Quay 11 45.5m x 4.7m
Surface:	Quays 1 & 2 - Combination of concrete slab and crushed stone. Others – Various.
Surface suitable for heavy, moving equipment:	The quays have been designed specifically to service the manufacture and installation of large scale offshore energy components and are suitable for the operation of the largest mobile harbour/gantry cranes working at full capacity. SPMT's working at full capacity can also be facilitated.
Type & construction of quay:	Anchored sheet pile wall.
Bearing capacity, General:	Quays 1 & 2 heavy duty area large crane operations – 0 - 8.1m back from quay 1t/m ² 8.1 - 16.0m 2Te/m ² . Rest of Quay 50t/m ²
Bearing capacity, Local:	Loading Platform adjacent to the quay – 25-50Te/m ² (west end).
Rights for exclusive use:	Available, if required.
Flood Risk:	No – the site has never been flooded and did not flood during 2013 Tees tidal surge.
Moorings (number & position):	4 equally spaced along the quays. ABLE can provide bollards for client requirements.
Fenders (number & position):	ABLE ports on the River Tees have fenders suitable for the mooring of all vessels and has an inventory of various sized Yokohama type fenders up to 6.0m diameter.
Cranes:	Mobile harbour cranes 300Te capacity. Crawler cranes 1,350t capacity.
Restrictions:	None known.
Other information:	<ul style="list-style-type: none"> ABLE can provide all port services including harbour tugs, pilots, foyboatmen, shore power, shore electric and other service connections. Storage areas can be rented on short or long term basis Fixed prices for quay usage on provision of forecasted import / export volumes. Location suitable for vessel to vessel transfer. Level ground for stored items. Bespoke grillage can be provided. Professional in-house design / engineering and draughtsman services available for consultation. Stevedoring and boatman facilities as necessary. Safety boat available. Project adjacent car park can be provided. Bespoke Ro-Ro ramp can be provided for SPMT quay to vessel if required. Hydraulic access platforms. On site procurement services available.

AMP - Land

Heavy duty hard-standing concrete for the storage and transportation of large components.



AMP is suitable for the construction of large scale industrial manufacturing facilities and the full site is suitable for storing and transporting large components and structures. The table below summarises the specification of the AMP land:

AMP Ground Information	
Size:	14.7 hectares (36.3 acres)
Surface type:	Heavy duty concrete standing.
Surface suitable for heavy, moving equipment:	Heavy-duty stone surface suitable for 50t UDL suitable for SPMT, gantry cranes and the largest mobile harbour cranes to work anywhere on the facility.
Bearing capacity, General:	Majority of site is 50t per m2 with additional 6,000T and 4,000T heavy load pads on site
Bearing capacity, Local:	As above
Allowed axle load:	The site can take the heaviest axle load that will be imposed with SPMT trailers loaded to their maximum. The site can also take the maximum load in extreme wind conditions of the largest mobile harbour crane, which is 27t per m2.
Rights for exclusive use:	Yes - areas can be reserved for exclusive use.
Flood Risk:	No – the site has never been flooded and did not flood during 2013 Tees tidal surge.



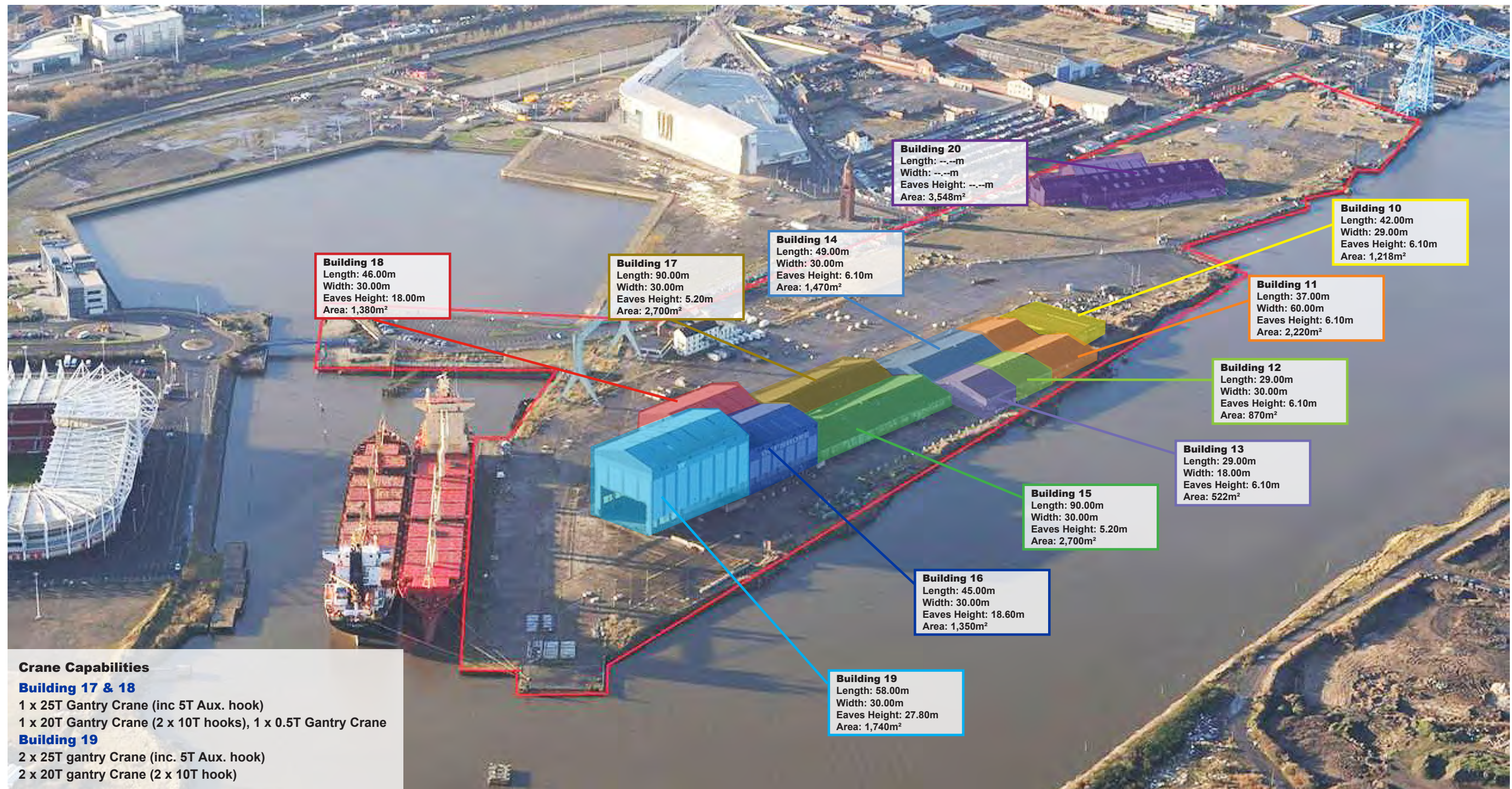
AMP's range of industrial buildings
offer close proximity to major
offshore markets.



AMP - Buildings

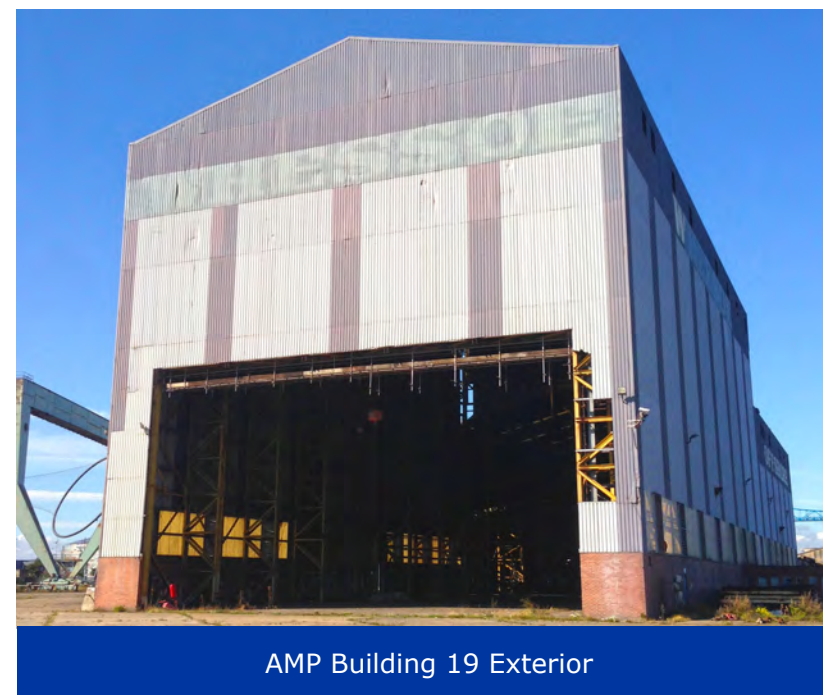
Existing buildings available for use or modification.

AMP offers a wide range of buildings including extensive fabrication halls and warehousing. An appraisal by Engineering firm Atkins stated that only minor reinstatement work is required to the major fabrication halls. These are available on flexible lease periods. For a tower manufacturer the construction of a new bespoke production facility is available, however, some of the existing buildings that are available will need modification.



AMP - Buildings

Photo gallery of some of the buildings at AMP available for use or modification.



Location - Proximity to Market

Perfectly placed for UK offshore projects.

AMP has immediate access to Dogger Bank, Hornsea, Teesside, Blyth, Westernmost Rough, Race Bank, Lincs Inner Dowsing, Sheringham Shoal, Dudgeon, Humber Gateway, Triton Knoll and East Anglia Offshore Wind Zone.

Circa. 80% of all North Sea Wind Farms and 60% of the entire European market is within 12 hours steaming time of AMEP (see map below denoting River Tees and Humber locations in the context of European offshore wind zones)

AIRPORT ACCESS

Teesside Airport is only 11 miles (16 mins) away, with 3 daily flights to Aberdeen.

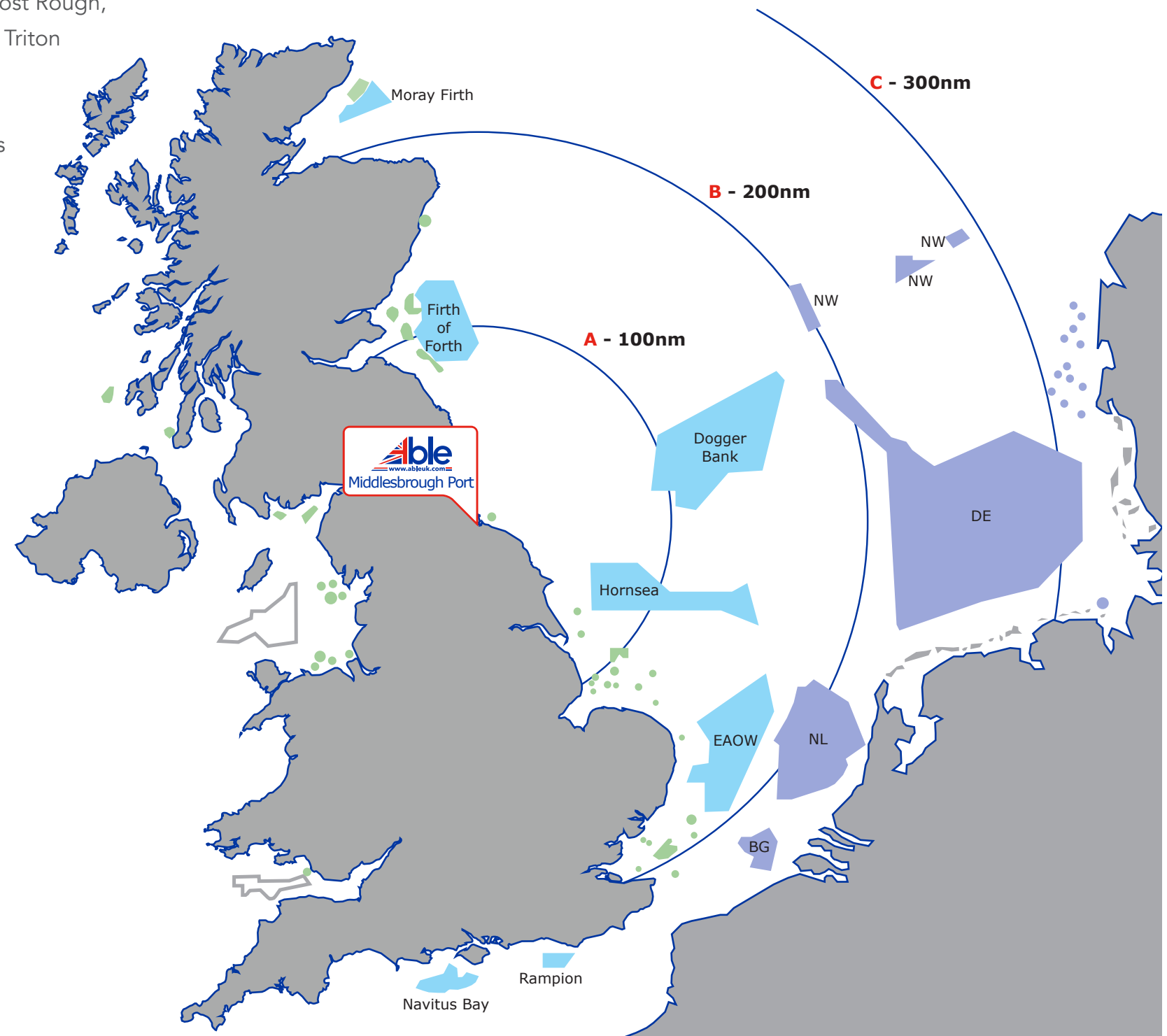
Other major airports:

- Newcastle Distance: 49 miles (56 mins)
- Leeds Bradford Distance: 61 miles (74 mins)
- Manchester Distance: 126 miles (126 mins)

LINER CONNECTIONS TO EUROPEAN PORTS

The River Tees ports complex provides regular container services to:

- Baltic
- Zeebrugge
- Felixstowe
- Rotterdam
- Gdynia



Location - Road & Rail

North East UK at the heart of the Northern Powerhouse.



AMP is an operating port 14km from open sea and is located on the right side of the Tees Transporter Bridge and not impeded by its height restriction.

Furthermore all components for an offshore wind turbine (including foundations) can be handled on the quays and transported to and from the Client’s premises using SPMT’s without having to go on any public carriageway.

ROAD

AMP is on a highly accessible from major routes running North to South and has excellent access via main road networks to A19, A66, A1, A1(M). Distances to motorways and major cities are shown on the right.

From	Miles
Middlesbrough	0.5
Sunderland	30
Newcastle	41
Leeds	67
Sheffield	99
Hull	111
Manchester	111
Edinburgh	159
Birmingham	175
London	245

RAIL FREIGHT

Nearby rail freight access to mainline UK network with sidings available for loading and unloading

PASSENGER RAIL

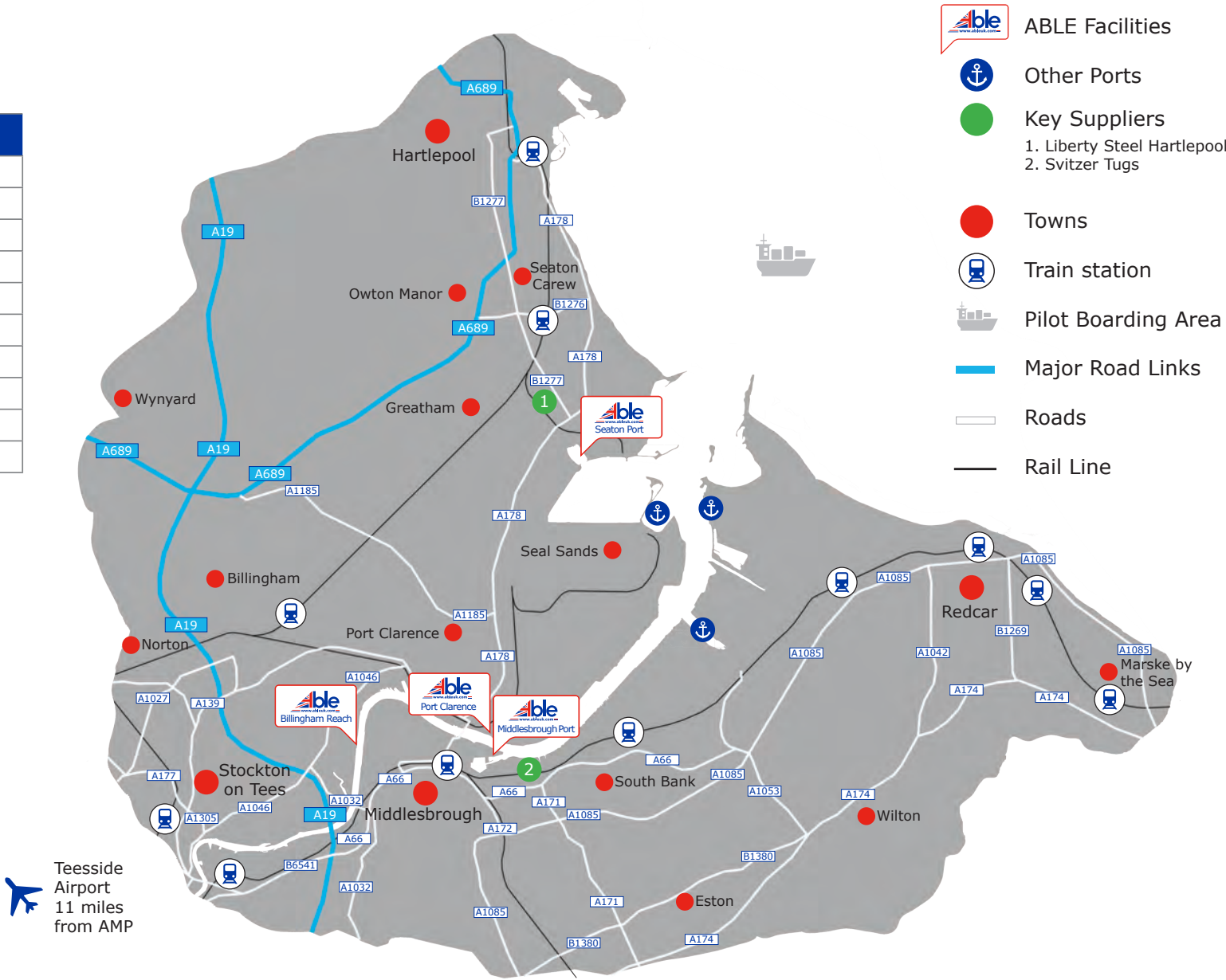
Fast and regular passenger services:

- Middlesbrough Station 1 km
- Darlington Station 29 km

Direct travel times to London and Scotland are:-

- Darlington to Glasgow and Edinburgh 2hrs
- Darlington to London 2hrs 30mins
- Eaglescliffe (Stockton) to London 2hrs 40mins
- Hartlepool to London 2hrs 30mins

These rail stations also offer direct services to Leeds, Manchester, Midlands and the South West.



Large, long fabrication halls with
overhead gantry cranes.



Heavy Lift & Transport Services

The largest mobile harbour crane in Europe along with crawler cranes and SPMT's are available and can be used to lift and transport heavy components.

ABLE has undertaken a multi-million pound investment plan to purchase new heavy lift and transportation equipment. ABLE Middlesbrough Port is the ideal location for challenging projects to be completed. ABLE own and operate a range of plant and equipment which includes:

Liebherr LHM 600 SHL Mobile Harbour Crane

SWL of 208t at 24 metres radius and capable of lifting 53.7 ton at 58 metres radius. Can be used for handling containers with Bromma container handler attachment. Maximum hoisting height above quay of 59 metres. Also available with a 28t; 16m³ dredging grab.

Liebherr LR1300 Crawler Crane

300.5 ton lift capacity and can be configured to a maximum radius of 80 metres. Also available with a 50m leader rig attachment and Bruce 16 ton piling hammer.

Liebherr 934 Material Handler

Ideally suited for handling scrap, bulk materials, feedstocks and grain.

Sennebogen 6130 Crawler Crane

Can be configured to lift 136 ton and has a maximum radius of 42 metres.

RT55 Rough Terrain Crane

SWL of 54.88 ton and a maximum working radius radius of 41 metres. A main jib head height of 34 metres but also comes complete with a telescopic fly jib that can increase the head height up to a height of 54 metres and can be offset from 0 to 40 degrees.

12 x Scheuerle 6 axle SPMTs with 5 x Z350 power pack units

The individual trailers can be linked together mechanically in any combination using coupling elements or in loose-coupling mode using a data line (area of 600 m x 600 m). Capable of transporting 2,880t loads.

Forklifts

Various sizes of forklifts available from 2.5 ton up to 32 ton.



ABLE's LR1300 Crawler Crane with Luffer



ABLE's LHM 600 SHL Mobile Harbour Crane



ABLE's 6 Line Scheuerle SPMT

Workforce - Availability

AMP is at the heart of Middlesbrough and provides a skilled workforce.



Previously c. 1,000 people have been employed on the AMP site. It is renowned as a major employment site within the Tees Valley. If required, our extensive knowledge of the area's labour market means ABLE can provide all labour types including stevedores, riggers, welders, engineers, electricians and operators.

- Pay of full-time Tees Valley workers is 91% of the GB average.
- Employees work on average more hours than those in the rest of the UK.
- Over 400,000 people of working age live within Tees Valley. 1.7million workers live within easy commuting distance of less than an hour.
- Staff turnover in the North East is lower than any other region in the UK.
- Employment in the Tees Valley remains below the North East and national averages.

Workforce - Future Employees

A large mobile workforce exists in the Tees Valley region with skills initiatives already in place.



A number of colleges in the local area have made strategic plans to support the offshore wind sector through targeted initiatives.

Middlesbrough College

- Largest provider of post-16 training in the Tees Valley.
- 11,000 students.
- Offers courses and bespoke training for employers in all aspects of engineering and management programmes.
- Provide a two-year Foundation Degree in Renewable Energy Engineering in partnership with Teesside University.
- Engineering courses and apprenticeships in all aspects from mechanical and electrical to welding and fabrication.
- Top 25% nationally for qualification success.

Hartlepool College - Centre of Offshore Wind Excellence

- £53m investment in new building and facilities.
- State of the-art-workshop incorporating an industrial wind turbine and a wind tunnel.
- 300m² workshop.
- North East Hub for the National Skills Academy for Environmental Technologies.
- Leading college in the design, installation and maintenance of technologies such including offshore wind.
- Working with a number of top engineering employers, including Heerema, TAG, PD Ports, Scottish and Southern Power.

Incentives - to Secure Investment



The AMP site is in an Assisted Area and large scale inward investments attract public sector funding on a regular basis.

ABLE and the local economic development organisation Tees Valley Unlimited (TVU) can assist with applications for funding support to the public sector..

- Assisted Area Status (15%) including Investment Aid to SME's
- Regional Growth Fund (extraordinary and routine calls)
- European Social Fund (ESF)
- European Regional Development Fund (ERDF)
- Lets Grow Fund (LGF)

Tees Valley Unlimited will help clients and any members of their supply chain to maximise financial support. Contact details for Tees Valley Unlimited are below, ABLE is happy to broker an introduction if required:

[John Lear](#)

Business Investment Manager
Tees Valley Combined Authority
Cavendish House
Teesdale Business Park
Stockton-on-Tees
Tees Valley
TS17 6QY

Tel: 01642 524436

Email: John.Lear@teesvalley-ca.gov.uk

Other ABLE Facilities

ABLE Seaton Port

Location: River Tees
Grid Reference: 54° 38' 04" N
01° 11' 26" W
Quays: 557m quays inc.
48,000t heavy load quay
Max Water: 20.5m MHWS



ABLE Humber Port

Location: River Humber
Grid Reference: 53° 39' 20" N
00° 14' 15" W
Quays: Potential length
1,340m
Max Water: 24.8m MHWS



Next Steps

Neil Etherington - Business Development Director

- Mobile: +44 (0)7768 405464
- Telephone: +44 (0)1642 806080
- Email: netherington@ableuk.com

Paul Connally - Group Estimator

- Mobile: +44 (0)7852 991637
- Telephone: +44 (0)1642 806080
- Email: pconnally@ableuk.com

PORTS



DEMOLITION



OIL & GAS RIG MAINTENANCE



SITES



DRY DOCK



LAND DEVELOPMENT



MARINE DECOMMISSIONING



LOGISTICS



WASTE MANAGEMENT

