

STATISTICS REPORT UK –

Unitised Goods Flows via UK East Coast Ports

Annex 1.3.3.4 to the Final Report



May 2007

PREFACE

This technical paper – including separate databases for unitised goods flows via ports located on the UK east coast – has been elaborated as part of the SUTRANET project (Work Package 1: Transport Research and Development Network). SUTRANET ('**S**ustainable **T**ransport Research & Development **N**etwork in the North Sea Region') is a project within the framework of the European Commission's (EC's) Interreg IIIB North Sea Programme.

The aim of the paper is to provide a basis for the analysis of available statistics as regards unitised goods flows via ports in UK bordering the North Sea. This is done with a view to international freight traffic in the North Sea Region. The paper gives a short presentation of the available data sources and relevant statistics. It is assumed that these ports represent transport links related with the North Sea Region (NSR).

The SUTRANET databases for ports on the UK east coast are presented separately as Excel files and structured in a way so that they are consistent with the similar SUTRANET databases elaborated on unitised goods flows for other countries in the NSR. This enables a comparison and analysis of data across the countries.

The paper finally presents some findings and recommendations with the aim to improve and harmonise the statistical reporting on unitised goods traffic in between the countries bordering the North Sea.

The paper and the SUTRANET databases have been elaborated by a team of researchers at Aalborg University, Department of Development and Planning. Valuable additional information has been provided by the Maritime Statistics Branch, Department for Transport in the United Kingdom, and by Professor Alf Baird from Napier University, Scotland.

Aalborg University, May 2007

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A few editorial modifications have been added in June 2007.

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Abbreviations and Acronyms Used

EEA

European Economic Area.

EC

European Commission.

LoLo

Lift-on lift-off. This way of cargo handling mainly applies to container ships.

NSR

North Sea Region.

NUTS

Nomenclature of Territorial Units for Statistics. The NUTS nomenclature is a standardised and hierarchical zoning and classification system applied by Eurostat (EC's statistical office).

RoPax

RoPax vessels are ferries for combined transport of RoRo handled goods, passenger cars and passengers (Pax).

RoRo

Roll-on roll-off. RoRo vessels are freight ferries for transport of RoRo handled goods only.

SUTRANET

Sustainable transport research network in the North Sea Region.

TEU

Twenty-foot Equivalent Unit. TEU is a unit indication for the equivalent number of twenty-foot containers.

Overview of the SUTRANET Databases for UK East Coast Ports

The databases consist of information about:

- Unitised Goods Flows via UK East Coast Ports – Comparative table for the year 2004, and partly for the years 2003 and 2005 (ref. Annex 1);
- RoRo Traffic via UK East Coast Ports – Distribution on UK ports, on countries, and on routes year 2004 (ref. Annex 2A and Annex 2B);
- Container Traffic via UK East Coast Ports – Distribution on UK ports and on NSR countries year 2004.

The SUTRANET databases for UK east coast ports present the total annual throughput figures for each port. The UK maritime statistics, and Annexes 2- 3, also provide a breakdown into inbound and outbound traffic.

The present paper provides the method of extending the databases to include additional years before 2003 and to update with year 2006.

Similar database structures have been elaborated for ports handling unitised goods in Norway, Sweden, Denmark, Germany, and partly the Netherlands/Belgium.

Location of UK Ports Handling Unitised Goods

The SUTRANET databases include the following ports in UK bordering the North Sea which have been identified as handling unitised goods with foreign origin or destination in 2003-2005:

- | | |
|----------------------|----------------|
| 1. Shetland Islands | 10. Boston |
| 2. Orkneys | 11. Ipswich |
| 3. Aberdeen | 12. Felixstowe |
| 4. Forth | 13. Harwich |
| 5. Tyne | 14. London |
| 6. Tees/Hartlepool | 15. Medway |
| 7. Goole | 16. Ramsgate |
| 8. Hull | 17. Dover. |
| 9. Grimsby/Immingham | |

The following overview map indicates the name and location of the UK east coast ports handling unitised goods in international traffic. However, no unitised goods handling was reported via Shetland Islands (Sullom Voe and Lerwick) in 2003-2005.



The ports that are handling unitised goods in 'Thames and Kent' (London, Medway, Ramsgate and Dover) have been included, although they are located just outside the eligible area of the NSR under the Interreg IIIB North Sea Programme.

The Orkneys includes the location of Scapa Flow.

Sources of Information

The main sources of information for this paper are:

- Department for Transport, October 2005: Transport Statistics Report – Maritime Statistics 2003, 2004 and 2005.
- Additional excel tables from Department for Transport, Maritime Statistics Branch concerning the distribution on selected origin/destination countries for UK RoRo traffic and UK container traffic 2004.
- Department for Transport, 2006: Focus on ports – 2006 edition.

The annual ‘Maritime Statistics reports since year 2001 are available for download (in pdf-format, and for year 2005 also as Excel tables) on the www.dft.gov.uk/ website:



Under ‘Maritime’, tables for year 2005 in Excel and pdf-format are found under ‘Ports’, which also include time series 1990/1995-2005 for unitised goods in total (units and tonnes figures) for each UK port. ‘Maritime Statistics Compendium’ presents pdf-files of the annual reports since 2001.

The UK Department for Transport’s Maritime Statistics Branch has kindly provided the SUTRANET project with the additional information and tables concerning RoRo traffic and container traffic between UK east coast ports and selected countries in 2004.

The annual ‘Focus on ports’ report presents some complementary “*statistical information about commercially active UK ports, including trends in traffic since the 1960s for unitised cargo types such as containers, road goods vehicles and trailers...*” etc.

The website www.freightferries.co.uk/routes has been consulted concerning existing RoPax and RoRo routes.

Availability of Port Data from the UK National Statistics

The annual reports are usually published end-October the following year.

The present paper has mainly been analysing compiled statistics covering the year 2004, because a main part of the SUTRANET data compilation was carried out during the first half of 2006. Since the database figures for 2004 were extracted, the annual statistics report for year 2005 has been published, and this year and year 2003 are partly included in the SUTRANET databases as well.

As it is the case for other EU Member States and Norway, the statistical reporting system has to meet the requirements of the EC maritime statistics Directive (Council Directive 95/64/EC). The Council Directive has been followed up by four Commission Decisions specifying the rules and arrangements for implementing the Directive.

The annual 'Transport Statistics Report Maritime Statistics 2004' and other annual statistics reports provide a substantial compilation of statistics about passenger and freight traffic through the ports of the United Kingdom (UK). Quoting from the Foreword of the 2004-report:

"The current system for collecting detailed port freight statistics was introduced in 2000 to meet the requirements of an EC maritime Statistics Directive (Council Directive 95/64/EC). Under this system, shipping lines or their agents supply detailed quarterly returns of traffic loaded or unloaded at UK major ports (generally those ports with at least 1 million tonnes of traffic a year), which includes information about the port of origin or destination in the UK and elsewhere in the world, cargo categories, gross weight and number of units and ship details. Major ports also supply quarterly totals of inwards and outwards traffic."

The reporting to the National Statistics, Department for Transport is thus done quarterly.

Details of the data collection system are given in Annex A of the annual report.

Comments on Relevant Tables

This section presents a short commenting as regards the relevant tables included in the 'Transport Statistics Report Maritime Statistics 2004'.

The statistics published for years 2003 and 2005 are applying the same types of tables as for year 2004, and thus the general comments below are valid also for statistics covering these years.

Assumptions

The weight of goods figures in the tables includes the immediate packaging. The weights of the transport unit and the tare weight of the container or RoRo unit are not included in the tonnes figures presented in these tables.

The report presents annual figures based on the quarterly reporting. In this annual report, the following tables are of relevance to unitised goods flows via the ports located along the UK east coast:

Table 1.8:

Major ports of United Kingdom, by cargo category and country of loading and unloading: 2004.

The table presents a distinction and distribution of traffic between ‘Short Sea’ countries and ‘Deep Sea’ countries. Specification of the geographical distribution of traffic (in tonnes) is, however, only provided for the UK totals (sum for the major ports) and not for any individual ports.

The tables in Section 2 of the annual report are all concerning unitised traffic. The Tables 2.1-2.4 do not provide separate figures for foreign and coastwise (domestic) traffic.

Table 2.1:

All ports, freight units by type of unit: 1997 – 2004. Foreign and coastwise traffic.

The table presents time series of the total traffic figures as the sum for all ports (in both tonnes and units) for each of the years 1997-2004. There is a further breakdown of figures on the following cargo handling types relevant for unitised goods:

- Container on LoLo and conventional services.
- Road goods vehicles.
- Unaccompanied trailers.
- Rail wagons, ship-borne port-to-port trailers and barges.

Until 1999, ‘Containers on RoRo services’ were reported separately. As from 2000, containers on RoRo services (essentially containers carried on ship-borne port-to-port trailers) have been mainly included in ‘Rail wagons, ship-borne port-to-port trailers and barges’. Until 1999, ‘Road goods vehicles’ included unaccompanied trailers.

Table 2.2:

All ports, main freight units by route: 1997 – 2004. Foreign and coastwise traffic.

The table provides the distribution of the total UK figures of ‘all main freight units’ for each of the years 1997-2004 on Short Sea countries and Deep Sea continents, and compared with the total of coastwise traffic.

Table 2.3:

All ports, main freight units by port: 2000 – 2004. Foreign and coastwise traffic.

The table provides the annual total throughput figures (in units and tonnes) for each of the UK ports handling unitised goods and covering the years 2000-2004.

Table 2.4:

Major ports unitised traffic, by category: 2004. Foreign and coastwise traffic.

The table presents the annual totals in units and tonnes (sum for all UK ports), separately for foreign traffic, coast wise traffic, and foreign plus coastwise traffic. There are no separate figures for the individual ports. For all figures there is a breakdown on ‘in’, ‘out’, and ‘all’. For units figures there is a breakdown into all units and empty units. For each of these groups and categories, there is a further breakdown of figures into the main goods handling categories including the following unitised goods handling types:

- Containers (separate figures for 20’, 40’, > 20’ and < 40’, > 40’);
- RoRo self-propelled: Road goods vehicles and trailers;
- RoRo non self-propelled: Unaccompanied road goods trailers;
- Rail wagons, ship-borne port-to-port trailers, and barges.

Other categories of goods handling (e.g. passenger cars and buses, import/export vehicles, other mobile self-propelled and non self-propelled units etc.) are not included in the SUTRANET databases (ref. Annexes 1-3).

Table 2.5:

Major ports unitised traffic, main freight units by route: 2004. Foreign and coastwise traffic.

The table presents the distribution of the sum of major UK port figures (in units) on Short Sea countries and Deep Sea countries, with a breakdown on the following unitised goods handling categories:

- All containers;
- Road goods vehicles;
- Unaccompanied trailers;

- Ship-borne port-to-port trailers etc.

For all figures there is a breakdown on 'in', 'out', and 'all'.

Table 2.6:

Major ports unitised traffic, main freight units by port: 2004. Foreign and coastwise traffic.

This table presents a breakdown for each individual port of annual figures (in units and tonnes) covering the following unitised cargo handling types, which are the same types as applied in Table 2.4 and Table 2.5:

All containers;
Road goods vehicles;
Unaccompanied trailers;
Ship-borne port-to-port trailers etc.

For all figures there is a breakdown on 'in', 'out', and 'all'. For unit figures there is breakdown on all, empty and loaded units. There is no breakdown on separate coastwise and foreign traffic.

This table, Table 2.7 and Table 3.8 are the main sources of the SUTRANET database Annex 1.

Table 2.7:

Major ports container traffic in TEUs¹ and weight carried, by port and route: 2004. Foreign and coastwise traffic.

The table provides the annual figures for each individual port (in both TEU and tonnes). It presents a breakdown into the following geographical groups of countries:

Domestic;
EU countries;
All other short sea countries;
All deep sea countries.

Table 2.8:

All ports container traffic in TEUs: 1993-2004. Foreign and coastwise traffic.

This table presents the time series for 1993-2004 with a breakdown of the UK grand total figure (in TEU) for each of the types of containers mentioned above under Table 2.4.

¹ TEU is the unit for the equivalent number of twenty-foot containers (TEU = 'Twenty-foot Equivalent Unit').

Table 3.6:
Ship arrivals at UK ports, by type and deadweight: 2004.

This table includes for each port the traffic (number of vessels) for three sizes (in deadweight tonnes) of RoRo vessels and three sizes of container vessels. There is no breakdown into foreign and domestic (coastwise) traffic.

Table 3.8:
Foreign and domestic traffic: 2004.

Table 3.8 consists of a sub-table for each individual port.

All these sub-tables include annual tonnes figures for main types of 'liquid bulk', 'dry bulk' 'all bulk', and 'other general cargo', and the following unitised goods handling types:

- Containers;
- RoRo self-propelled;
- RoRo non self-propelled.

It is of particular usefulness to the SUTRANET data bases that for each of these figures there is a breakdown on foreign traffic (including a breakdown on imports and exports) and domestic traffic (including a breakdown on inwards and outwards). However, there are no units figures included in the Table 3.8 sub-tables.

The report '**Focus on Ports 2006 edition**' presents some additional analyses on port developments since 1985/1990, including unitised goods traffic.

Table 4.2:
All ports of Great Britain: 1970 – 1988, 1988 – 2004. Foreign and coastwise unitised traffic, main freight units by type.

This table presents time series covering 1970-1988 and 1988-2004 for the total figure (the sum of all UK ports) for the following cargo handling types:

- Container units (since 1988, a breakdown on 'RoRo services' and 'LoLo and conventional services');
- Road goods vehicles and trailers (since 1982 a breakdown on 'road goods vehicles' and 'unaccompanied road goods trailers');
- Rail wagons, ship-borne port-to-port trailers and barges (since 1988 including ship-borne port-to-port trailers).

There is no breakdown on separate foreign and coastwise traffic figures.

Foreign Trade Statistics

The collection of foreign trade statistics (according to Intrastat and Extrastat procedures) has not been possible within the limited scope of the SUTRANET project.

International Ferry Routes via Ports in UK

Statistics for the geographical distribution of ferry traffic via UK East Coast ports are included in the overview tables in Annex 2 and Annex 3.

The website www.freightferries.co.uk/routes presents an overview of all international ferry routes serving freight, i.e. the overview includes both RoPax and RoRo traffic. As of 1 February 2006, the above mentioned website indicated the following routes to/from UK:

Baltic Sea Countries:

Immingham – Klaipeda
Immingham - Riga
Harwich - Klaipeda

Sweden:

Newcastle - Gothenburg
Immingham – Gothenburg
Tilbury – Gothenburg
Harwich - Gothenburg

Norway:

Newcastle - Bergen
Newcastle – Haugesund
Newcastle - Stavanger
Newcastle - Kristiansand
Immingham – Brevik
Immingham - Kristiansand

Denmark:

Immingham - Esbjerg
Harwich - Esbjerg

Germany:

Immingham - Cuxhaven

The Netherlands:

Newcastle - Amsterdam

Hull – Rotterdam
Immingham – Rotterdam
Felixstowe - Scheveningen
Harwich – Rotterdam
Harwich – Hook of Holland
Teesport - Rotterdam
Killingholme – Hook of Holland
Dartford - Vlissingen

Belgium:

Rosyth – Zeebrugge
Hull – Zeebrugge
Teesport - Zeebrugge
Ramsgate – Ostend
Dartford - Zeebrugge

Several routes serving RoRo traffic via UK east coast ports were not indicated in the www.freightferries website, ref. the SUTRANET database Annex. 2. This website, however, indicated ferry routes via Teesport, Tilburg, Killingholme and Dartford. These ports do not appear in Table 2.6 of the annual report on maritime statistics.

The picture of unitised goods flows via ports is dynamic. Some routes are being closed down, and new routes and services are being introduced. The comments in this paper refer to the ports which were reported serving unitised goods in 2003-2005.

Presentation of the SUTRANET Databases

The following general assumptions apply to the statistical figures in the SUTRANET databases (Annexes 1-3):

The weight of goods figures includes the immediate packaging. The weights of the transport unit, and the tare weight of the container or the RoRo unit, are excluded. This is also the case for statistics of ports in Sweden, Norway and Denmark, but not generally for port statistics covering Germany and the Netherlands/Belgium where some of the data sets for unitised goods may include the tare weight.

Specific assumptions are indicated in the SUTRANET databases in Annexes 1-3.

Annex 1

Annex 1 presents an overall comparative table for the year 2004, and partly for the years 2003 and 2005, including the annual throughput figures for the different types of unitised goods for each of all the UK east coast ports handling unitised goods in international traffic. Domestic

(coastwise) goods transport between UK ports is also included to the extent that the annual report does not provide separate figures for foreign traffic.

To ensure comparability of the tables and statistics for different countries, Annex 1 applies the following terminology (see also the notes attached to Annex 1):

A1 tonnes and units figures (derived from Table 2.6) include ferry goods quantities carried by road goods vehicles with or without accompanying trailers. This statistics may exclude other vessels than those categorised as ferries.

A2 tonnes and units figures (derived from Table 2.6) are ferry goods quantities carried by unaccompanied road goods trailers (semi-trailers), including goods carried by RoPax ferries and by RoRo freight vessels.

B tonnes and units figures (derived from Table 2.6) are ‘Ship-borne port-to-port trailers etc.’ (the share contributed by rail wagons is not indicated in Table 2.6, but goods by rail wagons was not reported since 1995). Containers on RoRo services are mainly classified to this category.

There is no specification on B1 figures (self-propelled) and B2 figures (non self-propelled), but Table 3.8 provides, for each port, a breakdown in total self-propelled RoRo (i.e. A1+B1) and total non self-propelled RoRo (i.e. A2+B2), but only tonnes figures.

C tonnes and TEU figures (derived from Table 2.6 and Table 3.8) cover quantities of goods in container carried by LoLo vessels. The figures do not include smaller than 20’ (e.g. 10’ and less containers). As mentioned above, since 2000 containers on RoRo vessels have been included in the cargo handling category ‘Rail wagons, ship-borne port-to-port trailers and barges’.

All figures derived from Table 2.6 are the sum of foreign and coastwise traffic. Table 2.7 provides separate figures for domestic and foreign container traffic. Table 3.8 includes separate domestic and foreign traffic tonnes figures for the sum of (A1+B1) and (A2+B2) figures.

RoRo and Containers in International traffic

The following Table 1 presents an extract from Annex 1 for foreign traffic:

Table 1: Foreign RoRo and container traffic via UK east coast ports 2004

No	Port	Total RoRo	Containers	
		Foreign traffic 1000 tonnes	Foreign traffic 1000 tonnes	1000 TEU
1	Shetlands Islands	0	0	0
2	Orkneys	0	0	
3	Aberdeen	4	8	1
4	Forth Ports	504	1,768	199
5	Tyne	749	183	33
6	Tees/Hartlepool	2,391	1,163	130
7	Goole	0	383	45
8	Hull	3,029	2,378	310
9	Grimsby/Immingham	11,372	1,025	133
10	Boston	0	85	22
11	Ipswich	933	476	84
12	Felixstowe	2,942	18,973	2,638
13	Harwich	3,607	437	61
14	London	6,146	9,083	978
15	Medway	492	3,796	632
16	Ramsgate	1,669	0	0
17	Dover	20,185	2	0
1-17	East Coast, total	54,023	39,760	5,266
	Great Britain, total		53,174	7,479

The figures are the sum of import and export:

Annex 2

Annexes 2A and 2B present - for each UK east coast port and the year 2004 - the distribution on selected countries, and on RoPax and other ferry/RoRo routes to the extent possible.

However, there is no complete specification of the routes that are by RoPax vessels (combined passenger and freight ferries) and RoRo vessels (freight ferries) respectively.

Annex 3

Annex 3 presents - for each UK port in year 2004 -the distribution of container traffic on selected countries, including all the North Sea countries and the Baltic Sea country group.

As mentioned previously, Annexes 2-3 are based on special tables provided by the Maritime Statistics Branch, supplemented by Table 3.8 as to total port tonnes figures.

Geographical Distribution of International RoRo and Container Traffic

These are presented in Annexes 2A and 2B (RoRo traffic) and Annex 3 (container traffic) for the following selected countries:

Baltic Sea countries as one group, Sweden, Norway, Denmark, Germany, the Netherlands, Belgium, and France.

The full databases (Annexes 1-3) can be provided as Excel files on request to the SUTRANET secretary, ref. the website www.sutranet.org.

Findings and Recommendations

In order to improve the statistics reporting concerning unitised goods flows via UK east coast ports, and harmonise it with the similar statistics for other NSR countries, some findings and recommendations have been identified as follows.

Findings

Compared with statistics for the Scandinavian countries, the UK maritime statistics provide a clear breakdown on accompanied and unaccompanied trailers, and a very consistent terminology in general.

There are some differences between annual RoRo figures for individual ports in Table 2.6 compared with Table 3.8 (for the year 2004). As an example, for Grimsby/Immingham Table 2.6 indicates the total annual RoRo throughput at 10,264x1000 tonnes (which is the sum of coastwise plus foreign traffic), but the figure in Table 3.8 indicates 11,372x1000 tonnes (for foreign traffic only; domestic traffic is negligible). Similar deviations occur for some of the other ports.

Small containers (10 foot and less) are not included in the container traffic by LoLo vessels, such as it may be the case for some other national statistics e.g. Norway. As to UK, 10' containers and less are included under 'Other general cargo' in the 'General cargo & containers < 20 foot' sub-category.

There is no separate presentation of figures for containers handled by RoRo equipment (e.g. mafi-trailers) and carried by RoPax/RoRo vessels.

The share of container transshipment cannot be identified based on available statistics. As to the port statistics of container traffic, it is not possible to identify the complete picture concerning distribution on feeder ships and deep sea ships, considering to which extent short sea traffic includes feeder traffic. As an example, it is not counted how much container traffic that flows from a UK port to continental container ports - such as Hamburg and Bremerhaven - for further transshipment to overseas countries. However, the 'Container Port Transshipment Study' Final Report (MDS Transmodal for Department for Transport, May 2006) provides an analysis of the magnitude, growing importance and development trends of the transshipment component.

Total UK figures in Table 2.4 are smaller than the total UK and total Great Britain figures according to Table 2.6, because Table 2.4 only includes 'major ports'.

There is no mention of the NST/R goods classification in the annual report for UK maritime statistics.

The SUTRANET database Annex 3 does not indicate any container traffic between UK ports and ports in the Netherlands.

Recommendations

A separate presentation of figures (e.g. in Table 2.6) for coastwise and foreign traffic respectively would be helpful.

It could be considered organising the reporting on container traffic in order to enable the identification of some data on the share of feeder and transshipment traffic.

It should be considered including a distinction between RoPax and RoRo vessels in the standard reporting procedures of ferry operators, in order to make this information available in the port statistics, so that unitised goods flows could be specified on RoPax and RoRo routes..

In order to assess whether RoRo handled containers is a growing market, it could be considered specifying this category separately.

It could be useful to publish the breakdown of units figures for each port in foreign and domestic traffic (e.g. in Table 3.8 of the annual statistics report for maritime traffic).

Periodic origin-destination surveys of RoRo traffic between North Sea countries is required as a basis for a reliable estimate of the breakdown at route level, e.g. for the application in modelling and forecasts.