



Implementation Report - Safeguarded Wharves Review 2018 - 2019

Final – December 2019

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Copies of this report are available from the weblink set out on the 'how to give your views' page

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Supporting documents

This Report is supported by the following documents, which were available for public consultation from 11th May to 3rd August 2018:

- 1) Individual Site Assessments of each wharf, updated December 2019, GLA

And

- 2) Forecasting London's Freight Demand and Wharf Capacity on the Thames 2015 – 2041, December 2016, Ocean Shipping Consultants

And

- 3) Strategic Environmental Assessment – Safeguarded Wharves Review, February 2018, WSP Consultants.

And

- 4) Habitats Regulations Assessment Screening, February 2018 WSP Consultants

And

- 5) An Equalities Impact Assessment of the Safeguarded Wharves Review, GLA

You can view these documents online and download them from:
<https://www.london.gov.uk/what-we-do/planning/implementing-london-plan/supplementary-planning-guidance/safeguarded-wharves-review>

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Executive Summary

- The last review of the network of safeguarded wharves approved by Government was undertaken in 2005.
- The proposals set out in this document were subject to a 3 month consultation from 11 May and 17 August 2018, with a further round of consultation on changes in response to submissions from 20 August to 2 October 2019. After considering the responses the Mayor is submitting this final set of recommendations to the Secretary of State for Housing, Communities and Local Government for his approval and to ask him to issue a further set of directions.
- The Mayor is recommending the removal of the safeguarding designation from the wharves listed in table ES 1 below.

Table ES 1 - Wharves where safeguarding Direction is recommended to be removed.

Borough	Wharf
Bexley	Railway
Newham	Priors
Newham	Mayer Parry
Barking & Dagenham	Welbeck
Havering	Phoenix

- The proposed Silvertown tunnel scheme will lead to the temporary loss of a safeguarded wharf and the need to relocate existing operators. This offers the opportunity to consolidate wharf activities within a more coherent boundary.

Table ES 2 - Wharves where safeguarding Direction is recommended to be removed due to the Silvertown Tunnel Scheme and to consolidate existing wharf operators

Borough	Wharf
Newham	Thames
Newham	Manhattan
Newham	Sunshine

- The Mayor is recommending the protection of the following wharves, which are not currently safeguarded, with the safeguarding Directions. These are set out in table ES 3 below.

Table ES 3 - Wharves where safeguarding Direction is proposed to be applied.

Borough	Wharf
Newham	Royal Primrose
Barking & Dagenham	Alexander

- The capacity of the network of safeguarded wharves is estimated at 18.0 mt. If the recommendations in tables ES1-ES3 are implemented the network's capacity will change to c.17.4 mt, a fall of 3.5%.
- The Habitats Regulation Assessment (HRA) screening, indicates that for the Mayor proposed Safeguarded Wharves *"it is not considered likely that there will be any significant effects on the European sites..."*
- The Strategic Environmental Assessment (SEA), indicates for the proposed safeguarded wharves the impact on the identified SEA topics is overwhelming positive.

Introduction

This chapter sets out some contextual background on wharves.

- 1.1 Safeguarding of Thames wharves was introduced as part of the suite of policies in Strategic Guidance for the River Thames (RPG3b/9b) in February 1997. Safeguarding Directions transferred the responsibility for safeguarding from the Secretary of State to the mayor of London and designated the wharves to be safeguarded. Planning applications on these wharves are referable to the Mayor under Category 4 of the Town & Country Planning (Mayor of London) Order 2008. Thus, any application lodged on the sites should be treated as a strategic referral to the Mayor under the procedures set out in the Order. This applies irrespective of whether it is for comprehensive redevelopment of the site or cargo-handling operations. The last set of safeguarding Directions were issued in 2005, as a result of the review of the same year.
- 1.2 Whilst the power to issue safeguarding Directions rests with the Secretary of State, it is for the Mayor to recommend to the Secretary of State which sites should be safeguarded, in the context of the London Plan.
- 1.3 The Directions have enabled the redevelopment of wharves that are viable or capable of being made viable for cargo-handling, to be fully considered in terms of the wharf's operational, planning and transport context.
- 1.4 The Mayor sought to review the Safeguarded Wharves network in 2011 making final recommendations to the Secretary of State for changes to the network in 2013. The Secretary of State chose not to endorse the Mayor's proposals and thus the network of wharves safeguarded via the 2005 review still represents the current network of safeguarded wharves.
- 1.5 National policy is set out in the National Planning Policy Framework¹ (March 2012) (the NPPF). The following paragraphs are of most relevance. Paragraph 17 *"Within the overarching roles that the planning system ought to play, a set of core planning principles should underpin both plan-making and decision-taking. These, 12 principles are that planning should;...proactively drive and support sustainable economic development to deliver the homes, business and industrial units, infrastructure...support the transition to a low carbon future in a changing climate,...contribute to conserving and enhancing the natural environment and reducing pollution."* Paragraph 30 *"Transport policies have an important role to play in facilitating sustainable development but also in contributing to wider sustainability and health objectives."* Paragraph 31 *"Local authorities should work with neighbouring authorities and transport providers to develop strategies for the provision of viable infrastructure necessary to support sustainable development"* Paragraph 35 *"Plans should protect and exploit opportunities for the use of sustainable*

¹ <https://www.london.gov.uk/what-we-do/planning/london-plan/current-london-plan>

modes for the movement of goods or people...” Paragraph 143 “In preparing Local Plans, local planning authorities should...safeguard existing, planned and potential rail heads, rail links to quarries, wharfage and associated storage, handling and processing facilities for the bulk transport by rail, sea or inland waterways of minerals, including recycled, secondary and marine-dredged materials..”

- 1.6 The Marine Policy Statement² (March 2011) (the MPS) sets out a framework for preparing marine plans and for taking decisions that affect the marine environment and is a material consideration for both land use and marine planning. Any decision made by planning authorities in relation to safeguarded wharves is required to have regard to the MPS. Two sections of the MPS are relevant to this report – Shipping and ports and marine aggregates.
- 1.7 In paragraph 3.4.1 the MPS states *“Ports and shipping play an important role in the activities taking place within the marine environment. They are an essential part of the UK economy, providing the major conduit for the country’s imports and exports.”* In paragraph 3.4.7 it adds *“Marine plan authorities and decision makers should take into account and seek to minimise any negative impacts on shipping activity...”*. ‘Decision makers’ includes both the Mayor and the boroughs. In paragraph 3.4.11 it advises *“When decision makers are advising on or determining an application for an order granting development consent in relation to ports, or when marine plan authorities are developing Marine Plans, they should take into account the contribution that the development would make to the national, regional or more local need for the infrastructure, against expected adverse effects including cumulative impacts.”*
- 1.8 In paragraph 3.5.1 the MPS supports the continued use of marine aggregates *“The UK has some of the best marine aggregate resources in the world. Marine sand and gravel makes a crucial contribution to meeting the nation’s demand for construction aggregate materials, essential for the development of our built environment. They are particularly important in England, accounting for 38% of the total regional demand for sand and gravel in the South East (80% in London),...It continues”* The extraction of marine dredged sand and gravel should continue to the extent that this remains consistent with the principles of sustainable development, recognising that marine aggregates are a finite resource and in line with the relevant guidance and legislation”. In paragraph 3.5.2 it adds *“Marine aggregates contribute to diversity of supply and deliver high quality aggregate into the centre of areas of high demand with minimum disruption.”* London is an area of high demand. In paragraph 3.5.3 the MPS advises *“Marine aggregates can present reduced impacts on local communities compared to the extraction of land-won aggregates, in particular with regard to the extraction process and transportation. Substantial*

² https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69322/pb3654-marine-policy-statement-110316.pdf

volumes of marine aggregates are landed on wharves close to where they are needed and locally distributed by rail, water (through barges) and road. Wider social and economic benefits include skilled, stable employment and the generation of income through the construction industry supply chain.”

1.9 Section 41 of the Greater London Authority Act (1999) places duties on the Mayor with regards to the strategies the Mayor produces, such as the Mayor’s Transport strategy or the Spatial Development Strategy, usually referred to as the London Plan. Given this, in sub sections 4 and 5, of Section 41, the Act states that:

- *In preparing or revising any strategy mentioned in subsection (1) above, the Mayor shall have regard to—*
- *the principal purposes of the Authority;*
- *the effect which the proposed strategy or revision would have on—*
- *the health of persons in Greater London; and*
- *the achievement of sustainable development in the United Kingdom; and*
- *the matters specified in subsection (5) below.*
- *Those matters are:*
- *the desirability of promoting and encouraging the use of the River Thames safely, in particular for the provision of passenger transport services and for the transportation of freight.*

1.10 The London Plan³ (March 2016) contains a number of relevant policies such as: Policy 5.20 Aggregates “*A The Mayor will work with all relevant partners to ensure an adequate supply of aggregates to support construction in London. This will be achieved by: 3 importing aggregates to London by sustainable transport modes. Fb – safeguard wharves and/or railheads with existing or potential capacity for aggregate distribution Fc minimise the movement of aggregates by road and maximise the movement of aggregates via the Blue Ribbon Network.*”

1.11 Policy 6.14 Freight “*A The Mayor will work with all relevant partners to improve freight distribution...and to promote movement of freight by rail and waterways...B Development proposals that: c) increase the use of the Blue Ribbon Network for freight transport will be encouraged. C DPDs should promote sustainable freight transport by: a safeguarding existing sites and identifying new sites to enable the transfer of freight to rail and water...*”

1.12 Policy 7.26 Increasing the use of the Blue Ribbon Network for freight transport “*A The Mayor seeks to increase the use of the Blue Ribbon Network to transport freight. B Development proposals a) should protect existing facilities for waterborne freight traffic, in particular safeguarded wharves should only be used for waterborne freight handling use. The redevelopment of safeguarded*

³ <https://www.london.gov.uk/what-we-do/planning/london-plan/current-london-plan>

wharves for other land uses should only be accepted if the wharf is no longer viable or capable of being made viable for waterborne freight handling...Temporary uses should only be allowed where they do not preclude the wharf being reused for waterborne freight handling uses...The Mayor will review the designation of safeguarded wharves prior to 2012. B) which increase the use of safeguarded wharves for waterborne freight transport, especially on wharves which are currently not handling freight by water, will be supported. C) adjacent or opposite safeguarded wharves should be designed to minimise the potential for conflicts of use and disturbance D) close to navigable waterways should maximise water transport for bulk materials, particularly during demolition and construction phases. C) Within LDFs boroughs should identify locations that are suitable for additional waterborne freight.”

- 1.13 Other plan policies also promote waterborne freight. Policy 5.17 on Waste Capacity promotes the use of the river “*B Proposals for waste management should be evaluated against the following criteria:...e) achieving a positive carbon outcome for waste treatment methods and technologies (including the transportation of waste,... g the full transport and environmental impact of all collection, transfer and disposal movement and, in particular, the scope to maximise the use of rail and water transport using the Blue Ribbon Network. G Land to manage borough waste apportionments should be brought forward through: ...d safeguarding wharves (in accordance with Policy 7.26) with an existing or future potential for waste management.”* Policy 5.18 dealing with Construction, Excavation and Demolition waste the use of the river “*A New construction, excavation and demolition (CE&D) waste management facilities should be encouraged at existing waste sites, including safeguarded wharves,... B Waste should be removed from construction sites, and materials brought to site, by water or rail transport wherever that is practicable...”* Policy 7.24 calls for “*prioritizing uses of the waterspace and alongside it safely for water related purposes, in particular for passenger and freight transport.”*
- 1.14 The draft London Plan continues to set out the Mayor’s support for river freight. Policy E4 on providing land to support London’s economic functions especially Parts A and D1. Policy SI 8 on waste especially Part B3C, Aggregates policy SI 10 part D2, Policy SI 15 on water transport, Transport Policy T2 on healthy streets particularly, Parts B 1 and D 2 and Policy T7 on freight and servicing.
- 1.15 The Mayor’s Transport Strategy⁴ (March 2018, pg. 198) sets out a complementary approach to that of the London Plan, it contains the following policy “*The Mayor, through TfL and the boroughs, and working with stakeholders, will seek the use of the Thames to carry passengers to integrate river services with the public transport system, walking and cycling networks,*

⁴ <https://www.london.gov.uk/sites/default/files/mayors-transport-strategy-2018.pdf>

and to enable the transfer of freight from road to river in the interests of reducing traffic levels and the creation of Healthy Streets.”

- 1.16 In November 2011, the Mayor adopted his statutory Municipal Waste Management Strategy ‘London’s Wasted Resource’⁵ This contains Policy 2 (pg. 77) *‘Reducing the climate change impact of London’s municipal waste management’* This is underpinned by a series of proposals such as Proposal 2.5(pg. 77) which states *“The Mayor, through Transport for London (TfL), will work with waste authorities to maximise cost efficiencies and reduce the environmental impact of transporting municipal waste...”*. On page 90 the strategy states *“The Mayor also wishes to see greater use of rail and water for transporting London’s municipal waste and supports the development of more waste infrastructure at railheads and wharves...”* This is developed further in Proposal 5.3 (pg115) *“The Mayor, through TfL, will encourage the movement of municipal waste using sustainable modes of transport. The Mayor, through TfL, will promote sustainable forms of transport for municipal waste, maximising the potential of rail and water transport where practicable The Mayor, through TfL, will work with waste authorities to make better use of London’s wharves and canals and the River Thames for developing the city’s municipal waste management infrastructure.”*
- 1.17 In his adopted Business Waste Strategy (November 2011) ‘Making Business Sense of Waste’⁶ the Mayor is seeking a similar approach for business waste Proposal 3.6 (pg83) encourages the integration of waste infrastructure into the urban environment noting that *“London needs to make better use of its rivers and canals, particularly for waterborne freight, including waste. This can also provide an opportunity for the waste sector to reduce its own transport-related environmental impacts. Water transport is particularly suited to bulk movements of relatively low value cargoes, including waste and recyclates, and waste and materials associated with construction and demolition activities.”*
- 1.18 This proposal is underpinned by a number of actions *“Action 3.6.1 The Mayor will examine opportunities for transporting waste by rail or water. Transport for London will, as appropriate, support businesses to explore opportunities to open up the rail and navigable water network for the transportation of waste, to allow the waste sector to reduce its vehicle mileage and the associated environmental and social impacts, including emissions, air quality, health impacts, noise and dust.”* and *“Action 3.6.2 Through Policy 5.17 of the London Plan, the Mayor will continue to require that wharves with an existing or future potential for waste management should be identified and safeguarded specifically for that use.”*

⁵ <https://www.london.gov.uk/WHAT-WE-DO/environment/environment-publications/mayors-municipal-waste-management-strategy>

⁶ <https://www.london.gov.uk/WHAT-WE-DO/environment/environment-publications/mayors-business-waste-management-strategy>

- 1.18 "Delivering London's Energy Future"- London's Climate Change Mitigation and Energy Strategy⁷ (October 2011, pg. 181) highlights that the transport sector was responsible for 22% of London's CO₂ emissions (9.9Mt) in 2008. Policy 10 seeks to tackle these emissions by *"Minimizing CO₂ emissions through a shift to more carbon efficient modes of transport. The Mayor, through TfL and working with boroughs and partners will support and incentivise carbon efficient travel behaviour, minimise the need to travel, and encourage a switch to lower carbon modes of transport....for freight, it will include water and rail-based movement."*
- 1.19 The strategy notes that (pg 184) *"In total nearly three quarters of London's CO₂ emissions from transport are from road-based modes."* In contrast, water based transport contributes less than 1% of the emissions (Pg185). The strategy (pg. 189) notes that *"The average emissions from vans below 3.5 tonnes are 340g of CO₂e per tonne of freight moved per kilometre (tkm). The average emissions from large heavy goods vehicles (HGV's) are 83g of CO₂e per tkm. Rail is much lower at 32g of CO₂e per tkm. Rail and water are only suited to certain types of freight flows and often have to be used in conjunction with road for collection and delivery. However, given London's relatively dense network of railways and waterways, there is an opportunity to reduce CO₂ emissions from transporting freight in London."*
- 1.20 The Mayor's London Environment Strategy⁸ sets out an overall approach to environmental issues. Proposal 4.2.1e seeks to *"reduce emissions from freight through encouraging a switch to lower emission vehicles."* This includes *"examining other ways in which freight can be moved around...making better use of river and rail services."* *"The Mayor will also support any proposals to use wharves as freight consolidation centres..."* This approach is complemented by Policy 9.1.1 *"Minimize the adverse impacts of noise from London's road transport network"*, and proposal 9.1.1a *"The Mayor will work with TfL to encourage mode shift to reduce road traffic"* Policy 9.1.1c *"The Mayor will work with key stakeholders to reduce noise from freight activity in London."*
- 1.21 In July 2016 the Port of London Authority published its 20 year 'Vision for the Tidal Thames'⁹ which provides a framework for the development of the tidal Thames through to 2035. The Vision was developed in partnership with estuary stakeholders and includes six key goals for growth and actions to deliver these goals. A number of these goals relate to waterborne freight and the future use of safeguarded wharves.
- 1.22 The Vision includes a goal to *'see more goods and materials routinely moved between wharves on the river – every year over 4 million tonnes carried by water – taking over 400,000 lorry trips off the region's roads'*. The Vision also includes a goal to *'see the Port of London becoming the biggest it's ever been, handling 60 – 80 million tonnes of cargo each year'*. The vision recognises the importance of

⁷ <https://www.london.gov.uk/WHAT-WE-DO/environment/environment-publications/delivering-londons-energy-future-climate-change>

⁸ Mayor of London (2018), London Environment Strategy, <https://www.london.gov.uk/what-we-do/environment/london-environment-strategy>

⁹ <https://pla.co.uk/About-Us/The-Thames-Vision>

maintaining and improving exit and entry points to the river to enable freight and cargo transport and includes a goal to '*maintain or reactivate viable cargo handling facilities, with at least five additional facilities brought into operation by 2025*'. The Vision also includes a goal to extend the Mayor's River Concordat, originally set up to promote passenger transport, to include the promotion of freight movement by water.

- 1.23 The Thames Estuary 2050 Growth Commission was announced by the Chancellor of the Exchequer in March 2016. The Commission is charged with developing a vision and delivery plan for North Kent, South Essex and East London, reporting back by 2017 with a clear and affordable delivery plan for achieving the vision. As outlined in DCLG's July 2016 discussion paper¹⁰, a key work stream for the Commission will be to review opportunities and constraints associated to 'increasing connectivity', which will include a review waterborne transport and associated infrastructure.
- 1.24 The Environment Agency's Thames River Basin District – River Basin Management Plan 2015¹¹ establishes a framework for protecting and enhancing the environmental, social and economic benefits provided by the water environment, implementing the requirements of the European Water Framework Directive. The Plan recognises that value of the estuary, and wider water environment, in supporting transportation and economic development. The plan recognises that value of the estuary in supporting commerce and navigation, through its designation as a Heavily Modified Water Body (HMWB).
- 1.25 The National Needs Assessment (NNA) is a cross-sector policy review of the UK's national economic infrastructure needs to 2050. Coordinated by the Institute of Civil Engineers (ICE), it covers energy, transport, communications, housing, water, waste and flooding. The NNA has established a shared vision for infrastructure, stating '*The UK will invest efficiently, affordably and sustainably in the provision of infrastructure assets and services to drive the economic growth necessary to enhance the UK's position in the global economy, support a high quality of life and shift towards a low carbon future*'.
- 1.26 Ensuring commercial activities continue to thrive and grow without compromising the natural, heritage, recreational, and landscape resources of the estuary is an overarching aim of the guidance. The guidance highlights that using the river as a sustainable transport corridor could result in significant reductions in road traffic and congestion. The guidance also includes Principles for Action for the safeguarding of riverside areas with good navigational access for river dependant activities.
- 1.27 Thames Strategy East is a strategic planning document providing a 100 year vision for the Thames area stretching from Tower Bridge to Gravesham. The plan focuses on providing landscape and development design guidance based on heritage, natural habitat preservation, recreational and access needs, economic considerations and flood defence requirements. The strategy includes reach specific guidance and policy which highlights the potential of waterborne transport.

¹⁰ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/537578/Call_for_ideas.pdf

¹¹ <https://www.gov.uk/government/collections/river-basin-management-plans-2015#thames-river-basin-district-rbmp-2015>

Freight – Demand, Capacity and Distribution to 2041

Demand

- 2.1 In the Autumn of 2016 the Mayor appointed Ocean Shipping Consultants Limited to undertake an assessment of demand for freight on the Thames in London to 2041, estimate the capacity of the current network to handle this forecast demand and examine the distribution of the demand/capacity across the network. This chapter presents a summary of their findings, a link to the full report is set out on the 'how to give your views' page.
- 2.2 Table 2.1 below shows that overall there has been a growth in freight volumes on the Thames in London over the 2005-2015 period. A period that covers both economic growth and economic recession. Strong growth in Construction Materials (this includes Construction, Demolition & Excavation Waste) and Petroleum Products has outweighed decline in Sugar, Agricultural Bulks and Steel. Waste and Vehicles have seen small growth.

Table 2.1 Change in Freight Volumes on the Thames 2005-2015

Commodity	Tonnes 2005	Tonnes 2015	Overall Change	% Change from 2005	% CAGR
Construction Materials	4,894,407	6,943,274	2,048,867	41.9%	3.6%
Sugar	1,164,999	543,416	- 621,583	-53.4%	-7.3%
Waste	1,009,224	1,076,856	67,632	6.7%	0.7%
Vehicles/Unitised	862,625	882,979	20,354	2.4%	0.2%
Agricultural Bulks	652,712	577,009	- 75,703	-11.6%	-1.2%
Steel	54,667	6,402	- 48,265	-88.3%	-19.3%
Petroleum	295,550	686,260	390,710	132.2%	8.8%

Products					
Total	9,092,167	10,716,196	1,624,029	17.9%	1.7%

- 2.3 Table 2.2 shows how the composition of freight volumes on the Thames in London has changed over the 2005-2015 period. The most notable features being the increasing importance of Construction Materials and the decline in Sugar.

Table 2.1 Composition of Freight Volumes on the Thames 2005-2015

Commodity	% of Total 2015	% of Total 2005
Construction Materials	64.8%	53.1%
Sugar	5.1%	12.8%
Waste	10.0%	11.1%
Vehicles/Unitised	8.2%	9.5%
Agricultural Bulks	5.4%	7.2%
Steel	0.1%	0.6%
Petroleum Products	6.4%	3.3%

- 2.4 OSC suggested that the basis for all commodity forecasts is the Compound Annual Growth Rate (CAGR) which is used to calculate an annual average growth rate over the historical period 2005-2015. CAGR accounts for fluctuations in the annual data and provides an average rate of change in volumes which can be used for forecasting.

- 2.5 The formula for CAGR is:

$$CAGR = \left(\left(\frac{End\ Value}{Start\ Value} \right)^{\frac{1}{n}} \right) - 1$$

Where n = time period

- 2.6 Even though CAGR can accurately reflect historical trends, it cannot, on its own, constitute an accurate forecasting method, especially over a longer time

horizon. So, even though it is used as a basis for the forecasts, it is not applied uniformly over the forecast period. In moving from the short-term to the longer-term, additional market assessments and assumptions are made which influence future commodity trends, therefore OSC utilised a CAGR 'Adjusted' measure. These will be discussed in more detail for each of the main commodities together with the overall forecast results.

- 2.7 Within this forecast methodology (CAGR 'Adjusted'), a high, base and low case scenario can be formulated. The base case scenario represents the most likely outcome whereas the high and low cases serve as a sensitivity analysis.
- 2.8 The CAGR of the different commodities from the historical dataset are presented in Table 2.3 below:

Table 2.3 Historical Commodity CAGR

Commodity	Start Value	End value	Period	% CAGR
Agricultural Bulks	652,712	577,009	2005-2015	-1.2%
Construction M.	4,894,407	6,943,274	2005-2015	3.6%
Petroleum	295,550	686,260	2005-2015	8.8%
Steel	54,667	21,313	2005-2016*	0.1%
Sugar	1,164,999	550,000	2005-2016*	5.1%
Vehicles	862,625	882,979	2005-2015	0.2%
Waste	1,009,224	1,076,856	2005-2015	0.7%

*2016 values were estimated and so forecasts begin a year later for these two commodities

- 2.9 As an example, the CAGR for Agricultural Bulks is calculated as follows:

$$CAGR = \left(\left(\frac{577,009}{652,712} \right)^{\frac{1}{2015-2005}} \right) - 1 = -0.01$$

Or -1% if expressed as a percentage.

- 2.10 It should be noted that cargo types assigned to individual wharves do not change over time i.e. a wharf is assumed to have been used for the same type of cargo over the period 2005-2015. This is an assumption that does not significantly affect estimated commodity volumes since it is accurate for the majority of cases. If a wharf is categorised as vacant during 2015, it is

assumed that they are vacant throughout the study period – although this may change in practice.

- 2.11 In the majority of cases, as the following table shows, CAGR calculations were used as a foundation for the base case scenario. In the case of Petroleum, the calculated CAGR was significantly high, based on our market intelligence information. This was deemed too high to reflect market conditions as a base case scenario. Therefore this was utilised as the high case scenario. For Steel and Sugar, the opposite is true.

Table 2.4 Commodity CAGR Scenarios

Commodity	CAGR Scenario
Agricultural Bulks	Base Case
Construction Materials	Base Case
Petroleum	High Case
Steel	Low Case
Sugar	Low Case
Vehicles	Base Case
Waste	Base Case

- 2.12 It should be highlighted however, that none of the scenarios, even the ones formulated on historical CAGR, are solely based on this value. As previously mentioned, they are combined with market condition assumptions and market intelligence. Each year in the period under consideration is given its own growth rate; rates for representative years are shown in tables after each commodity forecast.

- 2.13 So, for example, the 2021 estimated value of a commodity will be:

$$2021value = 2020value * (1 + 2021growthrate)$$

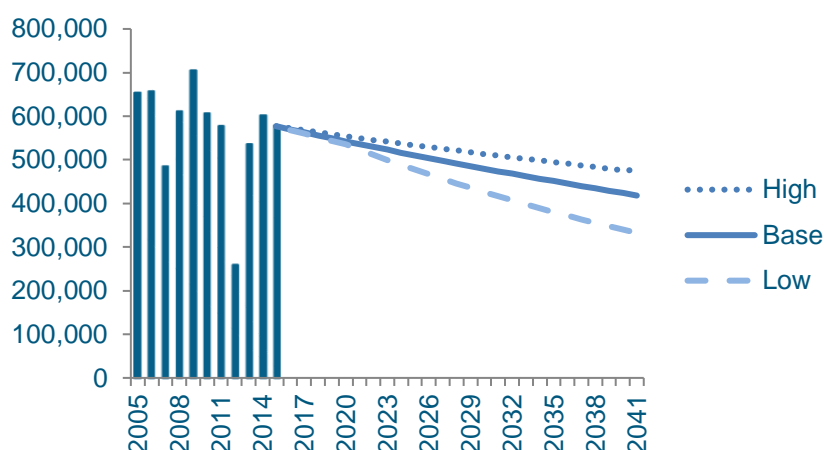
- 2.14 The base case scenario represents the most probable estimation of future market conditions. However, for the sake of sensitivity analysis, High and Low scenarios are also presented. They are an indication of possible volumes if growth rates fluctuate from our base case mean. The three scenarios broadly follow a similar trend for most commodities. When they do not, the cases are based on alternative market scenarios that can influence throughput in a significant way and are discussed under the individual commodity forecasts.

Individual Commodities

- 2.15 Whilst agricultural bulks represent a relatively small portion of overall traffic, it accounts for approximately 600,000t. Even though there have been significant

fluctuations, the overall trend is slowly decreasing over time. The base case scenario is formulated by applying the CAGR uniformly across the forecast horizon as it is anticipated that there will be no significant alteration to either supply or demand within the trading area. OSC were unable to confirm our forecast with a major oil seed importer. Accordingly, by 2041, the volumes will be around the 400,000t. In all three scenarios, a small decrease is expected in agricultural bulks. However, the forecasted values are anticipated to be within range of observed historical volumes.

Figure 2.1 Forecast Agricultural Bulks (tonnes)



(Source: Ocean Shipping Consultants)

Table 2.5 Forecast Agricultural Bulks CAGR by focus year

Agricultural Bulks	2016	2021	2031	2041
High	-0.85%	-0.75%	-0.75%	-0.75%
Base	-1.23%	-1.23%	-1.23%	-1.23%
Low	-1.50%	-2.25%	-2.25%	-2.25%

(Source: Ocean Shipping Consultants)

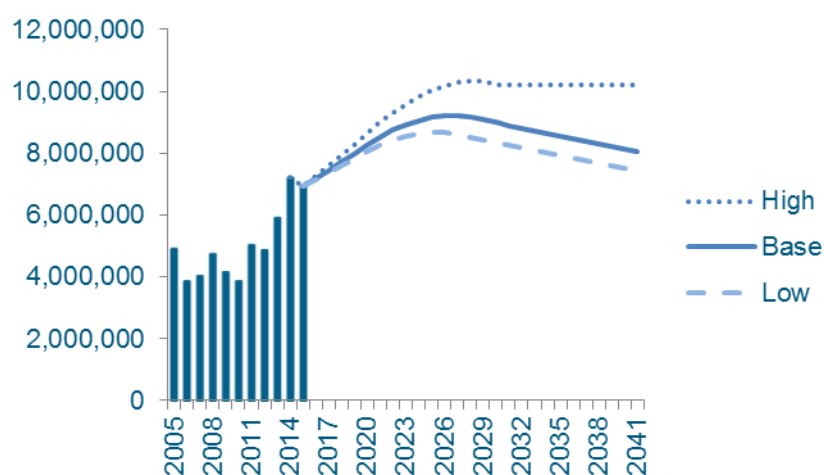
2.16 Construction Materials represent the majority of cargo for traffic on the Thames and have been rising rapidly over the recent past. CAGR for the period 2006-2015 was 4%. Construction materials are expected to continue on this upward trend especially since there are major projects planned in or around London. These include:

- The High Speed Rail (HS2)
- Silvertown Tunnel
- Thames Tideway Tunnel
- Bakerloo Line Extension
- Crossrail 2

2.17 In addition to the above schemes, the recent announcement from the Mayor's office (October 2016) that there will be new Thames crossings (bridges and tunnels) will also add to the potential for construction material to be transported via the Thames.

2.18 These projects are expected to generate both an increase in construction materials and an increase in CD&E waste moved via the river. Given the historic trend and the planned projects, this commodity is expected to increase substantially, in line with build-out of large infrastructural projects. The base case scenario is based on CAGR, however a 3.5% increase is unlikely to be sustained in the long-run. The planned projects given above are due for completion by 2028 and it is uncertain whether there will be further projects of this magnitude to sustain the same level of growth. Therefore, the growth rate gradually slows over latter the forecast period. Overall, construction materials are forecast to increase to 9.2mt by 2026, before declining to approximately 8.0mt by the end of the study period.

Figure 2.2 Forecast Construction Materials (tonnes)



(Source: Ocean Shipping Consultants)

Table 2.6 Forecast Construction Materials CAGR by focus year

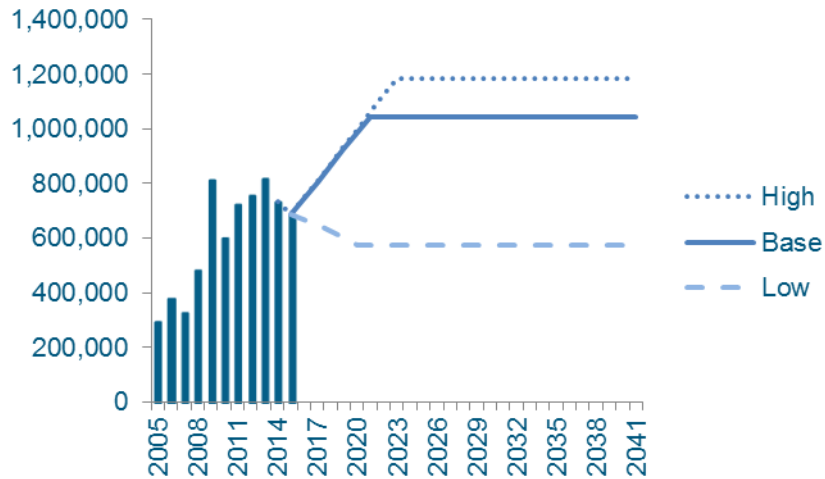
Construction M	2016	2021	2031	2041
High	4.50%	4.00%	0.00%	0.00%
Base	3.56%	3.06%	-1.00%	-1.00%
Low	3.00%	2.50%	-1.00%	-1.00%

(Source: Ocean Shipping Consultants)

2.19 Growth in petroleum products has been strong with a CAGR of 9%. All the petroleum products that are transported on the Thames flow to the Pinnacle Terminal where Stolt have a processing and storage facility. It is unlikely that another terminal will begin operations within the study area during the forecast period. Discussion with Stolt highlighted the investment that the company has made at the site in recent years. They also have expansion plans, meaning

that potential throughput at the terminal will increase in the near-term. Overall, there is positive potential for petroleum products on the Thames. The forecast highlights that the base case could rise to 1,000,000 tonnes per annum - if additional capital is invested at the facility- thus leading to a higher annual throughput.

Figure 2.3 Forecast Petroleum (tonnes)



(Source: Ocean Shipping Consultants)

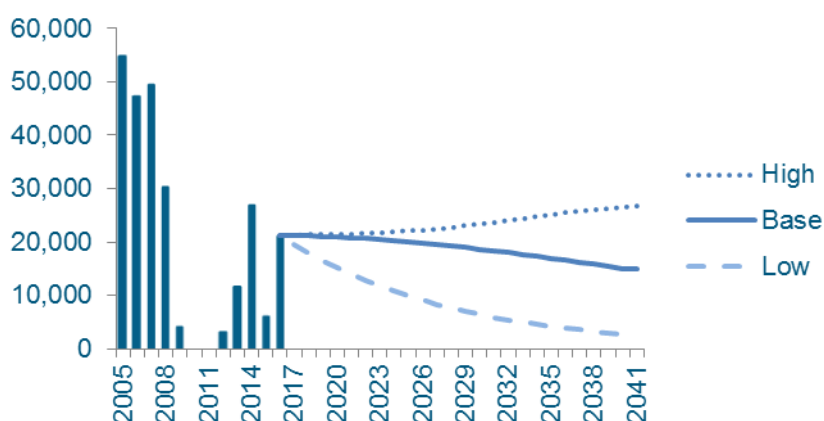
Table 2.7 Forecast Petroleum CAGR by focus year

Petroleum	2016	2021	2031	2041
High	8.79%	6.29%	0.00%	0.00%
Base	8.50%	6.00%	0.00%	0.00%
Low	-2.50%	0.00%	0.00%	0.00%

(Source: Ocean Shipping Consultants)

2.20 Steel traffic on the Thames mostly refers to scrap steel/metal and amounts to approximately 20,000 tonnes (average of past 10-years). Historical data is characterised by very large fluctuations in scrap metal throughput. Forecasting future throughput for the base case is based on declining throughput. This has not been verified via interviews, as these were declined. The low case scenario is formulated using CAGR and according to this, there is potential that this trade could cease during the forecast period. However, given the large inconsistency of the data, the base case is deemed the most likely scenario.

Figure 2.Error! No text of specified style in document. **Forecast Steel (tonnes)**



(Source: Ocean Shipping Consultants)

Table 2.8 Forecast Steel CAGR by focus year

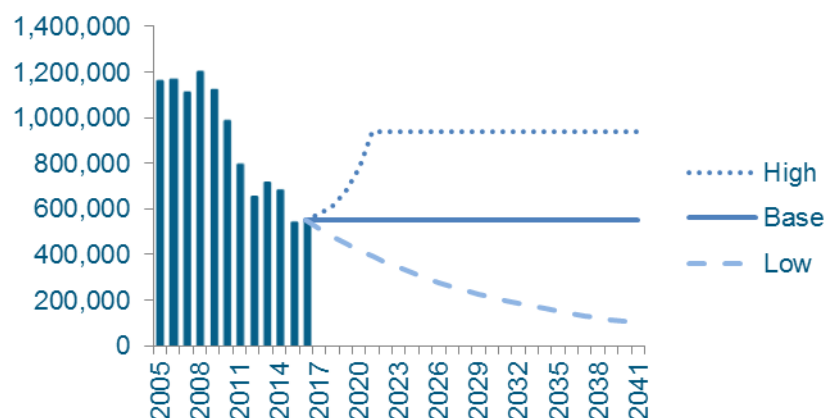
Steel	2016*	2021	2031	2041
High	21,313	0.40%	1.40%	0.80%
Base	21,313	-0.60%	-1.60%	-2.60%
Low	21,313	-8.21%	-8.21%	-8.21%

*2016 throughput for steel has been estimated as the average of the period 2005-2015, this was done due to missing values and large fluctuations to the dataset

(Source: Ocean Shipping Consultants)

2.21 The Thames Refinery plant has undergone a downgrading of refining capacity in recent years, as an adjustment to the changing demands from the sugar market. Capacity is around 500,000t annually. However, the operator hopes that the effect of Brexit on the UK sugar market may be positive, with more open policies, and improved customs and tariffs that will benefit the plant. Potentially the plant could double its current capacity if this were to occur.

Figure 2.5 Forecast Sugar (tonnes)



(Source: Ocean Shipping Consultants)

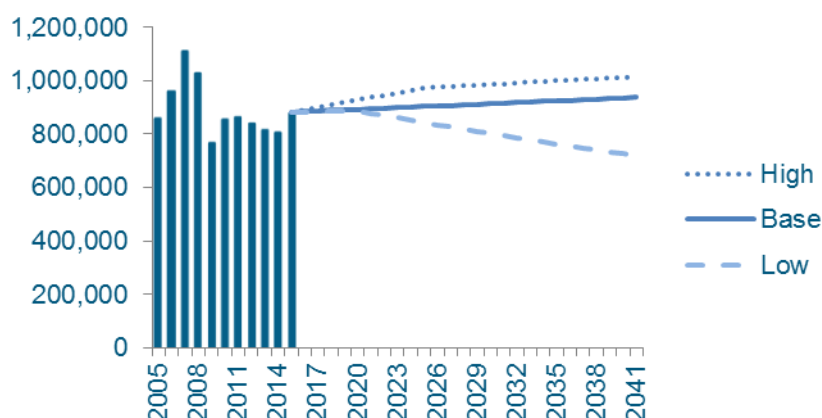
Table 2.9 Forecast Sugar CAGR by focus year

Sugar	2016*	2021	2031	2041
High	550,000	20.50%	0.00%	0.00%
Base	550,000	0.00%	0.00%	0.00%
Low	550,000	-6.60%	-6.60%	-6.60%

*2016 throughput for sugar has been estimated based on market intelligence

(Source: Ocean Shipping Consultants)

2.22 Vehicle traffic has been stable with a CAGR of 0.2%. This is forecasted to continue as shown in the base case scenario. Ford at Dagenham have recently invested in refurbishing the jetty and during 2015 purchased new tugs. Approximately, 300,000 vehicles per year are imported at the facility, whilst Dagenham-made diesel engines, plus eco-boost engines that are made at Bridgend are exported back to the Continent. As with sugar, the effects of Brexit could impact future throughput of vehicles.

Figure 2.6 Forecast Vehicles (tonnes)

(Source: Ocean Shipping Consultants)

Table 2.20 Forecast Vehicles CAGR by focus year

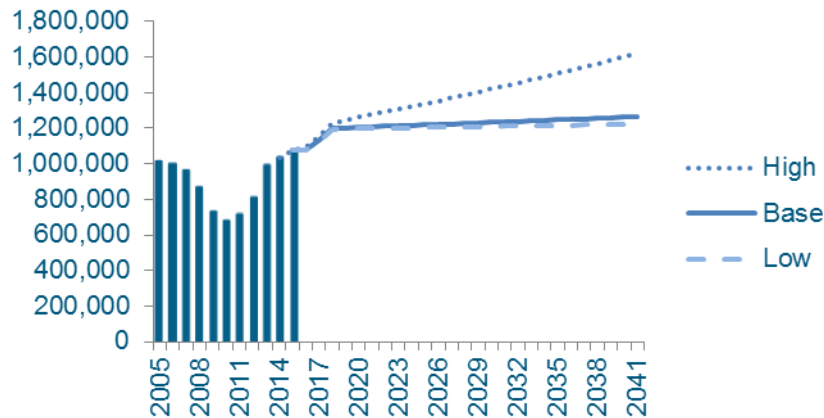
Vehicles	2016	2021	2031	2041
High	1.00%	1.00%	0.25%	0.25%
Base	0.23%	0.23%	0.23%	0.23%
Low	0.10%	-1.00%	-1.00%	-1.00%

(Source: Ocean Shipping Consultants)

2.23 The outlook for waste transportation on the Thames is a positive one. There is growing interest in the movement of waste via the Thames along with increased pressure on local councils to provide sustainable ways to handle

waste. The ability of the Belvedere incinerator to handle an additional 115,000t above current capacity will provide increased momentum for waste flows to the plant. Waste, which is handled on 10 safeguarded wharves, is forecast to increase throughout the study period. The base case scenario below highlights the potential increases of capacity at the Belvedere facility in the near-term, followed by historic rate increase per annum.

Figure 2.7 Forecast Waste (tonnes)



(Source: Ocean Shipping Consultants)

Table 2.11 Forecast Waste CAGR by focus year

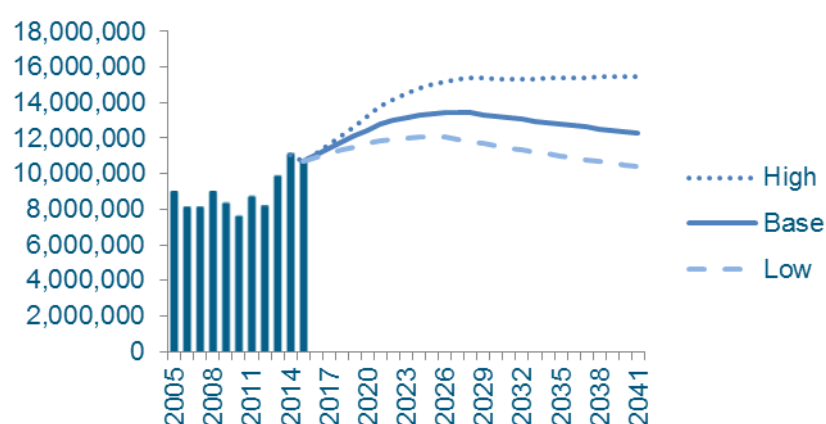
Waste**	2016	2021	2031	2041
High	1.20%	1.20%	1.20%	1.20%
Base	0.65%	0.65%	0.65%	0.65%
Low	0.10%	0.10%	0.10%	0.10%

(Source: Ocean Shipping Consultants)

**50,000 and 65,000t have been added to the forecasts for 2017 and 2018 respectively

2.24 The overall trend for the amount of cargo handled is forecast to increase to 13.4m tonnes by 2028. This peak could be pushed forward if there are significant delays in the major government backed infrastructure projects. Thereafter, it is anticipated that potential building/construction projects will continue, albeit at a lower less intensive rate than seen in previous decades. By the end of the study period, overall tonnes handled are approximately 12.3m tonnes. This total excludes new cargoes that may be transported on the river during the forecasts period, particularly containerised goods.

Figure 2.8 Forecast Total (tonnes)



(Source: Ocean Shipping Consultants)

Table 2.32 Overview of Commodity Forecast, by Case (tonnes)

Commodities	2015	2021	2031	2041
Agricultural Bulks				
High		549,583	509,728	476,336
Base	577,009	535,870	473,718	418,775
Low		522,974	416,532	331,754
Construction M				
High		8,998,686	10,229,853	10,229,853
Base	6,943,274	8,522,773	8,899,229	8,048,303
Low		8,250,386	8,245,252	7,456,858
Petroleum				
High		1,061,225	1,182,041	1,182,041
Base	686,260	1,044,215	1,044,215	1,044,215
Low		574,205	574,205	574,205
Steel				
High		21,527	23,661	26,737
Base	6,402	20,786	18,328	15,002

Low		13,890	5,900	2,730
Sugar				
High		941,454	941,454	941,454
Base	543,416	550,000	550,000	550,000
Low		391,019	197,637	99,894
Vehicles				
High		937,300	990,080	1,015,113
Base	882,979	895,421	916,549	938,175
Low		878,529	794,526	718,555
Waste				
High		1,276,565	1,438,295	1,620,515
Base	1,076,856	1,207,955	1,236,457	1,265,632
Low		1,198,729	1,210,770	1,222,933
Total				
High		13,786,340	15,315,112	15,492,048
Base	10,716,196	12,777,019	13,138,497	12,280,103
Low		11,829,733	11,444,821	10,406,927

(Source: Ocean Shipping Consultants)

Capacity

2.25 In order to help assess the capacity of the network, it is broken down into three geographic sections. The wharves to the west of Tower Bridge (on both sides of the river) (West), the wharves to the east of Tower Bridge on the North bank (North East) and those to the east of Tower Bridge on the South bank (South East). Appendix 1 sets out all the safeguarded wharves by sub region by commodity and capacity. This is summarised in table 2.13 below, giving a capacity of just over 18 million tonnes. In an effort to give as accurate picture as possible this estimate treated Alexander Wharf, an operational wharf but not safeguarded by the abortive 2011/3 review, as a safeguarded wharf. At 12,000 tonnes or 0.07% of overall capacity the Mayor did not view its inclusion as a significant change. Victoria Stone wharf (c.460,000 tonnes) currently handles construction materials by road not river. Therefore although the overall capacity figure for the NE sub region is correct at c.8.7m tonnes, the figure for construction material is an over estimate by 460,000 tonnes and the vacant figure is an under estimate by 460,000 tonnes.

- 2.26 Assessing capacity is problematic, as it can be affected by so many variables. Obviously, water depth can limit the size of a vessel using a wharf restricting capacity to high tide only. Many wharves have some form of on-site processing (such as washing marine gravel) which is considered to be critical to the economic viability of both the wharf itself and river transport generally. On-site processing will take up land that could otherwise be used for storing material and on-site processing may occur at a slower rate than loading/unloading, restricting capacity. A lack of suitable transport access can increase dwell times as streets may only be suitable for smaller lorries. A wharf's size and morphology can effect on site storage capacity. Restrictions on working hours, imposed as a condition of a planning permission, to reduce the impact of noise and dust on sensitive neighbouring uses are an obvious limit on capacity, especially when high tides fall outside of normal working hours.
- 2.27 All of these factors make it extremely difficult to provide a totally accurate assessment of wharf capacity. The data set out in Appendix 1 and summarized below is drawn from a number of sources. The Port of London Authority gives figures on the maximum annual throughput achieved for a number of wharves since 1995. This highpoint is taken as their theoretical capacity as it reflects the maximum throughput at the wharf, in the context of its characteristics, across several economic cycles. Another way to show capacity to examine it by commodity, this is shown in table 2.14 below.

Table 2.43 Estimated Capacity of Wharves by Commodity and Sub-Region, 2015

Commodities	North East	South East	West
Agricultural Bulks	-	857,000	-
Construction M	2,804,700	4,859,000	979,000
Food	21,400	-	-
Outside PLA Area	84,000	-	-
Petroleum	819,000	-	26,900
Steel	85,000	-	-
Sugar	1,331,000	-	-
Vacant	1,493,000	612,800	
Vehicles	1,112,000	-	-
Waste	961,000	1,220,000	771,000
Total	8,711,100	7,548,800	1,777,100

(Source: PLA 2016)

Table 2.14 Estimated Capacity of Wharves by Commodity, 2015

Commodity	Tonnes	%
Construction M	8,642,900	47.9%
Waste	2,952,000	16.4%
Vacant	2,105,800	11.7%
Sugar	1,331,000	7.4%
Vehicles	1,112,000	6.2%
Agricultural Bulks	857,000	4.8%
Petroleum	845,900	4.7%
Steel	85,000	0.5%
Total	18,037,000	

(Source: Table 2.13)

Demand

2.28 Table 2.15 and reveals that all sub regions experienced decline in the 2005-2010 period, probably due to the 2008/9 recession. Over the 2010-2015 period, there has been growth at wharves in all three sub regions. The data for the North East and South East sub regions shows they have enjoyed strong growth so that the 2015 figure is now above the 2005 baseline, this is especially true of the South East sub region. In the West sub region, the 2015 figure is still below the 2005 baseline but recovering from the 2010 figure.

Table 2.55 Historic Demand by Sub region 2005-2015

Sub region	2005	2010	2015	Change	% CAGR
North East	4,454,008	3,941,008	4,934,828	480,820	1.0%
South East	3,524,822	2,987,065	4,937,405	1,412,583	3.4%
West	1,113,337	665,027	843,963	- 269,374	-2.7%
Total	9,092,167	7,593,100	10,716,196	1,624,029	1.7%

(OSC)

2.29 Sub regional demand figures are shown below. They are based on the assumption, that if a sub region had 20% of a commodity in 2015, then it will have 20% of the 2041 total. They reveal the following sub regional patterns. In the North East sub region it is anticipated that strong growth will occur and the same pattern is found in the South East and West sub regions.

Table 2.16 Distribution of Commodities by sub region

Commodity	Total 2015	North East	South East	West
Construction Materials	6,943,274	36.1%	59.6%	4.3%
Waste	1,076,856	28.5%	20.7%	50.8%
Vehicles	882,979	100%	0%	0%
Petroleum	686,260	100%	0%	0%
Agricultural Bulks	577,009	0%	100%	0%
Sugar	543,416	100%	0%	0%
Steel	6,402	100%	0%	0%
Total	10,716,196	46.1%	46.1%	7.9%

(Source: OSC)

Table 2.17 Estimated Demand by sub region 2015-2041

Sub region	2015	2041	Change	% Change	% CAGR
North East	4,934,828	5,655,010	720,182	14.6%	0.53%
South East	4,937,405	5,657,963	720,558	14.6%	0.53%
West	843,963	987,116	143,153	17.0%	0.53%
Total	10,716,196	12,300,089	1,583,893	14.8%	0.53%

(Source: OSC)

2.30 Table 2.18 below highlights both commodity and capacity by sub region and the potential capacity gap. However, this excludes vacant wharves as these are not assigned a commodity. Table 2.19 highlights the overall demand and capacity in each region through to 2041. These include current capacity assumptions for all wharves in each area, both operational and vacant as provided by the PLA. In their examination of the gap analysis OSC advised that there is sufficient capacity to handle the forecast demand increases during the study period. On an aggregated sub-regional basis there is sufficient capacity to accommodate the increase in demand. However, in the near-term there could be concerns with both construction materials and petroleum that are forecast to have higher demand than capacity.

Table 2.18 Future Demand and Capacity* by Commodity and sub region 2015-2041 (mt)

Area	2015	2021	2031	2041
West				
Construction M				
Demand	296,914	364,458	380,556	344,168
Capacity	979,200	979,200	979,200	979,200
Gap	682,286	614,742	598,644	635,032
Waste				
Demand	547,049	613,648	628,127	642,948
Capacity	771,000	771,000	771,000	771,000
Gap	223,951	157,352	142,873	128,052
Petroleum				
Demand	-	-	-	-
Capacity	26,900	26,900	26,900	26,900
Gap	26,900	26,900	26,900	26,900
South East				
Agricultural Bulks				
Demand	577,009	535,870	473,718	418,775
Capacity	857,000	857,000	857,000	857,000
Gap	279,991	321,130	383,282	438,225
Construction M				
Demand	4,137,624	5,078,876	5,303,213	4,796,131

Capacity	4,859,000	4,859,000	4,859,000	4,859,000
Gap	721,376	- 219,876	- 444,213	62,869
Waste				
Demand	547,049	613,648	628,127	642,948
Capacity	1,220,000	1,220,000	1,220,000	1,220,000
Gap	672,951	606,352	591,873	577,052
North East				
Construction M				
Demand	2,508,736	3,079,439	3,215,460	2,908,004
Capacity	2,804,700	2,804,700	2,804,700	2,804,700
Gap	295,964	-274,739	-410,760	- 103,304
Petroleum				
Demand	686,260	1,044,215	1,044,215	1,044,215
Capacity	819,000	819,000	819,000	819,000
Gap	132,740	-225,215	- 225,215	- 225,215
Steel				
Demand	6,402	20,786	18,328	15,002
Capacity	85,000	85,000	85,000	85,000
Gap	78,598	64,214	66,672	69,998
Sugar				
Demand	543,416	550,000	550,000	550,000
Capacity	1,331,000	1,331,000	1,331,000	1,331,000
Gap	787,584	781,000	781,000	781,000
Vehicles				
Demand	1,076,856	895,421	916,549	938,175
Capacity	1,112,000	1,112,000	1,112,000	1,112,000
Gap	35,144	216,579	195,451	173,825
Waste				
Demand	222,772	249,893	255,789	261,825
Capacity	961,000	961,000	961,000	961,000
Gap	738,228	711,107	705,211	699,175

2.31 Table 2.19 below provides a sub-regional summary of the capacity across the network over the 2015-2041 forecast period. By 2041, it is forecast that the greatest capacity oversupply will be in the North East sector. Over the forecast period, all sub-regions are forecast to have a decline in surplus capacity.

Table 2.19 Future Demand & Capacity by sub-region 2015-2041 (mt)

	2015	2021	2031	2041
West				
Demand	0.8	1.0	1.0	1.0
Capacity	1.8	1.8	1.8	1.8
Surplus	1.0	0.8	0.8	0.8
South East				
Demand	4.9	5.9	6.0	5.5
Capacity	7.5	7.5	7.5	7.5
Surplus	2.6	1.6	1.5	2.0
North East				
Demand	4.9	5.9	6.1	5.8
Capacity	8.7	8.7	8.7	8.7
Surplus	3.8	2.8	2.6	2.9

Site Assessment Summaries

- 3.1 This chapter provides an overview of the individual wharf assessments. This chapter presents a summary of the findings, a link to the full report is set out on the 'how to give your views' page. It breaks the assessment down by sub-region.
- 3.2 There are currently 10 wharves safeguarded in the west sub-region, covering all safeguarded wharves west of Tower Bridge, so although classified as west some are actually fairly central. The assessment recommends all ten continue to be safeguarded. The OSC work, in Section 2, forecasts spare capacity in the sub-region. However, the Thames Tideway Tunnel Project, a scheme to move sewage across London to Beckton, has brought vacant wharves back into active use (eg Hurlingham, Cremorne), demonstrating their suitability for waterborne cargo handling. The extant permission at Swedish and Comley's wharf would, if implemented, bring Swedish wharf back into active use for waterborne cargo handling. Land values in west and central London are typically higher than those found in east London making it more difficult to bring other sites in this part of London into a wharf use, making it more important to retain the network London has. Being able to move material by river eases congestion and pollution in west/central London.

Table 3.1 Summary Assessment of Wharves in West sub-region

Borough	Wharf	Recommendation
Hammersmith & F	Hurlingham	Retain
Hammersmith & F	Swedish	Retain
Hammersmith & F	Comleys	Retain
Wandsworth	Smugglers Way	Retain
Wandsworth	Pier	Retain
Wandsworth	Cringle Dock	Retain
Wandsworth	Kirtling	Retain
Wandsworth	Middle	Retain
Kensington & C	Cremorne	Retain
City	Walbrook	Retain

- 3.3 There are currently 15 safeguarded wharves in the south east sub-region, OSC forecast that by 2041 there will be 2.0mt of spare capacity in this part of the network. The Mayor is recommending the release of one wharf from its safeguarding direction in this sub-region. This reflects navigational difficulties that make other wharves more attractive. Two of the vacant wharves in this

sub-region (Mulberry and Standard) have been recently acquired. The Mayor recommends maintaining their safeguarding while the new owners seek to develop cargo handling services or find new operators for these wharves. In October 2017 a permission was granted on Standard wharf for ancillary facilities that will increase its attractiveness to river operators.

Table 3.2 Summary Assessment of Wharves in South East sub-region

Borough	Wharf	Recommendation
Lewisham	Convoys	Retain
Greenwich	Brewery	Retain
Greenwich	Tunnel	Retain
Greenwich	Victoria Deep Water Terminal	Retain
Greenwich	Angerstein	Retain
Greenwich	Murphy's	Retain
Greenwich	Riverside	Retain
Bexley	Middleton	Retain
Bexley	Mulberry	Retain
Bexley	Pioneer	Retain
Bexley	Albion	Retain
Bexley	Erith	Retain
Bexley	Railway	Release
Bexley	Town	Retain
Bexley	Standard	Retain

- 3.4 There are currently 25 safeguarded wharves in the north east sub-region, OSC forecast that by 2041 there will be 2.9mt of spare capacity in this part of the network. The Mayor is recommending the release of four wharves in this sub-region. This reflects a combination of locational or site issues, navigational difficulties that make other wharves more attractive and major infrastructure projects which may lead to the loss of wharves. The table below refers to 24 wharves as Debden and Rippleway wharves are now considered as one wharf, Rippleway.

Table 3.3 Summary Assessment of Wharves in North East sub-region

Borough	Wharf	Recommendation
Tower Hamlets	Northumberland	Retain
Tower Hamlets	Orchard	Retain
Newham	Priors	Release
Newham	Mayer Perry	Release
Newham	Thames	Release
Newham	Peruvian	Retain
Newham	Manhattan	Release
Newham	Sunshine	Release
Newham	Thames Refinery	Retain
Barking & D	Welbeck	Release
Barking & D	Pinns	Retain
Barking & D	Steel	Retain
Barking & D	Rippleway	Retain
Barking & D	Docklands	Retain
Barking & D	Victoria Stone	Retain
Barking & D	DePass	Retain
Barking & D	Dagenham	Retain
Barking & D	Pinnacle Terminal	Retain
Barking & D	No.1 Western	Retain
Barking & D	East Jetty	Retain
Barking & D	No.4 Jetty	Retain
Barking & D	Fords' Dagenham	Retain
Havering	Phoenix	Release
Havering	Halfway	Retain

- 3.5 The Silvertown tunnel - a road-based river crossing between Greenwich and Newham – will, during its construction phase lead to the temporary loss of the currently safeguarded Thames wharf. In addition, the non-safeguarded Dock

Entrance wharf would also be lost. The public examination into this scheme ended in April 2017 and a Development Consent Order (DCO) was granted by the Department for Transport on 10 May 2018. This project opens up options for the reconfiguration of wharf capacity in the Thameside west area of LB Newham. Current operators at Thames wharf and the non-safeguarded Dock Entrance wharf would need to be relocated.

- 3.6 With this in mind, the Mayor is recommending that a safeguarding Direction is applied to Royal Primrose wharf adjacent to Peruvian wharf. This would allow a group of operators, affected by the Silvertown Tunnel, to co-locate and derive benefits from co-location, release existing sites for redevelopment as other uses, reduce the areal coverage of these operations whilst increasing their actual capacity and deliver modal shift benefits from road to water.
- 3.7 Alexander wharf was not safeguarded under the 2005 Directions but was recommended for safeguarding as part of the 2011 review. Having undertaken this assessment the Mayor still recommends that Alexander wharf is safeguarded

Table 3.4 Wharves proposed to have safeguarding Direction applied

Borough	Wharf
Barking & D	Alexander
Newham	Royal Primrose

Conclusions and Recommendations

- 4.1 Chapter 1 reveals a high level of policy support for the movement of goods by water and the need to have a network of wharves available to load/unload goods.
- 4.2 Chapter 2 highlights the growth forecast for the London section of the Thames over the 2015-2041 period. Despite this forecast growth, the study identified surplus capacity in each sub-region by the end of the plan period.
- 4.3 Chapter 3 summarises the results of the individual wharf assessments by sub-region. The Thames Tideway Tunnel scheme will be making use of previously vacant wharves in the west sub-region and this scheme has shown that these wharves are still viable for river-related uses and, as such, it would be premature to release any wharves in this sub-region.
- 4.4 In the South-East sub-region, an oversight meant that Railway wharf was omitted from the wharf capacity work so it was not included in the future demand and capacity work. Therefore, its loss as a safeguarded wharf does not change the overall picture in the SE sub-region. The 2011 study estimated the capacity of this wharf at 100,000 tonnes (<0.6% of total capacity).
- 4.5 In the North-East sub-region, greater change is proposed. The proposed changes to the network could see the loss of up to 787,000 tonnes of capacity. The addition of 250,000 tonnes at Royal Primrose wharf and 12,000 tonnes at Alexander wharf would mean that the overall change would be a loss of 525,000 tonnes. This would reduce the spare capacity in this sub-region from an estimated 2.9 mt by 2041 to c.2.4mt, a 18% reduction in excess capacity. This is spelt out in more detail in table 4.1 below.

Table 4.1 – Possible loss of capacity from NE sub-region

Wharf	Capacity
Priors	80,000
Mayer Parry	4,000
Welbeck	194,000
Phoenix	386,000
Sub - total	664,000
If Silvertown Tunnel proceeds	
Thames	104,000
Manhattan	4,000
Sunshine	15,000
Silvertown sub-total	123,000
Potential lost capacity	787,000

- 4.6 WSP Consultants, a multi-disciplinary consultancy, were appointed by the Mayor to undertake a Strategic Environmental Assessment of this safeguarded wharves review, plus a Habitats Regulation Assessment screening. In addition, the Mayor has undertaken an Equalities Impact Assessment.
- 4.7 These documents were subject to a 3 month public consultation alongside the round two consultation. Following consultation, the Mayor has considered any representations made and will be submitting his final set of recommendations to the Secretary of State for Housing, Communities and Local Government. It will be for the Secretary of State to come to a decision on changes to the safeguarded network and the issuing of any further Directions.

Appendix 1 – Capacity Estimates by Wharf

Sub region	Commodity	Wharf	Capacity	Group total	
West	Aggregates	Comleys	58,100		
		Pier	227,000		
	Petroleum	Kirtling	227,000	512,100	
		Swedish	26,900	26,900	
	Vacant	Hurlingham	356,000		
		Middle	70,600		
	Waste	Cremorne	40,500	467,100	
		Smugglers Way	319,000		
		Cringle Dock	342,000		
		Walbrook	110,000	771,000	
Sub total			1,777,100		
South East	Aggregates	Brewery	137,000		
		Victoria Deep Water	779,000		
		Angerstein	1,046,000		
		Murphy's	1,956,000		
		Riverside	95,000		
		Pioneer	477,000		
	Agricultural	Erith	369,000	4,859,000	
		Albion	857,000	857,000	
	Vacant	Convoys	200,000		
		Tunnel	116,000		
North East		Mulberry	56,800		
		Standard	140,000	612,800	
	Waste	Middleton	820,000		
		Town	400,000	1,220,000	
	Sub total			7,548,000	
		Aggregates	Thames	104,000	
			Rippleway	66,700	
			Victoria Stone	460,000	
			Dagenham	399,000	
			No.1 Western	212,000	
No.4 Jetty			1,563,000	2,804,700	
Petroleum		Pinnacle	819,000	819,000	
		Steel	85,000	85,000	
Sugar		Thames Refinery	1,331,000	1,331,000	
		Orchard	610,000		
		Priors	80,000		
		Mayer Parry	4,000		
		Peruvian	500,000		
		Manhattan	4,000		
		Sunshine	15,000		
		Welbeck	194,000		
		DePass	170,000		
		Phoenix	386,000		
	Vehicles	Halfway	21,400	1,984,000	
		Ford Dagenham	1,112,000	1,112,000	
	Waste	Northumberland	115,000		
		Alexander	12,000		
		Pinns	206,000		
		Docklands	131,000		
		East Jetty	111,000		
				575,000	
	Sub total			8,711,100	
	Total			18,037,000	