



**ROYAL HASKONING**

## **APPENDIX 1**

### **THE UK NEED FOR DEEPSEA CONTAINER HANDLING**

## THE UK NEED FOR DEEPSEA CONTAINER HANDLING

The proposed Bathside Bay container port will meet a requirement for modern, efficient deepwater container handling capacity in the UK for which there is a pressing need. The new deepwater facility will contribute to meeting the forecasted continuing strong growth in container traffic volume in the UK. It will provide substantial new capacity and be capable of handling the very largest vessels (which are taking an increasing share of the deepsea container trade) and serve as a transshipment hub port for the broader North European markets.

### Context

Through subsidiary companies HPUK owns and operates three ports in the UK: Thamesport (a container terminal in Kent), Harwich International Port and the Port of Felixstowe. The ports of Harwich and Felixstowe are both located in the Harwich Haven and are collectively referred to as 'the Haven ports'.

UK ports are an essential part of the transport infrastructure on which the UK economy and many businesses depend. The importance of ports to the UK economy cannot be overstated. Currently around 95% of export/import goods, by volume, go through UK ports. In 2000, this accounted for a trade of goods worth around £400 billion, compared to total Gross Domestic Product (GDP) of around £800 billion.

The UK economy is heavily dependent upon international trade in manufactured and semi-manufactured goods. This trade is already dominated by the container system. As the UK economy expands, the level of containerised imported and exported goods will continue to increase. Even with improved efficiency in existing terminals, this will generate a requirement for more container wharves.

As well as handling the import and export of goods directly into and out of the country, a port can act as a gateway for direct deepsea container shipping into and out of other parts of Europe, where goods are carried to their final destinations on shortsea trips. This is known as *transshipment* or *feeder*, where the port acts as a hub. Transshipment traffic is an important and growing sector of the container market. Some lines engage in the shipment of containers from one deepsea trade route to another deepsea trade route and this is also referred to as transshipment.

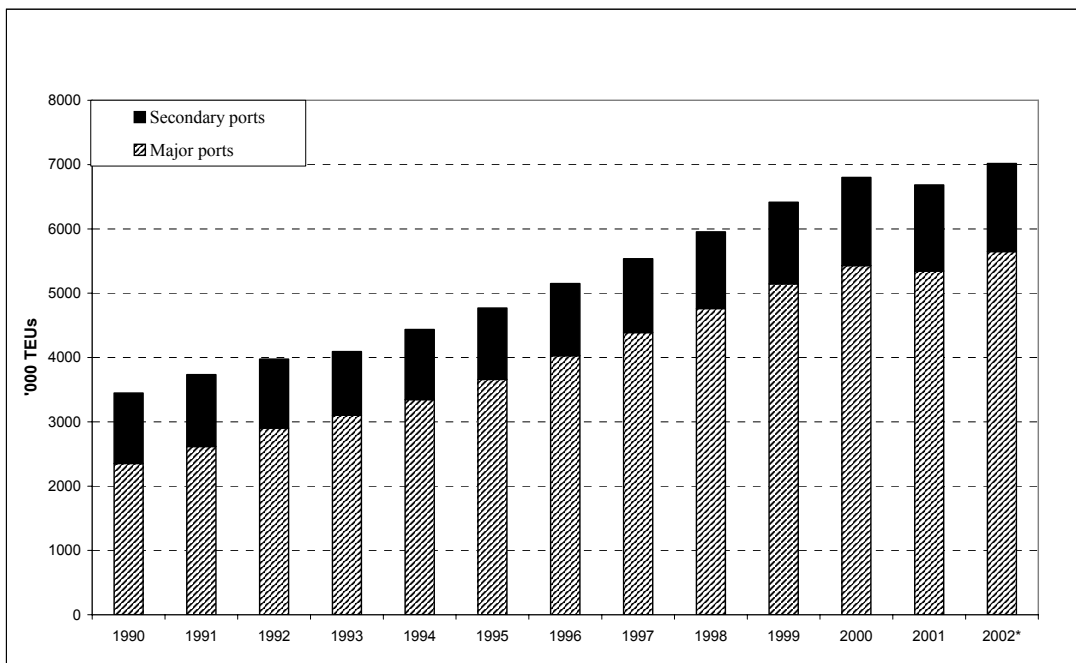
Modern deepwater container handling facilities need to offer berths of no less than 14.5m below CD, a high ratio of ship to shore quayside cranes for prompt discharge and loading of containers to and from vessels, and significant backup land and equipment for the stacking of containers in transit.

### Historic growth trends in the market

In 2001, UK ports handled some 6.68M TEU. This represented an increase of 40% since 1995 and 94% since 1990. Strong growth has been sustained during every year, except in 2001. The average annual rate of increase in container port throughput was 6.2% over 1991 to 2001 and 5.8% over 1996 to 2001.

The five major UK container ports of Felixstowe, Southampton, Liverpool, Thamesport and Tilbury handled 80% of the UK's seaborne container traffic in 2001; the proportion

accounted for by the major ports has increased from 68% in 1990 and 77% in 1995. This reflects the process of concentration at larger ports which has taken place over the period, together with the increasing importance of direct deepsea traffic and transshipment relative to shortsea traffic. Growth in the UK major ports has been significantly more rapid than the average rate, amounting to 7.8% per annum over the decade (Figure 1).



**Figure 1 UK container port throughput (1990-2002) (\* estimate for 2002)**  
**(Source: Ocean Shipping Consultants Ltd.)**

The trend illustrated has been the result of both economic growth and the increased globalisation of world trade, with the UK economy extremely dependent on trade in manufactured goods.

In particular, there has been very strong growth in the direct deepsea and transshipment parts of the UK port market. The combined importance of these business sectors has increased from 75.6% of the major port market in 1990 to some 84.1% in 2001. This has further focused demand on the largest deepwater terminals (see Table 1).

The North European ports competing in the North European transshipment market are Hamburg, Bremerhaven, Rotterdam, Antwerp, Le Havre, Felixstowe and Southampton. The North European container transshipment market spans the north continent and includes the UK. Transshipment activity is not directly tied to a particular local hinterland, but can take place at any suitable location within the region. Over 1990 to 2001, estimated North European transshipment volumes increased by some 209% to 6.73M TEU. The UK's share of this market rose from 9.4% in 1990 to 19.2% in 1999, before dropping to 15.6% in 2001.

**Table 1 Major UK container ports throughput (estimated by type of traffic, 1990-2001)**

	'000 TEUs											
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Direct deep-sea	1575.9	1731.5	1904.0	2128.8	2238.3	2416.6	2655.2	2853.6	3052.6	3214.0	3447.1	3441.7
Transshipment	204.5	280.5	344.7	422.7	498.6	597.5	700.8	842.1	938.5	1118.3	1116.8	1050.0
Direct short-sea	573.6	604.5	653.8	550.2	607.7	645.8	670.9	692.9	771.3	814.7	865.2	851.5
<b>Total</b>	<b>2354.0</b>	<b>2616.5</b>	<b>2902.5</b>	<b>3101.7</b>	<b>3344.6</b>	<b>3659.9</b>	<b>4026.9</b>	<b>4388.6</b>	<b>4762.4</b>	<b>5147.0</b>	<b>5429.1</b>	<b>5343.2</b>
	Percentage share											
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Direct deep-sea	66.9	66.2	65.6	68.6	66.9	66.0	65.9	65.0	64.1	62.4	63.5	64.4
Transshipment	8.7	10.7	11.9	13.6	14.9	16.3	17.4	19.2	19.7	21.7	20.6	19.7
Direct short-sea	24.4	23.1	22.5	17.7	18.2	17.6	16.7	15.8	16.2	15.8	15.9	15.9
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Source: Ocean Shipping Consultants Ltd.

Transshipment volumes at individual ports can be expected to fluctuate more than import/export traffic as it is quite easy for shipping lines to transfer their transshipment centre from one port to another. Further, capacity constraints in the UK major ports have already impacted on transshipment volume, some shipping lines finding it expedient to conduct this trade in continental ports not subject to the same capacity restrictions.

**Table 2 North European container transshipment market 1990-2001**

	'000 TEUs											
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
N.Continent West	1080.0	1190.0	1300.0	1300.0	1490.0	1549.0	1592.3	1790.5	1999.0	2224.6	2367.6	2302.9
N.Continent East	894.6	995.3	1090.5	1320.8	1541.7	1647.1	1755.2	2008.3	2205.2	2487.8	3030.5	3377.4
UK	204.5	280.5	344.7	422.7	498.6	597.5	700.8	842.1	938.5	1118.3	1116.8	1050.0
<b>Total</b>	<b>2179.1</b>	<b>2465.8</b>	<b>2735.2</b>	<b>3043.6</b>	<b>3530.3</b>	<b>3793.5</b>	<b>4048.3</b>	<b>4641.0</b>	<b>5142.7</b>	<b>5830.8</b>	<b>6515.0</b>	<b>6730.3</b>
<b>Growth (%)</b>	-	13.2	10.9	11.3	16.0	7.5	6.7	14.6	10.8	13.4	11.7	3.3
	Percentage share											
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
N.Continent West	49.6	48.3	47.5	42.7	42.2	40.8	39.3	38.6	38.9	38.2	36.3	34.2
N.Continent East	41.1	40.4	39.9	43.4	43.7	43.4	43.4	43.3	42.9	42.7	46.5	50.2
UK	9.4	11.4	12.6	13.9	14.1	15.8	17.3	18.1	18.2	19.2	17.1	15.6
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Source: Ocean Shipping Consultants Ltd.

Transshipment therefore represents an important part of the UK port market and loss of transshipment business from the UK to continental ports would have a detrimental impact on the UK economy. This is for the following reasons:

- The costs associated with shortsea feeding of transshipment containers from continental ports are significantly higher than those generated from direct shipments – in excess of £200 per container;

- Shipping lines require a minimum transshipment capability from continental ports for reasons of flexibility. The absence of a minimum of transshipment capability would therefore have a knock-on effect on other business;
- Transshipment container handling at UK ports represents additional revenue, both for the terminal operator and for the UK economy; and,
- The UK has established a successful role in this business.

Further, in *Modern Ports: A UK Policy* the potential consequences for the UK if the ports industry fails to meet demand is considered:

*“ ... shipping lines may divert primary services to overseas ports. This would make it harder to meet some objectives of integrated transport policy. The primary services would no longer collect and deliver UK trade to UK ports, adding the cost of transshipment in a foreign port to UK trade. A higher proportion would arrive in or depart from this country on road trailers. There would be a significant effect on the cost of UK trade, and thus on competitiveness, as well as on the volume and pattern of road traffic.”*

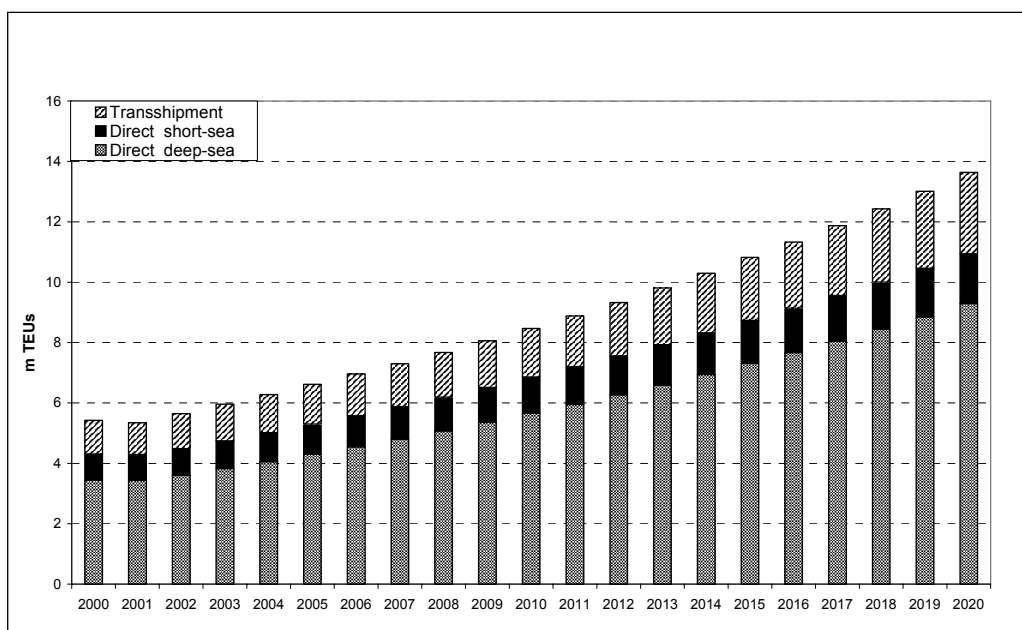
### **Forecast growth in container port throughput growth**

Trade in manufactured goods – the predominant constituent of container trade – has been at the centre of world economic expansion. An understanding of the relationship between economic growth and trade and container port demand is fundamental to the forecasting of the development of container traffic. This relationship allows the future development of demand to be defined and provides a useful tool for forecasting future container traffic throughputs (or number of TEU units), although there are numerous other factors at work which also have to be considered.

Ocean Shipping Consultants (OSC) Ltd have developed detailed projections of throughput growth for the major UK ports based on two cases of macroeconomic growth (see Section 1, Environmental Statement). A ‘base case’, which is considered over the longer term to be the most likely scenario, and a ‘low case’ which assumes a lower level of GDP growth and resulting demand. In the base case, UK GDP growth is forecast at an average of 2.3% over the period 2003 to 2020, with the low case forecast averaging 2.0% per annum from 2003.

OSC conclude that, in the base case direct import/export throughput at major UK ports is forecast to increase by 60% to 6.87M TEU over the period 2001 to 2010. Further growth of 59% to 10.94M TEU is anticipated to 2020 – although the projections obviously become more speculative over this extended time frame. This implies average annual growth of 4.8% over the period. By 2010, moves from deepsea services will have reached 5.66M TEU, and those from shortsea links are anticipated to amount to 1.21M TEU.

Combining UK import/export and transshipment in the base case, throughput is forecast to increase by 59% to 8.47M TEU over 2001 to 2010, whilst, in the low case, volumes are forecast to grow by 46% to 7.80M TEU. By 2020, throughput will have reached 11.26 to 13.63M TEU, depending on the economic conditions. The average yearly growth in the base case is forecast at 4.7% and, in the low case, at 3.7%.



**Figure 2 Major UK container ports forecast throughput by type of traffic (base case) (Source: Ocean Shipping Consultants Ltd.)**

These forecasts are seen to closely correlate with other projections that have been developed to assess UK container port demand in the past two years. Table 3 summarises the demand anticipated by OSC as part of the Bathside Bay project and compares this with other published forecasts. Detailed projections have also been produced in the context of other current proposals for container facilities at Southampton (Dibden Bay) and London Gateway (Shellhaven). In addition, MDS Transmodal on behalf of English Nature and the RSPB has also developed projections on the supply and demand in the UK ports industry.

Whilst there are differences in emphasis and methodology in each of these reports, it is very important to note that there is a remarkable degree of agreement in the forecasts developed which supports the conclusion that there is a significant demand for additional container port handling facilities in the UK.

The proposed development by HPUK of deepwater container handling facilities at Bathside Bay provides a partial solution to the emerging shortage of major port container handling facilities in the UK.

**Table 3 Comparison of forecasts for UK container port demand to 2015 (indexed development 2000 = 100)**

	2000	2005	2010	2015
<b>Bathside Bay forecast (OSC; June 2002)</b>				
Base case	100	122	156	199
Low case	100	117	144	174
<b>Supply and demand in GB Ports Industry (RSPB; March 2002)</b>				
Core demand forecasts	100	128	163	208
<b>Dibden Bay Terminal (ABP; October 2001)</b>				
Core demand forecasts	100	126	171	215
<b>London Gateway (P&amp;O Ports; August 2001)</b>				
Base GDP - High transshipment	100	122	154	181
Base GDP - Low transshipment	100	120	146	179

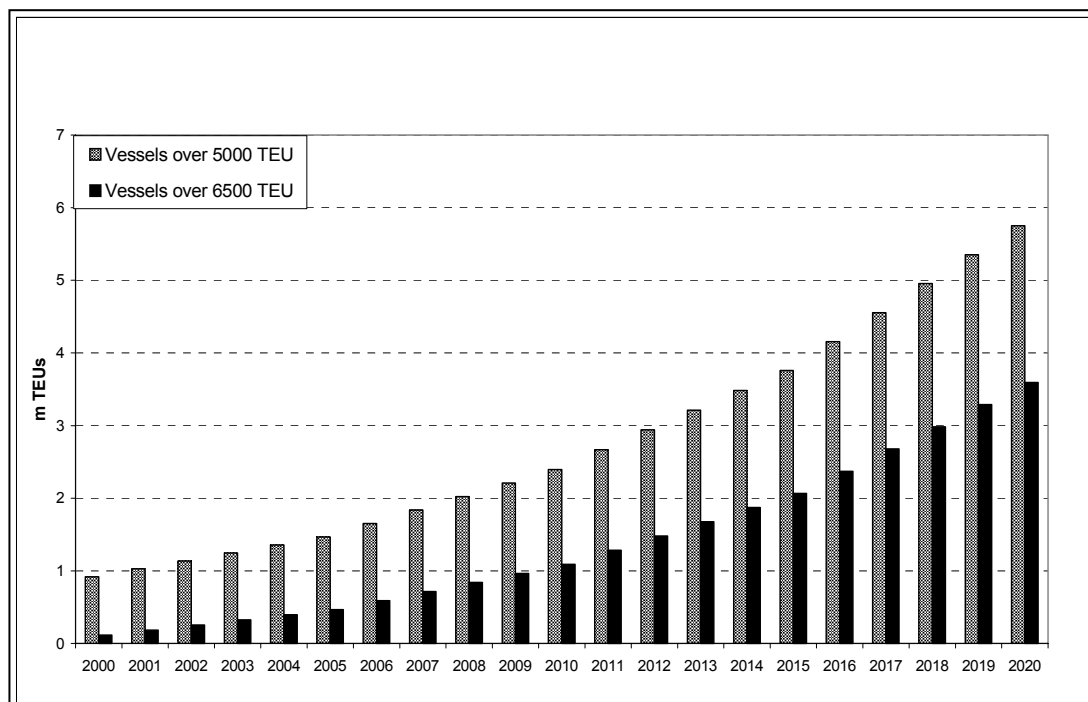
**Source: Ocean Shipping Consultants Ltd. Data derived from, Associated British Ports, P&O Ports and MDS Transmodal on behalf of English Nature and the RSPB.**

**Note: Some adjustment of forecast volumes has been required in order to make projections directly comparable. For example, the various projections do not always include the same major ports, some projections are based upon millions of containers (not TEU) and some re-basing has been required to allow proportional developments based on 2000 to be developed**

### **The importance of handling the largest vessels**

One of the most significant trends shaping deepsea container business has been the progressive increase in the size of vessels employed. In 2000, vessels of over 5,000 TEU capacity moved an estimated 0.91M TEU of deepsea (direct and transshipment) traffic through UK ports, or 20% of the total. It is forecast that this proportion will increase to 33% by 2010 and 48% by 2020. This implies extremely rapid traffic growth for these size categories. The proportion of deepsea container throughput carried by vessels over 6,500 TEU is anticipated to rise from an estimated 2.5% in 2000 to 15% in 2010, and to 30% in 2020.

These may well be cautious forecasts; the pace of development could be even more rapid. Clearly, to remain at the forefront of container handling, ports need to be planning now to provide the infrastructure requirements of such vessel size increases. The most costly, disruptive and environmentally demanding element of such requirements is the dredging to provide the necessary depth of water to accommodate increasing vessel draught.



**Figure 3 UK major ports: forecast deepsea\* container throughput by vessels over 5000 TEU (base case) (\* direct and transhipment) (Source: Ocean Shipping Consultants Ltd.)**

### The Harwich Haven solution to UK port capacity need

A detailed analysis of the current UK situation indicates that the major UK ports' combined capacity was around 6M TEU at the end of 2001. Under the base case, it is apparent that by 2020 further capacity of at least 7.6M TEU will be required. In the low case there is a requirement for a minimum of some 5.3M TEU additional capacity to satisfy growth projections.

The combined capacity of the Haven ports can be developed to offer some 5.55M TEU of capacity from 2010 onwards, of which Bathside Bay will contribute 1.68M TEU (Table 4). This represents a major, and well-configured, contribution to meet the forecast demand requirements for UK container handling over the period.

**Table 4 Potential Hutchison container port capacity development (million TEUs)**

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011-2020
<b>Felixstowe</b>											
<i>Trinity Terminal</i>	2.50	2.75	2.81	2.86	2.92	2.97	3.03	3.09	3.15	3.20	3.20
<i>Trinity III Extension</i>	-	-	-	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
<i>Landguard - existing</i>	0.40	0.40	0.40	0.40	0.40	0.40	0.40	-	-	-	-
<i>Felixstowe South</i>	-	-	-	-	-	0.65	0.65	1.30	1.30	1.95	1.95
<i>Total</i>	2.90	3.15	3.21	3.66	3.72	4.42	4.48	4.79	4.85	5.55	5.55
<b>Bathside Bay</b>	-	-	-	-	-	-	0.68	0.68	1.20	1.68	1.68
<b>Thamesport</b>	0.67	0.70	0.72	0.75	0.75	0.75	0.75	0.75	0.75	0.75	1.05
<b>TOTAL</b>	<b>3.57</b>	<b>3.85</b>	<b>3.93</b>	<b>4.41</b>	<b>4.47</b>	<b>5.17</b>	<b>5.91</b>	<b>6.22</b>	<b>6.80</b>	<b>7.98</b>	<b>8.28</b>

Source: Ocean Shipping Consultants Ltd.

A highly competitive way of providing for this forecast national need will be the development of capacity in the Harwich Haven. It will be possible to provide significant additional capacity by developing the Bathside Bay container terminal and redeveloping the southern end of the Port of Felixstowe. These combined projects will contribute 2750m to the existing 670m of deepwater quayage available in the Haven (an additional 270m will also become available with the extension of the Trinity III Terminal; which is under construction and due to be operational in 2004).

Vessels over 6,500 TEU will require berthing availability to a depth of 15m. The creation of capacity to provide this capability will be at the centre of the Haven ports' future market role.

#### **Existing UK port capacity and the 'do nothing' scenario**

As demonstrated, demand for UK container handling capacity is set to expand. The availability of handling capacity to meet this demand is currently constrained. The implications on the balance of supply and demand in the UK and on the competitiveness of 'UK plc' if new container handling capacity is not increased in the UK ports industry is important to consider.

The current capacity of the UK major ports is some 6.7M TEU at the end of 2002. There is scope to increase this capacity further as a result of:

- Progressive moves to increase productivity at existing facilities, especially the largest deepwater berths; and
- The addition of new capacity – where approval has been achieved. Only the extension of the Trinity Terminal at Felixstowe falls into this category.

The combined effect of these developments indicate that capacity at the major ports could be increased to around 8.2M TEU in 2010, with scope to squeeze additional capacity from these berths to provide a total of around 8.9M TEU at some time during the latter part of the following decade. These developments are detailed in Table 5.

**Table 5 UK major port capacity with no further investments\* (million TEUs)**

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011-2020
<b>HUTCHISON PORTS</b>											
<b>Felixstowe</b>											
<i>Trinity Terminal</i>	2.50	2.75	2.81	2.86	2.92	2.97	3.03	3.09	3.15	3.20	3.20
<i>Trinity III Extension</i>				0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
<i>Landguard</i>	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
<i>Total</i>	2.90	3.15	3.21	3.66	3.72	3.77	3.83	3.89	3.95	4.00	4.00
<b>Thamesport</b>	0.67	0.70	0.72	0.75	0.75	0.75	0.75	0.75	0.75	0.75	1.05
<b>HUTCHISON TOTAL</b>	<b>3.57</b>	<b>3.85</b>	<b>3.93</b>	<b>4.41</b>	<b>4.47</b>	<b>4.52</b>	<b>4.58</b>	<b>4.64</b>	<b>4.70</b>	<b>4.75</b>	<b>5.05</b>
<b>OTHER PORTS</b>											
<b>Southampton</b>	1.18	1.22	1.26	1.30	1.35	1.40	1.50	1.60	1.70	1.80	2.20
<b>Tilbury</b>	0.45	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
<b>Liverpool</b>	0.80	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
<b>TOTAL</b>	<b>6.00</b>	<b>6.72</b>	<b>6.84</b>	<b>7.36</b>	<b>7.47</b>	<b>7.57</b>	<b>7.73</b>	<b>7.89</b>	<b>8.05</b>	<b>8.20</b>	<b>8.90</b>

Source: Ocean Shipping Consultants Ltd.

\* Capacity at existing and authorised berths with productivity improvements

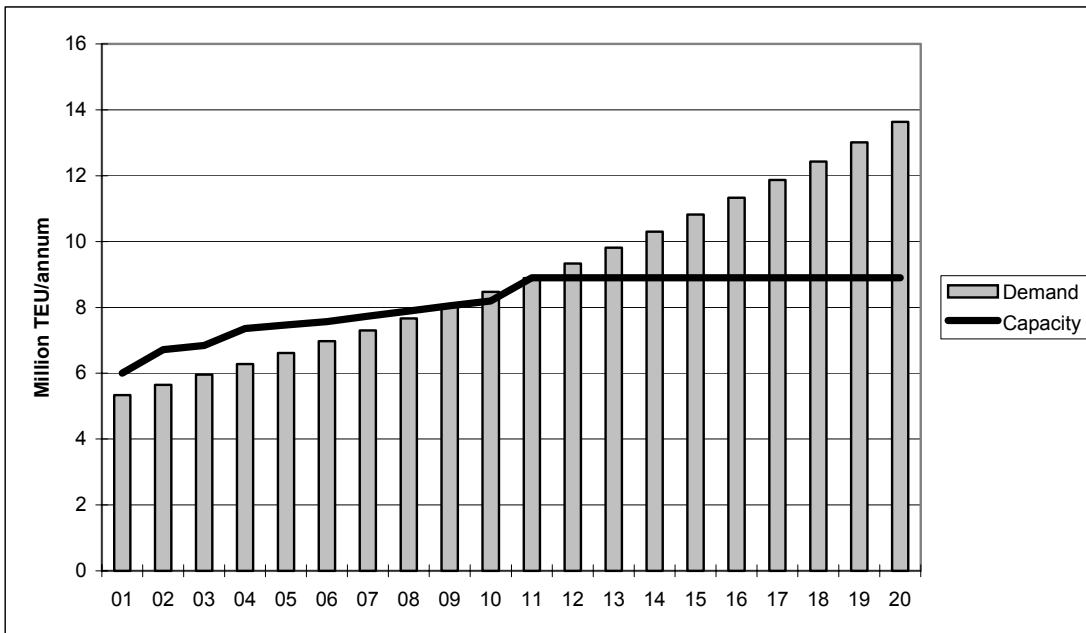
OSC has compared the range of potential (unconstrained) demand development for the UK major ports directly with the anticipated availability of port capacity if no additional investments are approved. Under the base case, OSC concludes that the UK major ports will run out of capacity some time in early 2009 and under the (less likely) lower economic growth scenario this will occur in 2013.

The underlying situation facing the UK is detailed in Figures 4 and 5. All of the potential trade above the capacity line represents the minimum loss to the UK economy under these conditions.

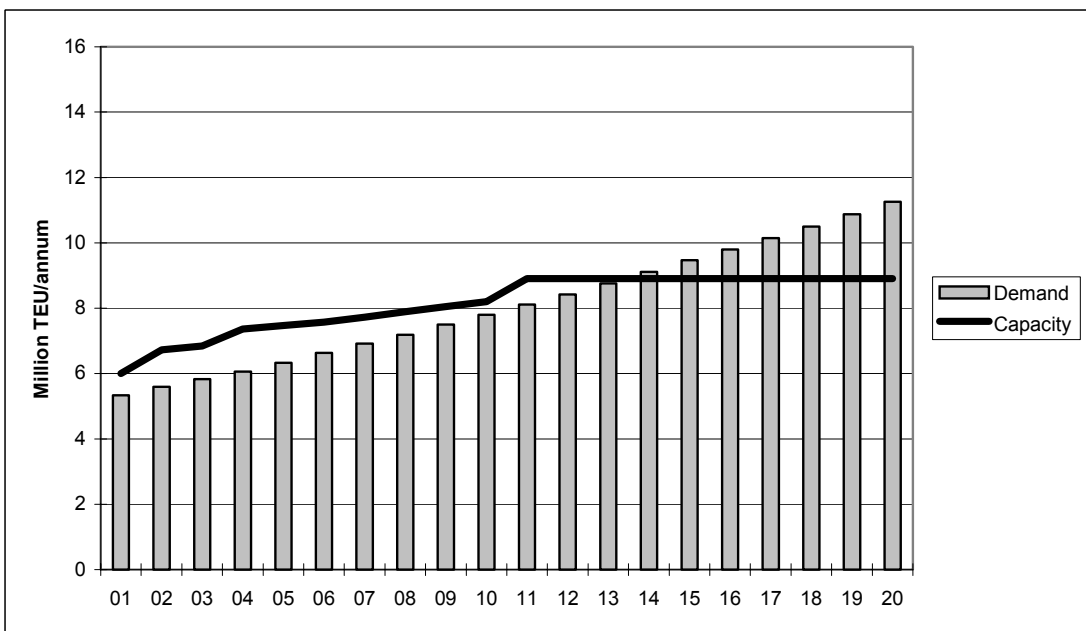
It should be stressed that severe capacity constraints, in respect of the availability of deepwater berths, is already being experienced in the UK major ports. The occupancy of berths at a port will rise and fall by about 12% above and below the average depending upon seasonal variations, day of week and disruptions to ocean shipping caused by bad weather. The amount of time vessels have to wait at anchor for suitable berths rises exponentially with berth occupancy. In addition to the extremely high costs involved, berthing delays result in scheduling difficulties being encountered at subsequent ports, causing yet more disruption and delay and discouraging customers.

In 2002, major shipping lines complained about a lack of capacity at both Southampton and Felixstowe, resulting in less than optimal operations with port delays and missed vessel calls. This indicates that a degree of excess capacity is required in large container ports in order to cope with the fluctuations that stem from seasonal differences in recorded demand levels and also to allow operational flexibility for lines and stevedores.

These considerations underline the fact that severe congestion and problems would be encountered in the UK major port sector ahead of the dates projected in OSC's analysis.



**Figure 4 Base case UK major ports supply/demand to 2020 (Source: Ocean Shipping Consultants Ltd.)**

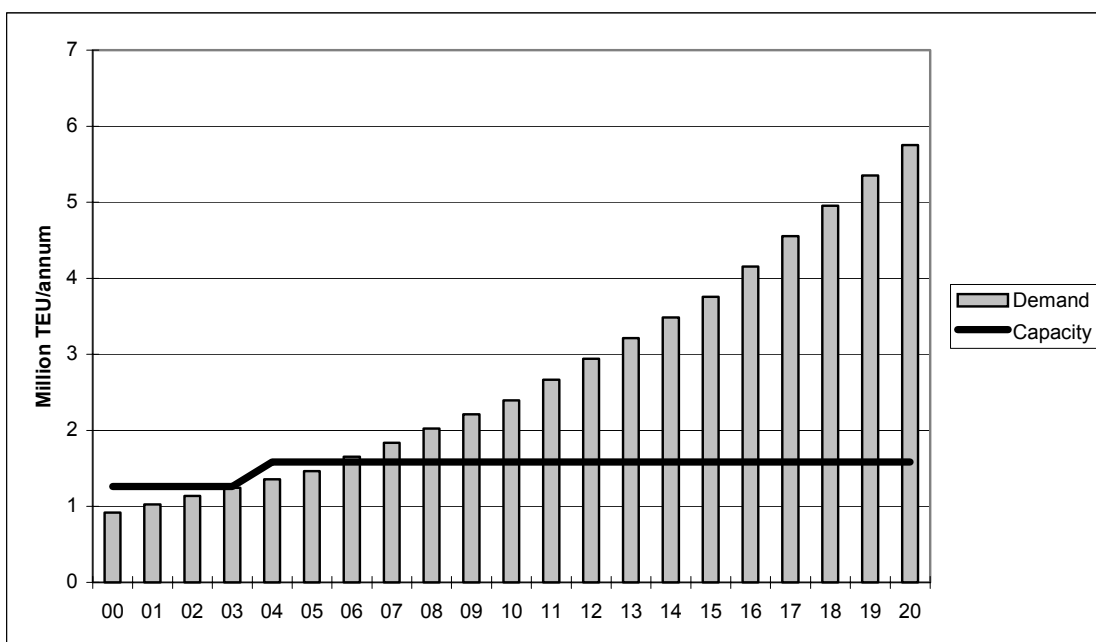


**Figure 5 Low case UK major ports supply/demand to 2020 (Source: Ocean Shipping Consultants Ltd.)**

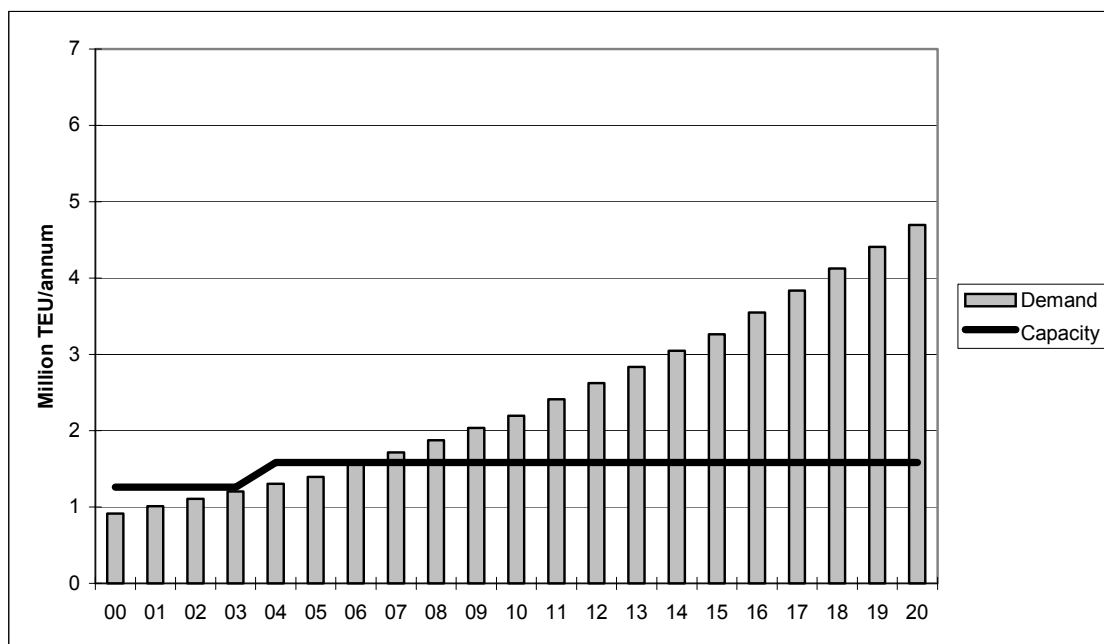
Although the overall balance of supply and demand is important in defining the implications of the 'do nothing' scenario, it is equally important to analyse the specific shortage of deepwater (14.5m+ depth) berths in the UK. At present, the shortage of capacity of the UK ports is limited to around 630m in Felixstowe and 420m in Southampton. This effectively restricts the UK to just two berths where the largest vessels can be handled fully laden. The addition of the extension of the Trinity III Terminal will increase this total by 270m and make three berths available in the UK.

There is a clear trend in favour of the introduction of larger vessels into the UK container trades. Two major trends are significant: The increasing importance of the largest current vessel size ranges, and; the imminent introduction of considerably larger classes of container ships.

By assuming that the deepwater berths can achieve an annual capacity of 1200 TEU per metre (and by relating this capacity to demand from 5000 TEU+ vessels) OSC derives an estimate of the balance of supply and demand in this sector (see Figures 6 and 7).



**Figure 6 Base case UK major ports supply/demand to 2020 for 5000TEU+ vessels (Source: Ocean Shipping Consultants Ltd.)**



**Figure 7 Low case UK major ports supply/demand to 2020 for 5000TEU+ vessels (Source: Ocean Shipping Consultants Ltd.)**

It is clear that the need for a supply of container berths in the UK to berth 5,000 TEU + vessels is becoming increasingly important in the market. On peak occasions, this lack of capacity for the largest vessels is already resulting in excessive queuing for berths.

All of the potential demand that is subsequently indicated will not be able to be handled at UK major ports under the 'do nothing' alternative. This represents a major constraint on UK trade (and, consequently, on the UK economy) through the following effects:

- Existing port facilities will become increasingly congested. This can only be partially mitigated by moves to improve the productivity of existing container terminals. The effect will be higher costs, and slower turnaround for UK exporters and importers;
- The first part of demand that will be adversely affected will be the transshipment sector. At present the Port of Felixstowe offers an efficient transshipment capability in comparison with competing continental ports. This capability is a result of firstly, the number of shipping services calling at Felixstowe, and secondly the number of ports that are served by them. Import and export containers transiting via Felixstowe benefit from direct delivery to, or collection from, in excess of 350 ports around the world and this is an important feature for shipping lines. This sector of the business will be lost to other ports if capacity is constrained. This will reduce the attractiveness of UK ports to major shipping lines;
- There will be a severe constraint on the introduction of larger vessels into the UK container trades. This will result in a failure to maximise scale economies in contrast to competing continental locations. This will increase relative costs for

UK industry, increase costs for importers and undermine the competitive position of the UK economy;

- There will be a lack of capacity to handle demand at major ports (irrespective of ship size considerations) and this will either limit the volume of UK trade or result in increased use of continental transshipment hubs using smaller UK ports. It is also likely that both of these results will be combined. This will increase significantly the costs of UK trade and also constrain the economic development of the UK as a trading nation; and,
- The failure to develop capacity will undermine an efficient UK industry and lead to reliance on continental ports for strategic aspects of the UK economy.

### **How competitive is the proposed Bathside Bay development?**

The Bathside Bay container port development will meet market requirements, in a highly competitive way.

#### *Water depth and access*

To remain in contention as front-rank container handling locations, ports must be able to handle current and coming generations of the largest vessels. This means providing access to vessels with draughts of up to 14.5m.

Terminals that are located at a distance from the open sea will find it increasingly difficult to keep up with the latest depth requirements, since the dredging involved will be extensive, costly, potentially disturbing environmentally and will require lengthy approval procedures.

Ports at a distance from the open sea are disadvantaged because tidal access windows for larger vessels are narrowed by the time taken to navigate the access channels. The Haven terminals (Bathside Bay and Felixstowe) are near the ideal from the point of view of large-vessel access. The HHA has already completed a programme to deepen the access channel at Felixstowe to -14.5m, and the port can receive the current deepest-drawing vessels (14.5m) over 80% of the time. Linking Bathside Bay to this deep-water channel – although involving some additional work – will clearly represent a much smaller dredging commitment than that entailed in other new terminal proposals.

#### *Operational capabilities and experience*

Comparing the current and recent productivity of UK container ports, in terms of TEU throughput per unit of quay and storage area, it is clear that Felixstowe (a terminal owned and operated by HPUK) provides the most efficient facility in the UK for handling the largest vessels operated by the mainline container carriers. Not only is Felixstowe the most productive UK port, but measures to raise productivity toward a target of 1,400 TEU/year per berth metre will sustain and extend the port's lead in this respect.

Given the established track record of HPUK for highly productive container handling facilities, it can be reasonably assumed that the planned facilities will be very fully utilised.

### *Port location*

Given that the UK is comparatively small market geographically there is relatively little to choose in the location of the various projects that are being promoted. Existing and planned terminals are well located for the south-east UK market. However, the Haven terminals are better placed to serve the Midlands and the north.

The proposed terminal at Bathside Bay will, like Felixstowe, be well placed for transshipment. Felixstowe's established transshipment hinterland stretches from the Baltic to the Mediterranean and Ireland.

### *Hinterland links*

The major UK container ports are all served by both road and rail links to the hinterland. The Haven terminals are particularly well placed to serve the Midlands and the north through the existing road infrastructure.

The mix of road and rail at the major container ports depends heavily on customer choice, rather than on any intrinsic infrastructure advantages of one UK container port location over another, with some port customers favouring rail much more highly. Development of the Haven terminals will require a further expansion of intermodal capacity. The Strategic Rail Authority (SRA) has given priority status to upgrading the cross-country link to Nuneaton in order to connect the port with the west coast mainline without the necessity for routing through London.

### *Transshipment*

Felixstowe is by far the UK's major deepsea transshipment hub. To maintain this role, it is apparent that significant further capacity will be required. Harwich Haven is well placed for transshipment, in terms of vessel access considerations, location in relation to the major European transshipment zones and the existing customer base at Felixstowe.

The development of HPUK's capacity in the Haven is needed to sustain the UK's role in this important market sector. In other locations, plans for transshipment are a more speculative aspect of the proposed development.

### **Conclusion**

On the basis of demand forecast (and increasing ship size within those forecasts), a clear national requirement has been identified for new deepwater container handling capacity. HPUK's proposal to develop new capabilities in the Haven ports of Harwich and Felixstowe would provide a major part of the solution to meet the forecast demand:

- The project will provide substantial new capacity and be capable of handling the very largest vessels that are taking an increasing share of the deepsea container trade.
- It is clear that the Bathside Bay terminal will be highly competitive commercially and the operational expertise of HPUK will ensure maximised utilisation of proposed investments.

- The Harwich Parkeston Quay Act 1988 authorises the reclamation of Bathside Bay and some 30% of the Bay has already been reclaimed. The proposal to undertake the tidal works to reclaim the remainder of the Bay and the landside development effectively completes the scheme authorised by the Act.
- The development of new port facilities at Bathside Bay that utilise existing infrastructure is supported at the regional, strategic and local planning policy levels in both existing and emerging strategy, subject to environmental safeguards.
- Not providing this much needed facility will have detrimental impacts on the UK ports industry and could do potentially far-reaching damage to the broader development of the UK economy.