

Industry background

1. This appendix addresses the following areas:
 - (a) economic trends;
 - (b) the logistics chain;
 - (c) Irish Sea ferry routes;
 - (d) types of freight;
 - (e) types of vessels; and
 - (f) regulatory factors.

Economic trends

2. We have been told that the health of the Irish economy is a key factor in the demand for Anglo-Irish ferry services. The physical balance of trade between the two countries favours a larger tonnage of goods being imported into Ireland than it exports. The growth of the GDP of the Republic of Ireland by an average of 7.1 per cent a year in the 1990s fuelled an increase of 322 per cent in the volume of exports from the Republic of Ireland between 1990 and 2001 and an increase of 174 per cent in its volume of imports over the same period.¹ Although this included an increase in the Republic's trade with Northern Ireland, it resulted in a substantial increase in the volumes of freight transported across the Irish Sea, particularly into and out of the Republic of Ireland. The tonnage of goods received by the Republic of Ireland on ro/ro ferries increased by 17.2 per cent a year between 1995 and 2001 and the tonnage it exported on ro/ro ferries increased by 13.3 per cent a year over the same period.² (For goods traded on lo/lo ships, the equivalent annual figures were 8.2 per cent and 0.2 per cent respectively.) GDP growth in the Republic of Ireland was still

¹*Irish Economic Statistics*, Central Bank & Financial Services Authority of Ireland, Autumn 2003.

over 6 per cent in 2001 and 2002, but in November 2003 the OECD expected it to slow to 1.8 per cent in 2003 before rising to 3.6 per cent in 2004 and 4.8 per cent in 2005.³ First Trust Bank expects the Northern Ireland Economy to grow by 2.5 per cent in 2003 and by 3.0 per cent in 2004.⁴ As the 'Celtic tiger' quietened, so volumes of freight stabilized, and since 2000 have been largely flat.

3. In terms of market size, the tourist sector has shown modest levels of growth over the period 1996 to 2002, but freight traffic has grown more rapidly. Between 1996 and 2000, freight traffic between Great Britain and island of Ireland (Ireland) grew from 1.1 million to 1.5 million freight units. Since 2000, the increase in freight traffic has levelled off. During the late 1990s, the share of accompanied freight (see paragraph 18) remained fairly constant in volume terms at around 40 per cent, although it increased from 2000 and in 2002 reached 44 per cent by volume. This growth in accompanied traffic took place at a time when capacity on the Holyhead–Dublin route, primarily an accompanied route, increased substantially.

The logistics chain

4. The ferry companies' direct and indirect customers consist of a logistics chain from the original consigner of the goods to the ultimate recipient. Consigners range from large-scale distributors of goods, such as manufacturers and supermarkets, to small companies that may not be able to ship a complete lorry load of goods. Large consigners typically have highly developed distribution planning functions that sometimes deal direct with the ferry companies to maximize their bargaining power. The way that shippers use ferries and road transport depends on the nature of the goods being transported. Consigners of fresh produce, such as supermarkets and dairy product manufacturers, will normally set rigorous requirements for the times

² *Statistics of Port Traffic*, Central Statistics Office, September 2003.

³ *Economic Outlook*, OECD, November 2003.

⁴ *Quarterly Strategic Information Report*, Department of Enterprise Trade and Investment, October 2003.

that goods are to be collected and delivered, with the objective of minimizing stock levels and ensuring that their outlets are supplied on a 'just-in-time' basis. The most severe are supermarkets' requirements that goods should be collected from depots in Great Britain in the evening and then delivered before 8am the next morning to shops in Ireland. Such requirements may seriously restrict the choice of route and ferry sailing available to the haulier carrying the goods.

5. A range of intermediaries exist to help smaller consigners to plan and carry out their shipping activities. Freight forwarders act as agents on behalf of a freight shipper. They frequently organize the road and sea transport arrangements, including employing hauliers and negotiating ferry prices and making any reservations on ferries. Groupage operators have centres where they collect a number of small consignments from small shippers to form complete trailer or container loads for onward shipment.
6. Although a few large consigners have their own haulage operations, most consigners employ independent hauliers to ship their freight. Many large hauliers, such as P&O Ferrymasters, Montgomery, Gwynedd, McBurney, Roadferry and Woodside, provide both accompanied and unaccompanied services. Large haulage operations are often part of firms offering a wider logistics service, sometimes including inventory management and the operation of distribution depots, to their customers. Some large hauliers, such as P&O Ferrymasters, are vertically integrated into other aspects of transport. At the opposite extreme, some hauliers are owner-drivers or small groups of drivers. Such small firms are likely to offer mainly accompanied services. In many cases they act as subcontractors to large haulage companies. Some third party agents, including a number of large hauliers, provide a service to help small hauliers book and purchase capacity on ferries more effectively and more

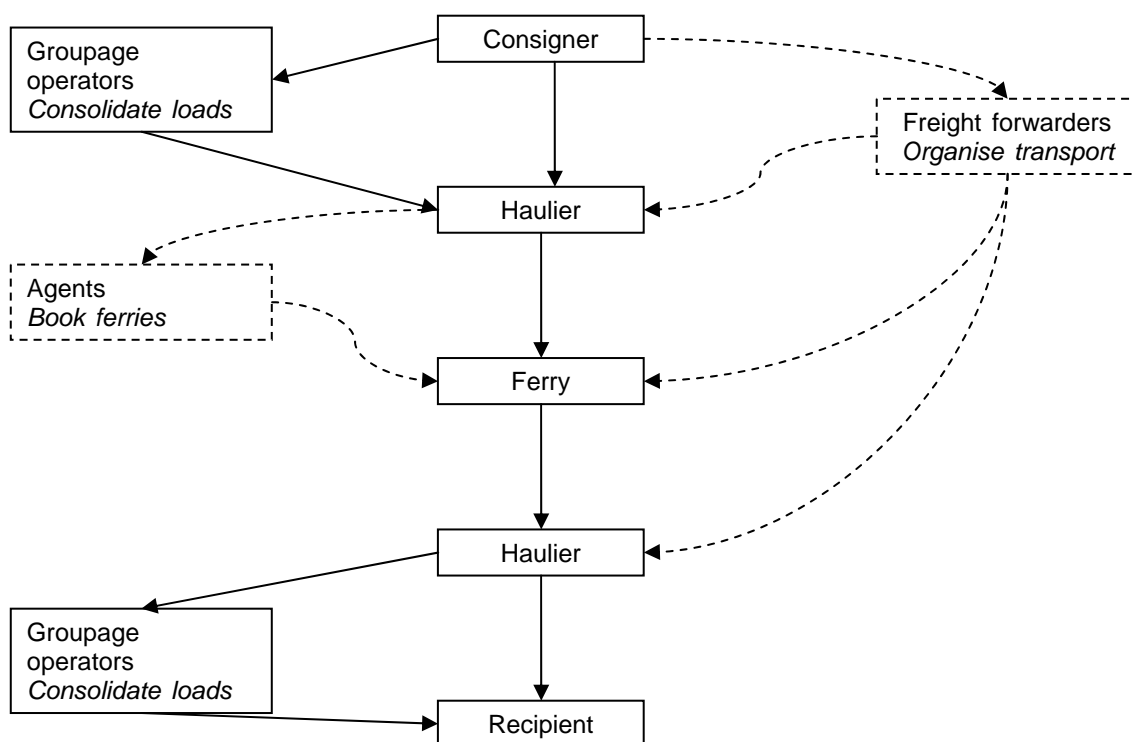
economically, for example by reselling space that they have pre-booked but are not going to use.

7. Figure 1 shows the physical flows of freight and illustrates the roles of the various types of intermediary.

FIGURE 1

The logistics chain

Physical flow of freight (solid line)



Source: CC.

Ferry routes

8. Irish Sea ferry routes between Great Britain and Ireland are commonly divided into three corridors. Both the northern and central corridors consist of long-sea and short-sea services. The short-sea services in the northern corridor consist of ferries between Northern Ireland and Scotland. The long-sea services in the northern

corridor are diagonal services between Northern Ireland and ports in north-west England. The central corridor comprises services between ports in the Dublin area and those in North Wales and north-west England. The southern corridor consists of services between the southern part of the Republic of Ireland and ports in South Wales. There are also a number of less-frequent diagonal lo/lo services between South Wales and both Dublin and Belfast, which we term the southern diagonal routes. (In this appendix we do not consider the routes between the Isle of Man and either Great Britain or Ireland as these do not provide a service for moving freight between Great Britain and Ireland.) As the major ferry operators have each invested in new vessels recently to meet anticipated market growth, capacity in the Irish Sea ferry industry has increased by about a third since 2000.

Northern corridor short-sea routes

9. Table 1 shows the short-sea ferry routes in the northern corridor and the ships operating services on them. The main short-sea services in the northern corridor are Stena's service from Stranraer to Belfast and P&O's services from Cairnryan to Larne and from Troon to Larne. These routes are characterized by short crossings and ships are consequently able to make several voyages a day enabling operators to offer high-frequency services. In combination the Stena and P&O services provide a sailing about every 60 to 120 minutes.

TABLE 1 Ships operating on the northern corridor short-sea routes in 2003

Route	Distance (nautical miles)	Type of ship	Round trips a day	Carrying	Journey time	Ships	Capacity per sailing, lane metres
Stena Stranraer/ Belfast	45	Ropax	2	Freight & tourist	3hr 15m	<i>Stena Caledonia</i>	850
		HSS	5	Tourist & limited freight	1hr 45m	<i>Stena Voyager</i>	750
P&O Cairnryan/ Larne	32	Ropax	7	Freight & tourist	1hr 45m	<i>European Causeway</i> <i>European Highlander</i>	1,771 1,850
		Fast craft	2†	Tourist only	1hr	<i>Superstar Express*</i>	N/A
Troon/Larne	62	Ro/ro freighter	1	Freight only	4hr 30m	<i>European Mariner</i>	750
Seacontainers Troon/Belfast	73	Car/pax	2–3†	Tourist only	2hr 30m	<i>Rapide</i>	N/A

Source: Stena and P&O.

*Also operates between Troon and Larne in the summer.

†Seasonal.

Notes: Ropax: Ro/ro ship carrying freight and fewer passengers than multi-purpose ships; Freighter: Freight only ship limited to 12 passengers; HSS: High speed ro/ro ship carrying freight and passengers; Lo-lo: Lo/lo ship carrying freight only; Car/pax: Ro/ro ship carrying cars and passengers only; Fast craft: Fast ro/ro ship carrying cars and passengers only; N/A: Details not available.

10. We discuss the main characteristics of the different types of ship in paragraphs 26 to 33. All types, other than those described as lo/lo, are ro/ro ferries. P&O has recently increased capacity on its Cairnryan–Larne route by replacing three small vessels by two new larger vessels (the *European Causeway* and *European Highlander*).

gonal routes

11. Table 2 shows the northern corridor diagonal services, the southern diagonal routes and the ships operating services on them. The northern diagonal routes include long-sea services between Fleetwood and Larne (P&O), between Heysham and Belfast (Norse Merchant), between Liverpool and Belfast (Norse Merchant and Coastal) and between Heysham and Warrenpoint (Seatruck). Crossings on these diagonal routes between Great Britain and Northern Ireland typically take 8 to 12 hours and operators on those routes offer sailings about two to three times a day.

The southern diagonal services are less frequent lo/lo services from South Wales to Dublin and Belfast.

TABLE 2 Ships operating on northern and southern diagonal routes in 2003

Route	Distance (nautical miles)	Type of ship	Round trips a day†	Carrying	Journey time	Ships	Capacity per sailing, lane metres
Northern corridor diagonal routes							
<i>P&O</i>							
Fleetwood/Larne	118	Ropax	3	Freight & tourist	8hr	<i>European Pioneer</i>	1,540
						<i>European Leader</i>	1,540
						<i>European Seafarer</i>	1,100
<hr/>							
<i>Norse Merchant</i>							
Birkenhead/ Belfast	137	MP	2	Freight & tourist	8hr	<i>Lagan Viking</i>	2,200
						<i>Mersey Viking</i>	2,200
Heysham/Belfast	121	Ro/ro freighter	2	Freight only	9hr	<i>Merchant Brilliant</i>	1,272
						<i>Merchant Bravery</i>	1,272
<hr/>							
<i>Seatruck</i>							
Heysham/ Warrenpoint	123	Ro/ro freighter	2	Freight only	9hr	<i>Moondance</i>	750
						<i>Riverdance</i>	750
<hr/>							
<i>Coastal Containers</i>							
Liverpool/Belfast	137	Lo/lo	3 a week	Lo/lo freight only	10hr+	<i>Coastal Isle*</i>	260 (TEU)
<hr/>							
Southern diagonal routes							
<i>Coastal Containers</i>							
Cardiff/Dublin	200	Lo/lo	3 a week	Lo/lo freight only	10hr+	<i>Coastal Wave/ Coastal Sound*</i>	132 (TEU)
Cardiff/Belfast	N/A	Lo/lo	2 a week	Lo/lo freight only	10hr+	<i>Coastal Wave/ Coastal Sound*</i>	132 (TEU)
<i>Dragon Shipping</i>							
Swansea/Belfast	N/A	Lo/lo	2 a week	Lo/lo freight only	10hr+	N/A	N/A

Source: Stena and P&O.

*Coastal Containers' vessels are interchanged between routes as required.

†In the case of lo/lo services these are usually calls a week within a complex schedule.

Notes: MP: Multi-purpose ro/ro ship carrying freight and passengers; Ropax: Ro/ro ship carrying freight and fewer passengers than MP ships; Freighter: Freight only ship limited to 12 passengers; Lo-lo: Lo/lo ship carrying freight only; TEU: Twenty-foot equivalent units; N/A: Details not available.

Central corridor

12. Table 3 shows the ferry routes in the central corridor and the ships operating them.

The short-sea routes include those from Holyhead to Dun Laoghaire (Stena) and from Holyhead to Dublin (Stena and Irish Ferries). The long-sea routes include those from Heysham to Dublin (Norse Merchant) and from Liverpool to Dublin (P&O, Norse

Merchant and Coastal) together with that from Mostyn to Dublin (P&O), which P&O intends to terminate. Central corridor services thus divide into high-frequency, short-distance routes (for example, Holyhead/Dublin) and lower-frequency, longer-distance routes (for example, Liverpool/Dublin).

TABLE 3 Ships operating on the central corridor in 2003

Route	Distance (nautical miles)	Type of ship	Round trips a day	Carrying	Journey time	Ships	Capacity per sailing, lane metres
Short sea routes							
<i>Stena</i>							
Holyhead/Dun Laoghaire	54	HSS	3	Freight & tourist	1h 39m	<i>Stena Explorer</i>	750
Holyhead/Dublin	56	MP	2	Freight & tourist	3h 15m	<i>Stena Adventurer Stena Transporter</i>	3,400 1,850
<i>Irish Ferries</i>							
Holyhead/Dublin	56	MP	2	Freight & tourist	3h 15m	<i>Ulysses</i>	4,100
		Fast craft	Up to 4	Tourist only	1h 49m	<i>Jonathan Swift</i>	N/A
Long-sea routes							
<i>P&O</i>							
Liverpool/Dublin	119	Ropax	2	Freight & tourist	7h 30m	<i>Norbay Norbank</i>	2,040 2,040
Mostyn/Dublin	110	Ropax	2	Freight & tourist	6h to 7h 30m	<i>European Ambassador European Envoy</i>	1,949 1,934
<i>Isle of Man Steam Packet</i>							
Liverpool/Dublin	119	Car/pax	1	Tourist only	4h	<i>Super Seacat 2</i>	630
<i>Norse Merchant</i>							
Birkenhead/Dublin	119	Ropax	1	Freight & tourist	7h	<i>Brave Merchant</i>	2,000
		Ro/ro freighter	1	Freight only	8h	<i>Linda Rosa</i>	2,028
Heysham/Dublin	125	Ropax	1	Freight only	9h	<i>Verbola</i>	950
		Ro/ro freighter	1	Freight only	9h	<i>Saga Moon</i>	950
<i>Coastal Containers</i>							
Liverpool/Dublin	119	Lo/lo	6 a week	Lo/lo freight only	10h+	<i>Coastal Breeze Coastal Sound</i>	210 (TEU) 132 (TEU)
<i>Mediterranean Shipping</i>							
Liverpool/Dublin	119	Lo/lo	1 a week	Lo/lo freight only	10h+	N/A	N/A

Source: Stena and P&O.

Notes: MP: Multi-purpose ro/ro ship carrying freight and passengers; Ropax: Ro/ro ship carrying freight and fewer passengers than MP ships; Freighter: Freight only ship limited to 12 passengers; HSS: High speed ro/ro ship carrying freight and passengers; Lo-lo: Lo/lo ship carrying freight only; Car/pax: Ro/ro ship carrying cars and passengers only; Fast craft: Fast ro/ro ship carrying cars and passengers only; TEU: Twenty-foot equivalent units; N/A: Details not available.

13. There have recently been a number of major increases in capacity on these routes.

On the short sea routes:

- (a) Irish Ferries introduced the *Ulysses*, one of the world's largest ropax vessels, on to its Holyhead–Dublin route in April 2001.
 - (b) Stena replaced the *Stena Challenger* on its Holyhead–Dublin route in April 2001 with the *Stena Forwarder* which provided a 40 per cent increase in capacity in terms of lane metres.
 - (c) Stena introduced a new multipurpose vessel, the *Stena Adventurer*,⁵ on its Holyhead—Dublin route in July 2003 (replacing the *Stena Forwarder*) which increased its capacity at Holyhead by a further 70 per cent.
14. On the long-sea routes, Norse Merchant Ferries replaced the *Norse Mersey* with the *Brave Merchant* on its Liverpool–Dublin route in September 2003. Although the vessels' nominal freight capacities are similar, the *Brave Merchant* is able to carry more freight owing to the layout of its freight decks and faster turnaround times. The *Brave Merchant* also has certification for 214 passengers (rather than 59), which enables Norse Merchant Ferries to increase the volume of accompanied freight carried.

Southern corridor

15. Table 4 shows the ferry routes in the southern corridor and the ships currently operating them. These services include those from Fishguard to Rosslare (Stena), from Pembroke to Rosslare (Irish Ferries) and from Swansea to Cork (Swansea Cork). Crossings on the main southern corridor services between either Fishguard or Pembroke and Rosslare take about 3½ hours and a service is provided every 12 hours. The longer southern crossing between Swansea and Cork takes about 10 hours and the service is much less frequent.

⁵When the charter on the *Stena Forwarder* ended in April 2003, Stena temporarily used the *Stena Transporter* on the Holyhead–Dublin route until the *Stena Adventurer* was ready to enter service.

TABLE 4 **Ships operating on the southern corridor routes in 2003**

Route	Distance (nautical miles)	Type of ship	Round trips a day	Carrying	Journey time	Ships	Capacity per sailing, lane metres
<i>Stena</i> Fishguard/ Rosslare	62	MP	2	Freight & tourist	3h 30m	<i>Stena Europe</i>	1,240
		Fast craft	4*	Tourist only	1h 39m	<i>Stena Lynx 3</i>	N/A
<i>Irish Ferries</i> Pembroke/ Rosslare	65	MP	2	Freight & tourist	3h 45m	<i>Isle of Inishmore</i>	2,060
<i>Swansea Cork Ferries</i> Swansea/ Cork	190	MP	4 a week	Freight & tourist	10hr	<i>Superferry</i>	690

Source: Stena and P&O.

*Seasonal.

Notes: MP: Multi-purpose ro/ro ship carrying freight and passengers; Fast craft: Fast ro/ro ship carrying cars and passengers only.

Types of freight

16. Freight on these crossings either originates in Great Britain and Ireland or is travelling between Ireland and mainland Europe using Great Britain as a 'landbridge'. In addition, a significant amount of freight is shipped on direct ro/ro and lo/lo services between Ireland and mainland Europe.
17. This report focuses on unitized freight. This can be carried in lorries and trailers on ro/ro services or in containers on lo/lo services. The majority of freight carried between Great Britain and Ireland is ro/ro freight. Lo/lo services are more commonly used for longer sea crossings or for goods for which a three-day delivery period is acceptable.
18. Ro/ro freight can be divided into two types: accompanied and unaccompanied. Accompanied freight is unitized freight carried on a vehicle with its own traction, typically a lorry, and accompanied by a driver. On average an accompanied freight vehicle requires 16 lane metres of space on a ferry. Much accompanied freight is

time-sensitive, for example perishable food or newspapers: the main parties estimated that 85 per cent of accompanied freight leaving Great Britain for Ireland was for next-day delivery. In these cases, haulage firms' choice of ferry routes may be strongly constrained by the need to meet the pick-up and delivery schedules required by their customers. Schedules that require the goods to be collected late in the evening and delivered early the following morning are particularly demanding. These include deliveries of perishable goods for supermarkets and other retailers as well as parcels, and groupage⁶ services. Hauliers carrying such freight are likely to favour ferry routes that offer sailings at the peak times late in the night, which permit next-morning delivery; they pay a premium price for such sailings. (The most popular sailings from Holyhead for accompanied freight are at 2.30am and 2.50am.)

19. In addition, other costs for an accompanied freight movement are normally higher on a door-to-door basis than for the equivalent unaccompanied movement, which does not require a tractor unit and a driver to have an unproductive period during embarkation, the sea voyage and disembarkation. Nonetheless, some consigners of high-value freight prefer an accompanied service for security reasons; where there is no requirement for an early-morning delivery this freight is likely to use off-peak sailings. The main parties told us that the short-sea crossings between Holyhead and Dublin Bay, between Pembrokeshire and Rosslare, and between Loch Ryan and Belfast or Larne particularly appealed to time-sensitive customers and those with accompanied freight. For a given required arrival time in Ireland, they offered later departure times in Great Britain than the nearest alternative long-sea route, thus enabling hauliers to make late-evening pick-ups from their customers.

⁶Groupage refers to a haulier collecting a number of part-loads which are then transported as a single trailer load.

20. Unaccompanied freight is freight travelling without a traction unit or a driver, typically either on a trailer or in a rigid container. The haulier delivers the unaccompanied freight to the port, and an associated haulier then collects it on the opposite side, but the ferry company manages the loading and unloading of the freight and transports it across the sea. On average an unaccompanied trailer requires 12.5 lane metres of space on a ferry. Although some shippers of evening-collection, morning-delivery freight send it unaccompanied, unaccompanied ro/ro freight is often less time-sensitive than accompanied freight. The choice of route in these cases is therefore less constrained by any need for short transit times. The main parties told us that the lower-cost longer crossings were therefore suitable for many customers with unaccompanied freight.

21. Unaccompanied ro/ro freight requires a more substantial organizational infrastructure, including fleets of tractor units that collect and deliver trailers and depots to support them. The depots normally need to be situated both close to the port and the industrial area that the haulier services. These hauliers' route preferences may, therefore, be strongly influenced by the location of their depots. This implies, for example, that Liverpool is likely to be preferred to Holyhead as a port for unaccompanied freight originating in central England, because it offers the infrastructure and local population needed to support a depot and the shorter driving times for most traffic would allow more frequent lorry journeys between pick-up locations and port. Given that arrival times for unaccompanied freight are often relatively flexible, use may also be made of off-peak sailings with lower fares.

22. Buyers of freight services can switch between accompanied and unaccompanied modes by changing hauliers to obtain a different service. Many hauliers have both accompanied and unaccompanied operations and can switch their focus between the two. Many ferry services primarily concentrating on unaccompanied ro/ro operations

are equally able to provide accompanied spaces.⁷ Other ferry services can switch in the medium term by chartering different ships. This ability to switch is discussed in more detail in the section of the main report on market definition (see paragraphs 4.1 to 4.28).

23. Containers may either be carried on ro/ro ferries or on specialized container ships that are also referred to as lo/lo ships. Containers carried on ro/ro ferries are normally first mounted on to a special-purpose trailer and can then be classified as ro/ro freight. Containers to be carried on lo/lo ships are lifted on and off by special-purpose cranes and then closely packed on deck to make efficient use of the available space. Dublin Port Company estimated that lo/lo freight accounted for 19 per cent of its throughput in 2002. Operators of lo/lo ships often offer their customers the choice of door-to-door or quay-to-quay service.

24. We have been told that there are a number of trends relating to unitized freight. First, there has been a long-term trend towards an increasing proportion of freight being unitized; the unitized proportion of total goods by weight passing through ports in the Republic of Ireland increased from 25 per cent in 1995 to 34 per cent in 2002.⁸ In addition, there has been a more recent trend towards an increasing proportion of the freight travelling between the mainland Europe and Ireland being carried on direct services, as more lo/lo services are developed, reducing the use of Great Britain as a landbridge. Thirdly, the past two or three years have seen an increasing proportion of accompanied traffic on the Irish Sea. Stena has, however, suggested that, given increasing restrictions on driver working time following the implementation of the EC

⁷Freighter services, which are limited to 12 drivers, are the exception.

⁸*Statistics of Port Traffic*, Central Statistical Office, 2002.

Road Transport Directive⁹ in 2005 (see paragraph 37), there might be a trend back towards unaccompanied freight in the future.

25. Freight is also carried in bulk shipments between Great Britain and Ireland, and a small tonnage is transported by air. In 2002, 29 per cent by weight of the freight handled by ports in the Republic of Ireland was liquid bulk (including petroleum products), 33 per cent was dry bulk (including grain, fertilizers and coal) and 4 per cent was break bulk (including timber).¹⁰ We consider types of freight in the section of the report on market definition (see paragraphs 4.1 to 4.28).

Types of ships used

26. The types of vessel used for Irish Sea ferry services fall into a number of categories. All ferries specially designed to carry cars, lorries or trailers using internal and external access ramps are termed 'ro/ro ships' and the category is split into a number of further types that are considered below.

Multi-purpose ferries

27. These vessels include the *Adventurer* (Stena) and the *Ulysses* (Irish Ferries); they are ro/ro ships with a large 'drive-through' freight capacity for the movement of mainly driver-accompanied traffic. Multi-purpose ferries have passenger certificates allowing more than 500 people to be carried and often cater for over 1,000. They offer a high standard of shopping, catering and other on-board amenities. Tourist and freight capacity on multi-purpose vessels is flexible: the ships can in principle use their full vehicle capacities to carry only freight vehicles, only cars, or only coaches. Multi-purpose ferries are used on routes with a roughly equal freight and tourist demand that allows them to offer capacity and facilities that compete strongly

⁹2002/15/EC.

for both types of custom. On the Irish Sea routes, they normally make one or two round trips per day.

Ropax ferries

28. P&O's *Norbay*, *Norbank*, *European Ambassador* and *European Envoy* and Norse Merchant's *Brave Merchant* are ropax ships. They are a development from multi-purpose ferries with more emphasis on freight and scaled-down tourist capacity and amenities but still carry a mixture of tourist and freight traffic. In practice, there is no firm distinction between ropax ferries and multi-purpose vessels. Ropax vessels combine a large ro/ro freight capacity (from 100 to around 200 units) and a moderate passenger capacity (below 500 passengers). They carry both accompanied and unaccompanied freight. Loading may be drive-through, as with multi-purpose ferries, or stern-only, which is more convenient for unaccompanied freight. As in the case of multi-purpose ships, tourist and freight vehicle capacity is interchangeable. Ropax ships are used for services where a heavy freight bias is combined with a need to carry unaccompanied freight and significant numbers of freight drivers and tourists (in the passenger season). Although their rotation on typical Irish Sea routes would be one or two round trips a day, on the short Cairnryan–Larne route they are able to achieve 3½ round trips a day.

Fast craft

29. Fast craft, such as *Jonathan Swift* (Irish Ferries), are high-speed tourist-only catamarans or single-hull vessels that carry mainly passengers and cars and have a speed of over 35 knots. They can transport up to 900 passengers and 200 vehicles. They carry some coaches but none of the largest freight vehicles. Fast craft are used for tourist services only—often on a seasonal basis to meet summer peaks in

¹⁰Op cit.

tourist demand. They are susceptible to disruption by bad weather as they typically cannot operate with waves higher than 3.5 metres.

High-speed ships

30. Stena uses high-speed ships (HSSs) on both its Stranraer–Belfast and Holyhead–Dun Laoghaire routes. They were developed from earlier, smaller fast craft and are large fast catamarans which carry both freight (subject to a weight restriction limiting the total carried to about 30 units) and tourist vehicles (cars and coaches). Their passenger licences allow up to 1,500 passengers. On-board facilities are comparable with those on multi-purpose vessels. HSSs have top speeds of up to 45 knots, about twice the speed of conventional ferries. They are designed for fast loading and unloading by using multi-door access and advanced berthing arrangements, which enable a turnaround time of 20 to 40 minutes to be achieved. HSSs are thus particularly suitable for passengers and accompanied freight and can be likened to high-speed multi-purpose vessels. HSS craft, with their greater weight, size and power, are less susceptible to weather disruption than smaller fast craft: they can typically operate in 4-metre-high waves. Some of their tourist and freight vehicle capacity is interchangeable but they have weight restrictions that limit the amount of freight which can be carried on the vehicle deck(s); HSSs consequently have a dedicated car deck that cannot be used by freight vehicles.

Freighters

31. Freighters can be either ro/ro or lo/lo ships. They are used for longer-sea unaccompanied services with a rotation of one round trip a day, one round trip every two days or even one round trip a week.
32. Ro/ro freighters, such as the *Saga Moon* (Norse Merchant) and the *Moondance* (Seatruck), are freight-only vessels that are licensed to carry not more than 12

passengers (normally drivers) and have very limited on-board facilities. They typically have a capacity of 60 to 170 freight units. As they are intended to carry unaccompanied freight, they use stern-only loading. These vessels often have deck heights in excess of 6.2 metres to enable them to carry double-stacked containers on specially built trailers.

33. Lo/lo freighters, such as *Coastal Breeze* (Coastal), are unable to carry trailers as they are designed for stacked containers. They are normally used for freight for which a three-day delivery period is acceptable. The main parties told us that they expected direct lo/lo services between mainland European and Ireland to increase.

Possible developments in ship types

34. P&O and Stena said that they expected developments in ferry technology to be evolutionary and did not expect any particular type of ferry to predominate. Stena added that the most significant development in recent years had been the introduction of larger, faster vessels, such as P&O's vessels on the Cairnryan–Larne route, and, on the Holyhead–Dublin route, Irish Ferries' *Ulysses* and Stena's *Adventurer*. Further developments were expected to continue for all categories of ferry. Increasing size offers economies of scale as both capital costs and staffing costs rise more slowly than capacity. Greater speed offers an improved quality of service, particularly for passengers, and, coupled with quicker turnaround times in port, the opportunity of increased numbers of round trips per day—although these advantages need to be weighed against the higher fuel consumption associated with higher speeds. Stena expected that the size and speed of all types of vessel would continue to grow when increases in freight and tourist demand justified replacement; this would allow fewer vessels to provide a better service. Different routes might require different types of vessel, depending on the mix of passengers and types of freight and any constraints on the length and draft of vessels that could be

accommodated at ports. P&O commented that frequency was more important than vessel size: ships were no longer getting bigger on some other short-sea crossings.

Regulatory factors

35. In addition to the regulation of ports referred to in Appendix C, the two main regulatory factors concerning this industry are:
- (a) maritime safety legislation; and
 - (b) regulation of road hauliers.
36. For the purposes of this report, the most important factor to note is the reduced manning and other regulatory requirements associated with freighters carrying 12 or fewer passengers, which give them a significant operating cost advantage over other types of ro/ro vessels.
37. Freight drivers are currently subject to restrictions on their driving hours under the EC Working Time Directive.¹¹ At present this limits them to 9 driving hours a day and to 45 driving hours in any five-day period with minimum rest periods of 11 consecutive hours a day and 45 hours a week (which can be varied to a limited extent). Possible amendments to these requirements are being discussed including the introduction of electronic tachographs to improve the enforcement of limits on driver hours. The EC Road Transport Directive,¹² which will come into force in 2005, will prevent drivers from driving for more than 6 consecutive hours. A break of at least 30 minutes will have to be taken where working hours total between 6 and 9 hours. In addition, the average weekly working time will not be permitted to exceed 45 hours and, where night work is performed, the daily working time will not be allowed to exceed 10 hours in each 24-hour period. This will apply to all employed freight drivers, although self-

¹¹93/104/EC.
¹²2002/15/EC.

employed drivers will be exempt until 2009. The effect of all these regulatory changes will be to reduce permitted driving hours and to increase required rest periods.

38. Long-distance freight operators have to consider these restrictions on driver hours when planning their overall routes. This may particularly affect the choice of routes for accompanied freight crossing the Irish Sea, by increasing the appeal of the longer overnight crossings. It also favours freight being unaccompanied rather than accompanied.¹³ In the case of accompanied freight, longer overnight sailings provide a greater opportunity for drivers to rest in order to satisfy EC driving time restrictions than the shorter crossings. This may increase the attraction of the longer diagonal routes, provided that they allow hauliers' collection and delivery schedules to be met.
39. Across many European countries there is a wish to reduce the levels of freight on the roads. In addition to the EC Working Time Directive, other measures may well be introduced, including the proposed UK lorry road-user charge,¹⁴ expected to be implemented by 2006. In some European countries there are already bans in place regarding the transport of non-time-sensitive freight at weekends. All of this will tend to move freight away from the roads and on to the sea or other modes of transport where possible.

¹³Nonetheless, P&O told us that it did not expect this to result in a clear trend from one mode to the other.

¹⁴Proposed in 2002 Finance Act. It would be a distance-related charge, accompanied by offsetting tax reductions. See also COM (2003) 448 for an EC perspective.