

**PORT OF LONDON TRADE FORECASTS
TO THE YEAR 2035**

SUMMARY OF THE REPORT

prepared for the

Port of London Authority

by

Stamford Research Group

November 2015

The Port of London Authority (PLA) commissioned Stamford Research Group to produce forecasts of cargo handled in the Port of London to the year 2035. These forecasts were completed in November 2015. Due to much of the information collected being commercially confidential and the detail of the forecasts making identification to individual terminals possible, this summary – rather than the full report – is being published.

Methodology

The methodology used by Stamford Research was a combination of econometric forecasts and market intelligence:

- (i) *Econometric forecasts:* Firstly estimates of future traffic and economic activity through the UK were produced, based on the relationship between traffic and economic activity. These UK forecasts were used to derive econometric forecasts for London. There is a long data history for both the Port of London and all UK ports, with associated GDP data at a national and a regional level. Econometric modelling is therefore a plausible forecasting methodology as the UK is a mature economy in a way that may not be true for developing economies with short data histories. Stamford Research used the Maricasts model, developed by Bill Eadie Associates, to provide a forecast scenario envelope within which more detailed forecasts could be made using market intelligence.
- (ii) *Market Intelligence:* Stamford Research then carried out extensive market research interviewing the port terminals in person, by telephone or by questionnaire. Major terminals were interviewed face-to-face or by telephone to obtain information about past volume growth and expectations for the future. They were also asked to provide capacity estimates based on the present mix of traffic, any changes in operations and planned investments at the terminal. The other port terminals were emailed a questionnaire to gain their views. Telephone interviews were also held with other external stakeholders including roll-on/roll-off operators, shippers and transport operators.

This market research was applied to the econometric forecasts to produce forecasts for all types of cargo handled in the Port of London, including intra-port traffic.

Below are the forecasts for unitised, petroleum, aggregates/cement, other cargoes, total inter-port and intra-port traffic. Forecasts were produced at five year intervals. The graphs shown assume smooth growth between these 5 year periods. Forecasts were produced for three scenarios: High, Central and Low. The rationale for High, Central and Low forecasts varies from cargo to cargo.

Unitised Trade

Unitised trade includes containers and roll-on/roll-off traffic, which includes the import/export of vehicles. Forecasts were produced individually for each of these trades and then combined to produce a unitised forecast.

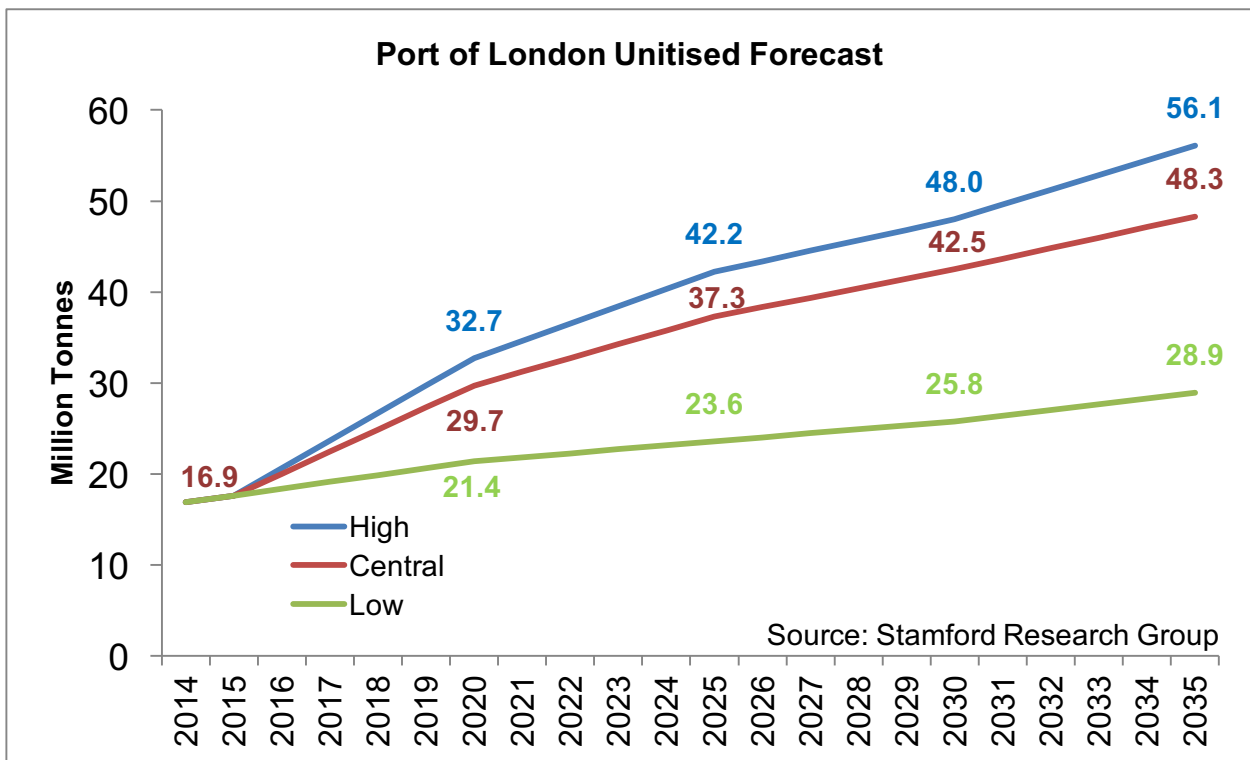
The assumptions underlining the unitised forecasts are as follows:

Containers

- The background growth of the port will parallel that of the UK market as a whole, as London's port share has varied little, and within the load-on/load-off container sector, deepsea and shortsea traffic have broadly maintained their shares.
- In the Central and High scenarios, London Gateway is assumed to gain one of the alliances within the next five years. This traffic will also grow in line with the UK market.
- In the Low scenario, it is assumed that London Gateway gains half of an alliance service throughout the period.

Roll-on/Roll-off (ro/ro)

- Ro/ro will continue to be unaccompanied.
- The econometric forecast is accepted as the Low scenario forecast because current capacity constraints have suppressed demand in London.
- The Central scenario forecast takes into account proposed developments at London terminals.
- The High scenario forecast assumes London's share of UK's ro/ro market from 1982 to 2013 is continued to 2035.



Petroleum

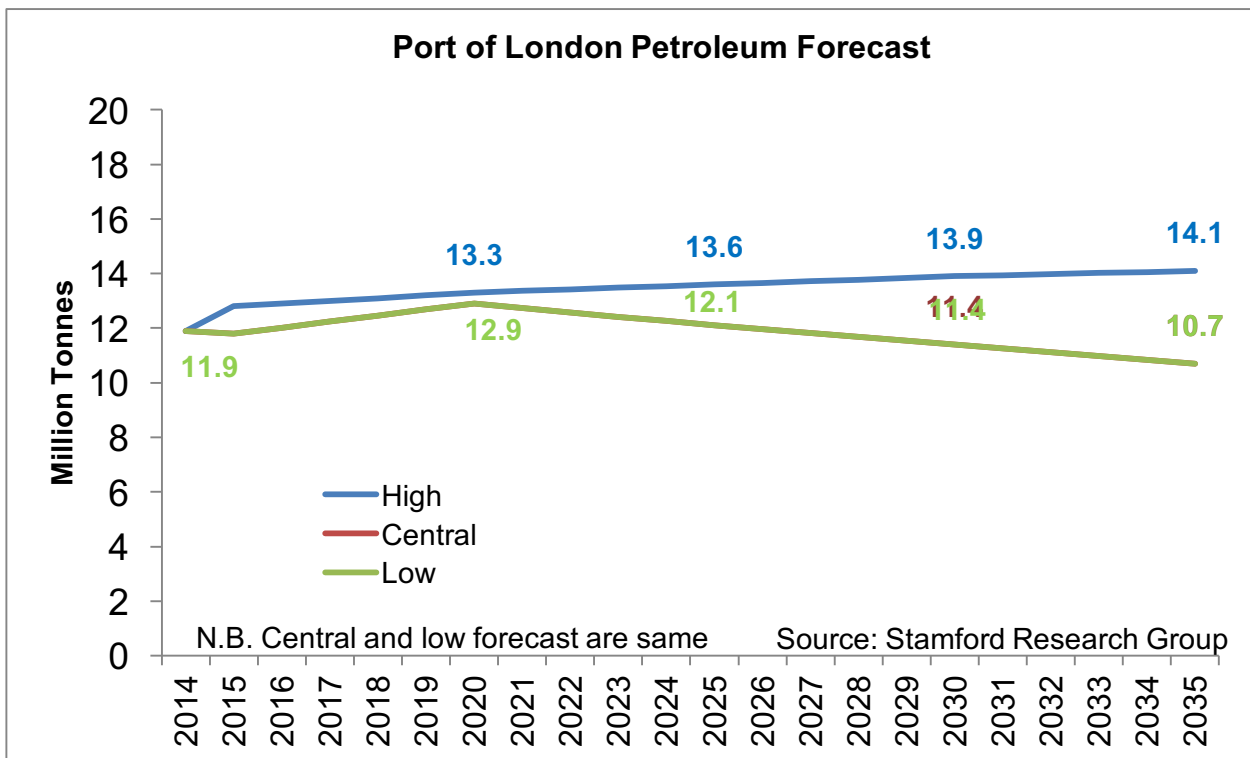
Petroleum products include bitumen, diesel, automotive petrol (gasoline), aviation fuel, liquefied petroleum gas (LPG), lubricants, naphthas and waxes. UK petroleum products logistics is extremely complicated and complex, with product distributed by pipeline between refineries and storage depots as well as by water, road and rail. No region takes all its own refinery supply. Demand is met by distribution from other regions as well as from regional refineries. London and the South East accounts for a quarter of demand, about 16 million tonnes, but no longer has any refineries of its own.

UK petroleum demand is affected in the first place by the state of the general economy, and then by the greening of transport, which includes environmental regulations and continuing improvement of car and aviation engine efficiency.

What is true for the country as a whole is not necessarily true for London, because of its more rapid growth in income and population. London cannot be analysed as simply having a share of a notional UK market because of this and the complications caused by inter-port and pipeline movements.

The assumptions underlining the petroleum forecasts are as follows:

- The High scenario forecast is based on market intelligence from present petroleum terminals who believe due to fuel efficiencies, demand for petrol and diesel will remain static at 10 million tonnes. Any forecast higher than this would assume one of the remaining six refineries serving the South East closes. To this is added the aviation fuel and bitumen forecasts.
- The UK Petroleum Industry Association forecast's aviation fuel imports will rise from 6 million tonnes per annum in 2011 to 9.5 million tonnes in 2030. Much of this will be for airports in the South East region. This growth is included in all London forecasts.
- The Department of Energy and Climate Change forecast diesel and petrol demand will have decreased by about 15% by the year 2030. The Central and Low scenario forecasts uses this official forecast for fuel demand. To this is added the aviation fuel and bitumen forecasts.
- Bitumen is used for roads so demand depends on Government road building in the hinterland served. Growth in London is expected due to investments in this business at London terminals meaning more bitumen is sourced locally.



2.3 Aggregates & Cement

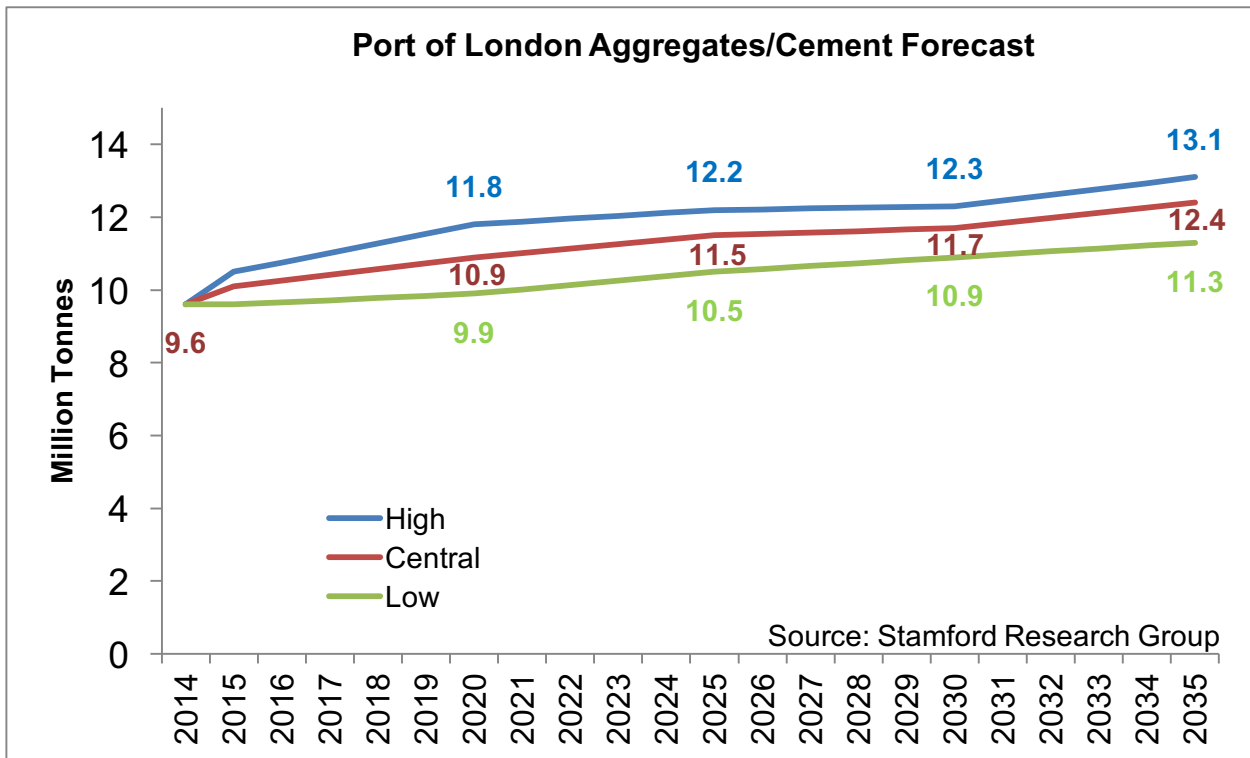
Aggregates & cement comprise sand and gravel, crushed rock and mineral wastes, cement and slag. Nearly half of all aggregates are used for concrete and cement, and over a quarter is used in road construction. The remainder is used as drainage fill and for other construction purposes. There are three main sources of aggregates in the UK: land-won, marine-dredged and recycled.

UK construction aggregate supply is managed through the Managed Aggregate Supply System. Land and sea reserves are identified and managed through the provision of aggregate supply targets for each region. Crushed rock is supplied from limestone in England and Wales and igneous rock in Scotland, and accounted for 62% of total UK supply in 2013. Land-based reserves are declining as there is less availability of suitable areas of unconstrained resources and Government policy is now to encourage marine dredged aggregate use.

Demand for aggregates is driven by activity in the construction industry and the economy as a whole. This includes transport infrastructure building/maintenance, the level of house building, major building projects such as new retail parks and major one-off projects such as Crossrail in London. In the 1990s, there was a strong relationship between the demand for aggregates and GDP. This relationship is no longer as strong, due to greater efficiency in the use of the material, new design and construction methods as well as competition from alternative materials.

The assumptions underlining the aggregates/cement forecasts are as follows:

- The econometric forecasts are correct. Discussions with aggregates companies concurred.
- There will be a number of significant construction projects in next 10 years and substantial house building in the region.
- A hub aggregates terminal in Port of London will not increase total volumes of aggregates handled in London.

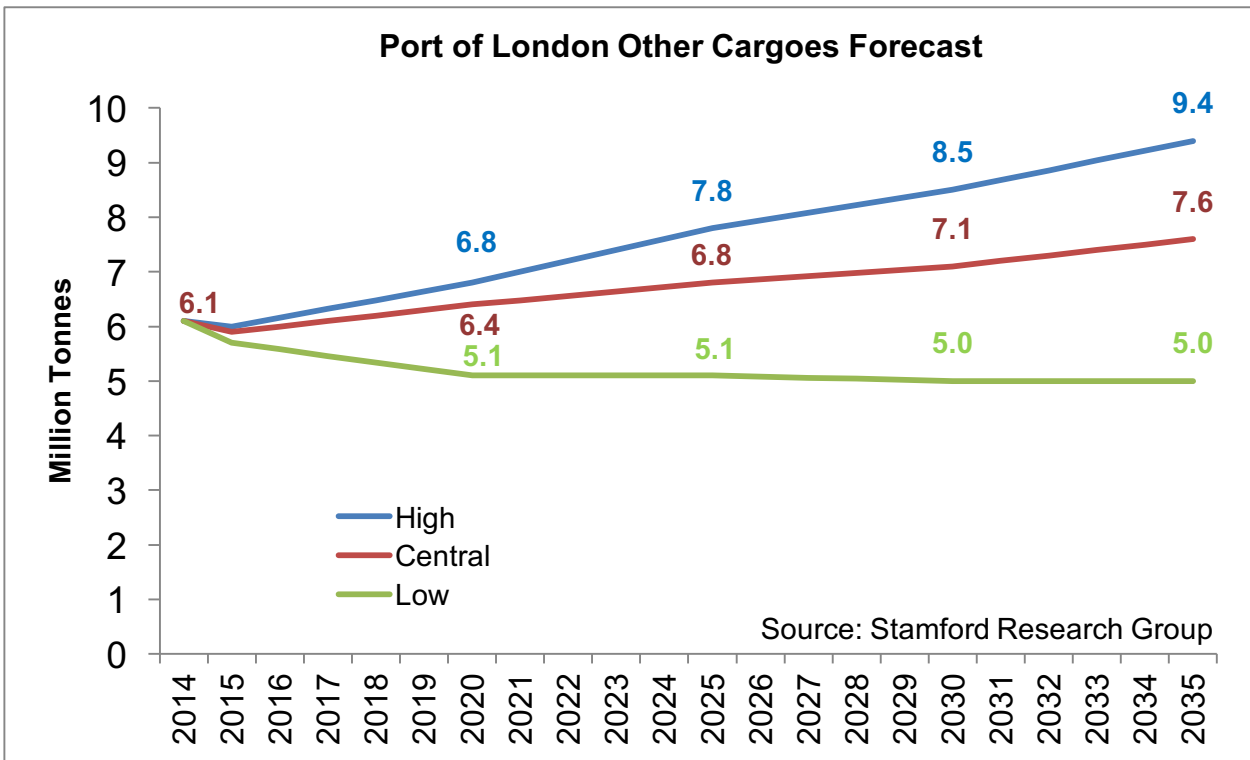


Other Cargoes

Other cargoes' forecasts are a combination of individual forecasts of a number of dry bulk, liquid bulks and general cargoes. It includes forest products, cereal, sugar, scrap, metals, vegetable oils, oil seed, animal feed, chemicals and general cargo. These forecasts are based on both econometric forecasts and market intelligence.

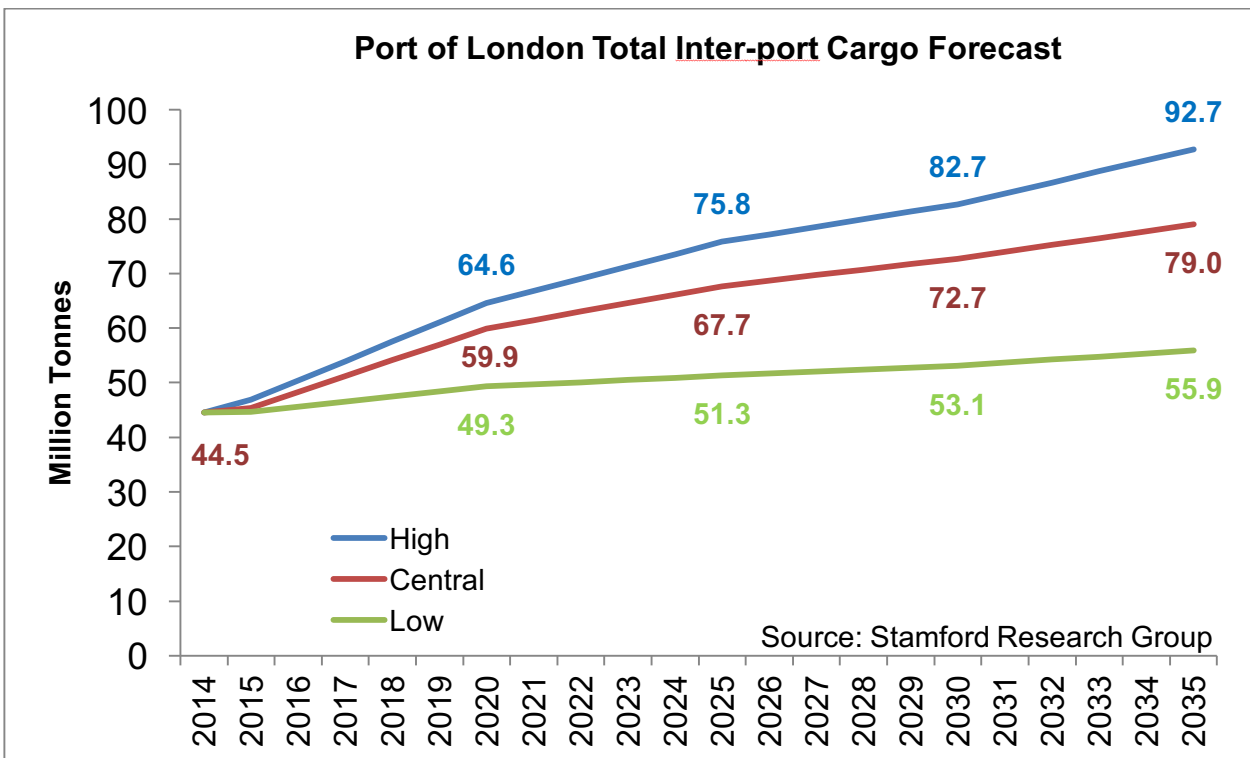
The main assumptions underlining the forecasts are as follows:

- The High scenario forecast assumes changes in sugar regulations lead to sugar imports returning to full capacity levels.
- The econometric forecasts were used for most of these cargoes.
- Many of these cargoes have been static over a number of years and growth is not expected to be significant.



Total Inter-port Trade

The total inter-port forecasts are shown below. London handled 44.5 million tonnes of trade in the year 2014, by 2035 this is forecast to increase to between 56 and 93 million tonnes.



The table below gives the total Central scenario forecast for 2035 compared to trade actually handled in Port of London in 2014. This illustrates that the vast majority of the forecast increase in trade is unitised traffic.

Central Forecast – million tonnes

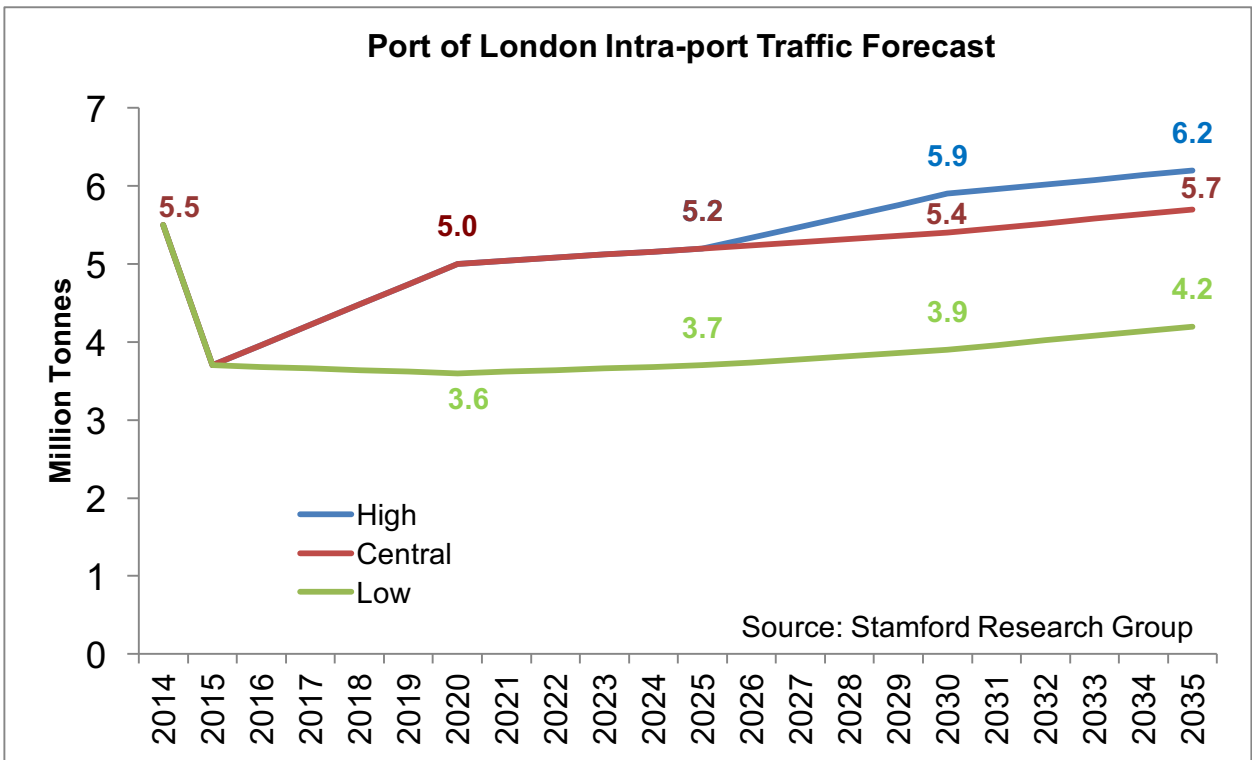
	2014	2035	Increase	% increase
Unitised	16.9	48.3	31.4	186%
Petroleum	11.9	10.7	-1.2	-10%
Aggregates/Cement	9.6	12.4	2.8	29%
Other	6.1	7.6	1.5	25%
Total Inter-port	44.5	79.0	34.5	78%

Intra-port Trade

Intra-port trade is cargo moving between terminals on the River Thames and cargo from Medway and Brightlingsea. It includes aggregates, spoil, construction materials, household waste and vegetable oils.

The assumptions underlining the forecasts are as follows:

- The Low scenario forecast assumes a background intra-port tonnage of 3.2 million tonnes increasing at the same rate as aggregates traffic (i.e. 1.2% pa).
- The Central scenario forecast has the same assumption as the Low forecast regarding the background traffic, but each year there are projects which add an additional 1.5 million tonnes.
- The High scenario forecast assumes that increased energy costs combined with severe environmental restrictions on road freight cause a further increase of 10% over the Central scenario forecast.
- Household waste will continue to be transported to landfill sites.



End