Terms of reference and conduct of the inquiry

Terms of reference

1. On 8 February 2011 the OFT sent the following reference to the CC:

    1. In exercise of its duty under section 22(1) of the Enterprise Act 2002 ('the Act') to make a reference to the Competition Commission ('the CC') in relation to a completed merger the Office of Fair Trading ('the OFT') believes that it is or may be the case that—

        a. a relevant merger situation has been created in that:

            i. enterprises carried on by or under the control of Stena A/B have ceased to be distinct from enterprises carried on by or under the control of DFDS A/B; and

            ii. as a result, the conditions specified in section 23(4) of the Act will prevail, or will prevail to a greater extent, with respect to the supply of freight and/or passenger ferry services in the UK; and

        b. the creation of that situation has resulted, or may be expected to result, in a substantial lessening of competition within any market or markets in the UK for goods or services, including the supply of freight ferry services between the north west of England and Northern Ireland (the 'diagonal routes').

    2. Therefore, in exercise of its duty under section 22(1) of the Act, the OFT hereby refers to the CC, for investigation and report within a period ending on 25 July 2011, on the following questions in accordance with section 35(1) of the Act—

        a. whether a relevant merger situation has been created; and

        b. if so, whether the creation of that situation has resulted, or may be expected to result, in a substantial lessening of competition within any market or markets in the UK for goods and services.

    3. In relation to the question whether a relevant merger situation has been created, the CC shall exclude from consideration one of the subsections (1) and (2) of section 23 of the Act if they find that the other is satisfied.

    ***(signed)* Amelia Fletcher**
    Chief Economist, Office of Fair Trading
    8 February 2011

Conduct of our inquiry

2. On 9 February 2011, we posted on our website an invitation to express views to us about the merger, and, on 17 February 2011, we posted an administrative timetable for our inquiry.

3. We also invited a wide range of interested third parties to comment on the merger, including former owners, customers and competitors on the Irish Sea, port operators and shipbrokers. We sent detailed questionnaires to former owners, competitors and

port operators and we gathered oral evidence through ten hearings with selected third parties. Evidence was also obtained through telephone contacts and through further written requests. Summaries of our hearings with third parties are published on our website.

4. Members of the inquiry group, accompanied by staff, visited Stena's offices and the ports of Heysham, Fleetwood and Birkenhead (Liverpool) and were given a presentation by Stena on the operation of its business.

5. On 1 March 2011, we published an issues statement on our website, setting out the areas of concern on which the inquiry would focus.

6. We received written evidence from Stena, and a non-confidential version of its main submission is on our website. We also held a hearing with Stena on 27 April 2011.

7. We commissioned GfK NOP Social Research to carry out a survey of Stena freight customers and DFDS former freight customers. The results of the survey were published on the CC website on 12 May 2011.

8. In the course of our inquiry, we sent to Stena and other parties some working papers and extracts from those papers for comment.

9. A non-confidential version of the provisional findings report dated 25 June 2011 was placed on our website. We also published Stena's response.

10. We thank all those who assisted in our inquiry.

Interim measures

11. We took steps to ensure the separate and independent operation of Stena and the acquired business during the course of our inquiry.

12. Stena gave initial undertakings to the OFT under section 71 of the Act on 13 December 2010 for the purpose of ensuring the separate management of Stena and the acquired business whilst the OFT proceedings were ongoing. Subsequent to signing the undertakings, Stena requested and was granted a number of derogations by the OFT.

13. The CC adopted these undertakings, along with the derogations, on 14 February 2011. We then considered whether any further changes were necessary to prevent pre-emptive action by the parties which might prejudice the reference or impede the application of effective remedies at the end of our inquiry should they be required, including assessing the need for a hold-separate manager or a monitoring trustee.

14. After considering evidence from Stena on the post-merger structure of the two companies, we decided that the appointment of a monitoring trustee was necessary and issued directions for the appointment of a monitoring trustee on 21 February 2011. The Monitoring Trustee was required to ascertain the degree of integration which had occurred between the two businesses, to supervise the establishment of mechanisms for ensuring compliance with the undertakings and to monitor Stena's compliance. The Monitoring Trustee continues to perform this function and report to the CC on a monthly basis.

15. Following submissions from Stena, we formed the view that the three vessels it had used on its Fleetwood–Larne service could not form any part of a remedy to any

substantial lessening of competition that we might find, and on 15 April 2011 gave consent for Stena to dispose of the vessels.

16. We consented to Stena undertaking some initial planning work with regard to integration on 21 June 2011.

Route performance assessment

1. In our counterfactual assessment, we consider which operators would have operated which routes absent the merger. This appendix sets out evidence from discussions with operators regarding the decisions they take in assessing route performance. It also reviews the route performance assessments that Stena undertook in considering the future of the Fleetwood–Larne route and compares the approach and conclusions drawn with those taken by Stena on other routes. It sets out the views of market participants regarding strategic (non-route-specific) reasons for operating a route. Additionally, it describes the performance of the DFDS routes.

2. We consider operators' views on route assessment in paragraphs 5 to 16.

3. With regard to Stena's routes, we review the historic performance of Fleetwood–Larne in paragraphs 17 to 25*(b)* and review Stena's forecasts for the Fleetwood–Larne route in paragraphs 26 to 83. In paragraphs 84 to 140, we review the forecast profitability of the options for relocating the Fleetwood–Larne route and whether Stena was likely to have considered any other options absent the merger (paragraphs 141 to 145). Finally, we review the approach Stena has taken in assessing the profitability of other underperforming routes (paragraphs 146 to 160).

4. We review strategic (non-route-specific) reasons for operating a route in paragraphs 161 to 171. We review the performance of the DFDS routes in paragraphs 172 to 175.

Operators' views on route assessment

Opening routes

5. In assessing opportunities to open new routes, Stena told us that it projected the contribution of the route after capital and allocated costs calculated as an NPV over a [seven- to twelve]-year period. Stena aimed for a positive value.

6. Irish Ferries and P&O assess new investment opportunities typically over a ten-year forecast period. Other operators have a less well-defined period of assessment (DFDS and Seatruck).

7. We note that it is common practice in other industries to consider investments over their estimated lives (in the case of a vessel this would be over 20 to 35 years) and calculate a discounted cash flow (DCF) to assess the viability of such an investment. We note Stena's view that forecasting beyond a ten-year period is too unreliable to be worthwhile. We consider Stena's NPV approach in paragraphs 33 to 36. [✂]. We consider this a reasonable assumption.

8. As well as route-specific financial reasons for opening a route, we were told that strategic factors may also play a role. We understood such strategic factors to be factors that would contribute to an operator's overall profits, even if they did not generate profits on the specific route. Examples may include: offering a hub with multiple destinations, the ability to offer multiple routes in a comprehensive network, or the ability to offer both passenger and freight services. Seatruck saw economies of scope in operating hubs such as Heysham.

Closing routes

9. We found that there was no clear consensus among operators with regard to decisions to close existing routes. They review various key performance indicators (KPIs), such as total volume, utilization, operating profit, average prices, ROCE, EBITDA margin, contribution after allocation of overheads, and cost per unit. [✂][1]

10. Other operators explained that they assessed underperforming routes based on their view of likely improvements but also against the alternative options. Closing a route could involve significant costs depending on the level of investment made at a port, the length of any commercial agreements (in particular, port contracts) and the alternative options for the tonnage/vessels (relocation, charter, sale etc). There is a charter market that can accommodate reassignment of vessels, but the strength of this market is correlated with the wider shipping industry (and indeed global economy) as a whole and demand for charter vessels declines when there is a downturn.

11. The likely transfer of custom following closure of a route is also a relevant consideration in assessing alternative options as there may be strategic concerns regarding transfer of customers to competitors or other routes owned by the operator, ie how much custom competitors may gain and how much the operator may migrate to its other routes.

12. We heard from operators, notably Seatruck and DFDS, that had tonnage commitments continuing to run 'loss'-making (ie not making a contribution to overhead costs and/or to capital costs) routes or opening new routes which they expected to be loss-making (at least in the short term), as it was at the time the least unattractive option when compared either with trying to sell/charter the vessels or even keeping them in dock.[2]

13. For example, DFDS told us that it was maintaining a service to Russia, even though this was not currently profitable, in the expectation that the route would become profitable in due course.

14. Stena told us that closing down a route was always the last resort as it forced the operator to incur closure costs, with no chance of recovery. It said that only where there was no prospect of a sale to a third party, or of a successful ongoing operation, would an operator be likely to choose to close a route.

15. We consider that an operator contemplating route closure will consider financial information on:

    (a) whether the route is covering its direct costs—if EBITDA/EBITDAc[3] is forecast to be negative, then absent wider non-route-specific reasons for continued operation there is a prima facie case for closure;

    (b) whether the route is making a contribution towards capital costs and common costs—if the EBITDA/EBITDAc margin is forecast to be positive, then it may be worth continuing to run the route, depending on whether there are alternative uses for the assets;

    (c) if tonnage can be redeployed elsewhere and/or port commitments used for alternative routes, then it is relevant to take these commitments into account in

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[1] [✂]
[2] We use 'loss' to mean making no positive contribution to either overheads or to capital throughout this appendix.
[3] EBITDAc and EBITDA will be the same where vessels are not chartered.

deciding whether to continue to operate the route; in this case, the operator may look for a positive incremental contribution; and

(d) if the tonnage and port facilities cannot be used elsewhere (ie they are sunk costs), then they are not relevant to the decision; in this case the relevant margin would be the EBITDA/EBITDAc plus common costs.

16. In comparing options, an operator will generally compare the relevant NPV of continuing to operate (under various scenarios) against the NPV of closure. An operator may also place more weight on current market conditions than on long-term forecasts. We think that an operator is unlikely to continue with a route that is not making a positive contribution (measured on an appropriate basis, as set out in paragraph 15) without signs of improvement unless there are wider non-route-specific reasons for continued operation (such as network benefits or preserving custom for transfer to a new route). We set out operators' views on non-route-specific reasons for continuing operations in paragraphs 161 to 171.

Fleetwood–Larne: historical performance

17. Table 1 sets out a summary of the historical financial performance of the Fleetwood–Larne route under Stena's ownership. Stena bought the route from P&O in 2004.

TABLE 1 **Summary management accounts* for Fleetwood–Larne route, 2004 to 2010**

£ million

	2004	*2005*	*2006*	*2007*	*2008*	*2009*	*2010*
Revenue	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
EBITDAc	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
EBITDAc margin (%)	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
Capital costs	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
C5 (net profit)	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]

Source: Stena.

*[✂]
Note: Capital costs represent depreciation and interest on the capital.

18. Table 1 shows that in the first four years of Stena's ownership the route's performance generally improved. C5 (net profit) reached a peak in 2007 at £[✂] million.[4] Performance started to deteriorate in 2008 and continued to decline in 2009 and 2010.

19. Stena told us that the spike in 2006/07 was caused by general market growth and internal fuel hedge effects affecting the C5 result positively. In 2007, freight revenue was affected positively by the linkspan upgrade at Heysham port, which meant that there was limited operation at Heysham port which in turn caused traffic to move to Fleetwood.

20. In 2008, revenues on the route reached a peak of £[✂] million. However, the EBITDAc[5] margin fell significantly (from [✂] per cent in 2007 to [✂] per cent in 2008). The EBITDAc margin fell primarily because of increased bunker (fuel) costs, wages and ship costs. Bunker costs increased by £[✂] million ([✂] per cent) in 2008

[4] C5—The 'net margin' or EBT. Revenue from freight, cars and passengers less the cost of: the goods sold on board, amounts paid to the port, personnel, redundancy, advertising, route level overheads, fuels costs, ship operating costs, any charter expenses, head office cost allocation, capital costs of the vessels and all financial adjustments (eg fuel hedging) and provisions.
[5] On routes where Stena owns the vessels, EBITDAc and EBITDA are the same.

compared with the prior year. Wages and administration costs increased by [✂] per cent, and ship costs by [✂] per cent, compared with 2007.

21. In 2009 and 2010, performance continued to deteriorate as freight revenues fell from 2008 to 2009 by £[✂] million and from 2009 to 2010 by a further £[✂] million.[6] Stena told us that revenue reduction was driven by volume reduction. Costs in 2009 were slightly lower than in 2008, primarily due to reduced fuel and ship costs (£[✂] million reduction in fuel and £[✂] million reduction in ship costs compared with 2008) but by 2010 costs were comparable with 2008 levels as fuel and ship costs rose once again. The increased costs, coupled with the decline in revenues, led to a net loss in 2009 and 2010 on the basis of C5. Given Stena's assessment of common costs in 2009 of £[✂] million (see paragraph 32), in 2009 and 2010 the incremental contribution after capital costs would have been negative.

22. In terms of variable costs, Stena and other operators explained that costs did not vary significantly with the utilization of a vessel (other than requiring slightly less staff); costs only varied significantly when sailing frequency was reduced.

23. We compared the freight revenue decline ([✂] per cent) on Fleetwood–Larne between 2008 and 2010 with other Stena routes and found that the revenue declines on Fleetwood–Larne were at the higher end of the range ([✂] to [✂] per cent).[7] Between 2009 and 2010, Fleetwood–Larne freight revenue fell [✂] per cent and on Stena's other Irish Sea routes fell between [✂] and [✂] per cent.[8] It was in 2009 and 2010 that additional capacity was operated by Seatruck and DFDS in competition with Fleetwood–Larne.

24. Figure 1 shows the freight volumes on Stena's Fleetwood–Larne service and DFDS's Heysham–Belfast service in the period from 2004 to 2010. This supports the view that Fleetwood–Larne had lost significant volumes to competitors, particularly with regard to unaccompanied traffic.

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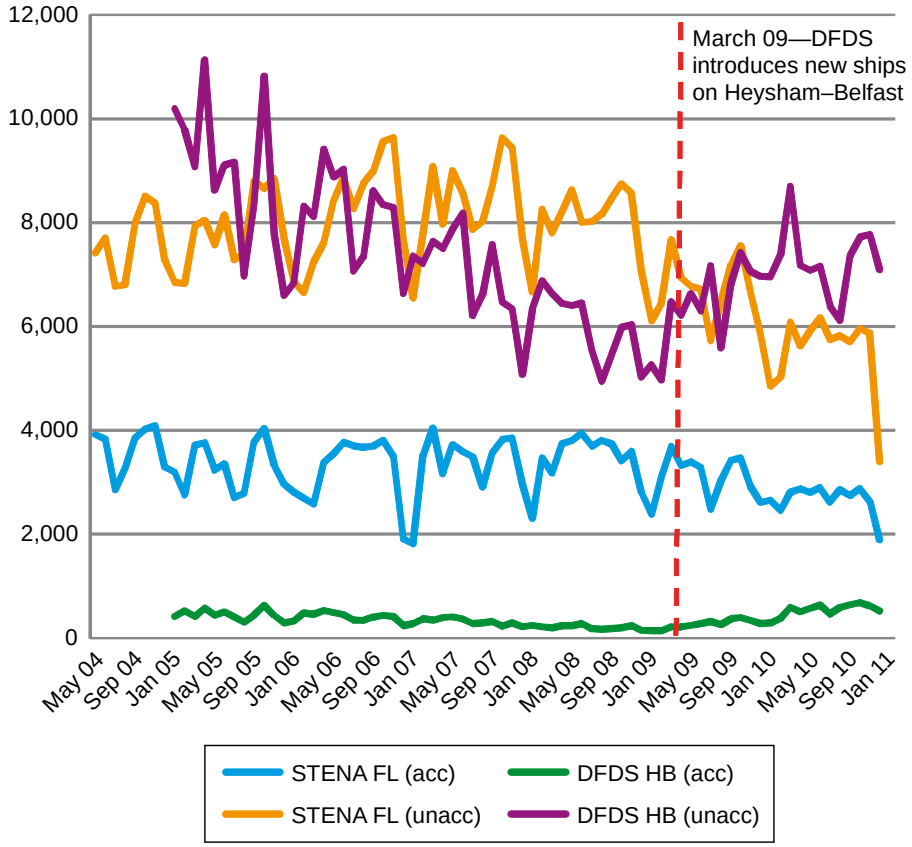
[6] Freight volumes fell from 138,185 in 2008 to 98,341 in 2010.

[7] This compares with a [✂] per cent reduction on Fishguard–Rosslare, [✂]per cent reduction on Holyhead–Dublin, and a [✂] per cent reduction on Stranraer–Belfast. The reduction in freight revenues on Stena's North Sea routes between 2008 and 2010 was: [✂] per cent Rotterdam–Harwich, [✂] per cent Hoek van Holland–Killingholme and [✂] per cent Hoek van Holland–Harwich.

[8] Holyhead–Dun Laoghaire excluded, which fell [✂] per cent (the frequency of sailings was reduced).

FIGURE 1

Freight volumes on Fleetwood–Larne and Heysham–Belfast, 2004 to 2010



Source: Stena and DFDS.

25. There is a general view that there was overcapacity on the Irish Sea in 2010:

    (a) DFDS told the OFT that capacity need to be reduced by 20 to 30 per cent (and prices to be increased by 15 to 20 per cent) in order to make a reasonable return. Seatruck told the OFT that there was 20 to 25 per cent overcapacity on the Irish Sea and P&O said that there was 'significant overcapacity'.

    (b) Danske markets (a broker for DFDS) said in its note of 8 December 2010 that the Irish market needed another round of consolidation, as overcapacity was probably still around 15 to 20 per cent even though Stena was to close its Fleetwood–Larne route. It considered that DFDS was likely to provide this consolidation either through sale of the remaining routes to P&O or closure.

Fleetwood–Larne: forecast performance

Stena's approach

26. In assessing its options for the Fleetwood–Larne route, Stena considered the forecast performance of the route.

27. Stena said that its strategic decision-making is based primarily on [✂].

28. There are two key Fleetwood–Larne forecasts: *(a)* the forecasts presented to the board in September 2009 (when it initially decided to close the route) and *(b)* the

forecasts presented to the board in June 2010 (when it confirmed this decision). These board reports present the ten-year forecasts for EBITDAc and C5 contribution of each option.[9]

29. Stena said that the volume projections in the forecasts reflected the market conditions at the time the forecasts were made, and where it considered a relocation of the Fleetwood–Larne route, it projected the volume diversions from Fleetwood–Larne to other routes. The volume estimates were combined with average fare estimates to give expected future revenues. The cost modelling was based on current costs adjusted for expected future price increases. Where tonnage other than Fleetwood–Larne existing vessels was considered, Stena used accounting information from suitable vessels to assess projected costs.

30. Frontier Economics (Frontier) conducted an economic review of Stena's decision to close the Fleetwood–Larne route in November 2010, as part of Stena's submissions to the OFT seeking clearance. This reviewed the management decisions taken in September 2009 and June 2010 against the associated financial forecasts, and agreed with the decisions taken. In the main, Frontier assessed the profitability of route options over a ten-year period on the basis of the incremental contribution before capital costs (although where these were primarily positive it also considered the capital costs). To assess the incremental contribution, Frontier added back common costs (as these costs would continue to be incurred even if the route was not operating) to the EBITDAc, and then adjusted for the ships' capital costs.

CC review of Stena's approach to evaluating options

31. We review Stena's forecasts of its options below. We focus our review on the forecasts for the board presentations of September 2009 and June 2010 (as it was on the basis of these forecasts that management made decisions relating to Fleetwood–Larne).

32. We agree with Frontier that common costs should be excluded from the analysis of profitability when deciding whether to close a route, on the basis that these costs will be incurred in any event. Stena confirmed that common costs should be assessed as £[✂] million.[10] Stena told us that [✂].

33. Stena's NPV calculations are based on [✂].

34. This approach is different from a standard DCF approach where the calculation is based on free cash flows and the capital cost of a project is accounted for at the start of the project (effectively year zero) and then any remaining capital value in the final year ([✂]) is included as income, a cash inflow. However, the two approaches result in the same NPV.

35. [✂][11]

36. We considered that Stena's approach, as adjusted for common costs, was a reasonable basis on which to assess the options. This discounts the incremental contribution in each year of the forecast to the base year (we have used 2010 as the base year) by the discount rate. Stena uses a discount rate of [✂] per cent throughout its

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[9] [✂]
[10] In the Frontier report common costs were assumed be £[✂] million a year in the September 2009 assessment and £[✂] million in the June 2010 assessment. However, Stena confirmed to us that the June 2010 figure was incorrect and that this was meant to be €[✂] million.
[11] [✂]

operating divisions and at a group level. It told us that this was a nominal figure that was derived from an average cost of capital for equity and external financing for the Stena AB Group.

September 2009

37. In September 2009, Stena reviewed four options for the Fleetwood–Larne route. These were to:

    (a) continue operations in the same manner as before (ie 'as is');

    (b) reduce the capacity used on the route;

    (c) invest in two new vessels (F-max vessels) designed for operation in Fleetwood port; and

    (d) close the route.

38. Tables 2 and 3 and 7 to 9 below include C1 contribution. This represents revenue from freight, cars and passengers less the cost of the goods sold on board and any amounts paid to the port and is equivalent to the gross margin.

'As is' and reduced capacity

39. The forecasts for *(a)* 'as is' and *(b)* reduced capacity did not involve obtaining any new vessels. These assumed that the route ran to 2014 and no further.

Assumptions

40. The assumptions core to both forecasts were: costs follow CPI inflation at [✂] per cent, salary increases were at [✂] per cent and oil prices were assumed to be US$[✂] per barrel in 2010/11 and US$[✂] per barrel in 2012–2014.[12]

41. Stena forecast anticipated volumes of freight. These were expected to grow only very slowly given that the vessels and the route were considered both unattractive to customers and also constrained by limited capacity on peak sailings. The C1 forecast in the 'as-is' option increases by between [✂] and [✂] per cent in each year.

42. For the reduced capacity option, the freight management team was of the view that the loss of volumes with the withdrawal of the *Stena Seafarer* would not be limited to the volumes carried by that vessel but would also spill over to volumes carried by other vessels. It was felt that some customers who used Fleetwood–Larne because of the daily third sailing would move all their volumes if this was not operating.

43. The assumptions underlying the two forecasts are the same other than relevant costs and revenues being reduced under the scenario with the *Stena Seafarer* withdrawn.

Operate 'as is'

44. Table 2 sets out the EBITDAc forecasts that Stena considered in September 2009 for its continue 'as is' option and our analysis of the expected incremental contribution of the route.

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[12] Foreign exchange rate of £1=$1.5 applied to the bunker price.

TABLE 2 **Forecast incremental contribution for the Fleetwood–Larne route as at September 2009**

£ million

	2010	*2011*	*2012*	*2013*	*2014*
C1	[✂]	[✂]	[✂]	[✂]	[✂]
EBITDAc	[✂]	[✂]	[✂]	[✂]	[✂]
Common costs	[✂]	[✂]	[✂]	[✂]	[✂]
IC* pre-capital costs	[✂]	[✂]	[✂]	[✂]	[✂]
Capital	[✂]	[✂]	[✂]	[✂]	[✂]
IC*	[✂]	[✂]	[✂]	[✂]	[✂]
NPV of IC*	[✂]				

Source: Stena data and CC calculations.

*Incremental contribution.

45. Table 2 suggests that the Fleetwood–Larne route with its current vessel configuration[13] was not forecast to be profitable at an EBITDAc level in the period to 2014. The forecasts provide positive incremental contribution pre-capital costs. However, with capital costs included the routes were not expected to have a positive incremental contribution. The NPV of incremental contribution was –£[✂] million.

Reduced capacity

46. Stena considered whether to alter the vessel configuration on Fleetwood–Larne by withdrawing the *Stena Seafarer* from the service and operating with a reduced capacity.

47. Table 3 sets out the forecasts that Stena considered in September 2009 for its reduced capacity option.

TABLE 3 **Forecast incremental contribution for Fleetwood–Larne route with *Stena Seafarer* withdrawn as at September 2009**

£ million

	2010	*2011*	*2012*	*2013*	*2014*
C1	[✂]	[✂]	[✂]	[✂]	[✂]
EBITDAc	[✂]	[✂]	[✂]	[✂]	[✂]
Common costs	[✂]	[✂]	[✂]	[✂]	[✂]
IC* pre-capital costs	[✂]	[✂]	[✂]	[✂]	[✂]
Capital	[✂]	[✂]	[✂]	[✂]	[✂]
IC*	[✂]	[✂]	[✂]	[✂]	[✂]
NPV of IC*	[✂]				

Source: Stena data and CC calculations.

*Incremental contribution.

48. Table 3 shows that EBITDAc measure reviewed by management is consistently negative. When common costs are added back the route makes a small positive contribution, but this is pre-capital costs. Assuming that capital costs are two-thirds of those forecast for the operation of three vessels, the option is not profitable on an incremental basis.[14] The NPV of incremental contribution was –£[✂] million. On an NPV basis, this option is marginally less negative than operating 'as-is'.

[13] ie the use of the *Stena Leader*, *Stena Pioneer* and *Stena Seafarer*.
[14] We consider this a reasonable assumption as the *Seafarer* represented 30 per cent of the 2010 capital costs for Fleetwood–Larne.

Stena's views

49. Stena was concerned that the reliability of the vessels would further deteriorate leading to additional losses in custom and reductions in profitability.

50. Stena management reviewed the EBITDAc figures. It found that the reduced capacity option was less profitable at an EBITDAc level than continuing to operate with three vessels and therefore rejected the idea. The C1 reductions were not always offset by cost reductions. As explained above, Stena had forecast revenues to fall on all three vessels, not just the *Stena Seafarer*—see paragraph 42 above.

Summary

51. The forecast assumptions in paragraph 39 do not appear to be unreasonable.

52. We note that the oil price assumptions of $[✂] and then $[✂] a barrel appear low based on current oil prices, which at March 2011 were over $100 per barrel. Stena told us that were it forecasting bunker costs [✂] based on the position [✂], it would likely use a range of US$[✂]–$[✂] per barrel. Fuel represented [✂] per cent of total costs in 2010 and therefore the forecasts costs are likely to be understated. However, we recognize that at least some of this cost increase would likely be passed on to customers through higher revenues.

53. The wage rate increases of [✂] per cent a year seem high given the current economic climate, but other operators told us that it was difficult to recruit suitable staff and that higher wages had been necessary. [✂]

54. Under either of these options, the Fleetwood–Larne route is not making a positive EBITDAc contribution. Review of the incremental contribution also shows a negative contribution. Of the two options, over the five-year period reducing the capacity is the least unattractive option when considering incremental contribution.

55. If we were to take a view that the vessel costs were effectively sunk, then continuing with the route could be seen to give a small positive contribution, as shown by the 'IC pre-capital costs' line in Table 2.

Fleetwood-Max

56. In September 2009, Stena considered investing in two new bespoke vessels (known as 'Fleetwood-Max' vessels), which would become operational in 2015, and the existing vessels would be used until then in order to ensure business continuity. The Fleetwood-Max forecast included fuel at US$[✂] per barrel in each year, which means that the EBITDAc forecast in 2010–2014 (when the existing Fleetwood vessels were operating) is worse than in Tables 2 and 3 above. It also used revised estimates for revenues which were reduced from those in the 'as-is' and 'reduced capacity' forecasts as they were based on Stena's 2009 forecast 3 rather than forecast 1.

57. Stena's forecasts suggest that under this scenario the route would have made positive incremental contribution pre-capital costs from 2014.[15] Frontier considered the annualized capital cost of the new vessels to be £[✂] million[16] and said that when this was taken into account incremental profits would not be earned until 2018, with

[15] ie one year before the new vessels were operational, although contribution in 2014 forecast to be only £[✂] million.
[16] £[✂] million estimated purchase cost of two vessels with [20–25]-year economic life and a discount rate of [✂] per cent.

significant losses being accumulated until then. Frontier's approach results in forecast incremental contribution in 2018 of £[✂] million.

58. Table 4 sets out the forecast profitability of investing in the Fleetwood-Max vessels as at September 2009.

TABLE 4 **Fleetwood–Larne incremental contribution forecast with Fleetwood-Max vessels, 2010 to 2018,* as at September 2009 (Frontier method)**

£ million

	2010	*2011*	*2012*	*2013*	*2014*	*2015*	*2016*	*2017*	*2018*
EBITDAc	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
Assumed common costs	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
IC† pre-capital costs	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
Capital costs‡	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
IC†	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
NPV of IC†	[✂]								

Source: Stena data and CC calculations.

*The forecasts were for ten years including 2009 but we have based from 2010 for consistency.
†Incremental contribution.
‡[✂]

59. Frontier's approach calculates the [✂]. In practice, [✂].

Stena's views

60. In relation to this forecast, Stena/Frontier made the following comments:

(a) Consideration of the option needs to take into account the losses incurred before implementation of the new vessels. We note that, as set out above, these losses are forecast to be £[✂] million between 2010 and 2014 (£[✂] million on an NPV basis).

(b) Given the short- and medium-term unprofitability of the operations, and the uncertainty about long-term profitability, Stena's management rejected the 'Fleetwood-Max' option and has not sought to purchase new vessels for operation on Fleetwood–Larne. It did not consider this option further.

(c) Stena had not produced projections beyond [✂], but the expected losses early on suggested that the investment would not be profitable. Frontier noted that Stena had not included the effect of the expansion by Seatruck (although it is not clear that Seatruck's plans were known at the time of the forecast) or the lost revenues that may arise from customer dissatisfaction with vessel unreliability associated with operating the ageing vessels prior to the introduction of new vessels in 2015.

(d) The lead time for constructing specialist vessels was [✂] years (compared with three years for conventional vessels); by 2009, this meant that even if Stena ordered the vessels immediately, it would be left with maintaining the route with increasingly unreliable ships until perhaps [✂].[17]

[17] Stena submission to the CC, paragraph 4.10.

(e) The strength of competition from Heysham meant that there was little prospect of revenue that would justify the investment costs. The new Heysham vessels were close to 2,000 lane metres whereas the old ships were only around 1,000 lane metres. New Fleetwood ships would need similar dimensions to the able to compete. [18]

(f) Stena explained that it typically allowed [✂] build time for a standard vessel, and had allowed [✂] for the F-max vessels due to the additional complications with designing shallow draught vessels with higher capacity. Although some work had already been undertaken on the design, this would have needed to be revisited and updated to take the F-max project forward; there was an outstanding uncertainty regarding [✂] the vessels. Stena could not be certain that the additional [✂]-year lead time would be reduced, and even with a shorter lead time it was still not an attractive option and the additional lead time was not a significant factor in the decision.

Summary

61. The NPV under this option is –£[✂] million, according to Frontier's calculations of incremental contribution. [✂] Our review of Stena's forecasts indicates that investing in the new bespoke vessels necessary for operation from Fleetwood was not profitable on an NPV basis over Stena's planning horizon.

Closure

62. We consider the cost of closure as assessed in September 2009 in paragraph 81 below.

June 2010

As-is/reduced capacity

63. In June 2010, Stena again reviewed the Fleetwood–Larne route on an 'as-is' basis and reduced capacity basis. It did not consider the F-max option. This time it estimated that the vessels would keep running to 2015 (as opposed to 2014 in the September 2009 forecasts).

Assumptions

64. Stena told us that the assumptions underpinning the June 2010 forecasts were: costs and salary increases were at [✂] per cent annually and oil prices were assumed to be US$[✂] per barrel on average to [✂].[19]

65. Stena said that the increase in oil price was part of the reason for the decline in EBITDAc performance (from the September 2009 forecast), but also that the forecast revenues had decreased. Stena said that between the September 2009 and June 2010 presentations, the volumes and revenue on the route had steadily decreased, so the base for the forecast was a lower route performance. The volumes were forecast in units at [✂].

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[18] Stena submission to the CC, paragraph 4.10.
[19] Foreign exchange rate of £1=$1.5 714 applied to the bunker price.

66. Our understanding is that these forecast calculations were actually made in April 2010 (and presented to the board in June 2010), before Seatruck started its Heysham–Larne route—see paragraph 70. However, some account of the start of operations by Seatruck, which Stena had become aware of, plus the fact that the performance of the Fleetwood–Larne route was lower than expected, was reflected in these volume forecasts.

Forecasts

67. Table 5 sets out the forecast incremental contribution from Fleetwood to Larne if it continued to operate 'as-is' in June 2010.

TABLE 5 **Incremental contribution from continued operation of Fleetwood–Larne route, forecast at June 2010—as-is basis**

£ million

	2010	*2011*	*2012*	*2013*	*2014*	*2015*
EBITDAc	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
Common costs	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
IC* pre-capital costs	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
Capital costs	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
IC*	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
NPV of IC* (5 years)	[✂]					

Source: Stena data and CC calculations.

*Incremental contribution.
Note: N/A = not available.

68. The figures in Table 5 are significantly worse than the comparable figures as at September 2009, shown in Table 2 above. Route performance had been forecast to decline even more. The five-year incremental contribution NPV had reduced from –£[✂] million in September 2009 (Table 2) to –£[✂] million.

69. Stena's EBITDAc and C5 forecasts for the reduced capacity option were also heavily negative (although less so than for the 'as-is' option). We asked Stena to explain why in June 2010 the 'as-is' option was forecast to be more loss-making than the reduced capacity option—as noted in paragraph 50, in September 2009 the reverse was true. Stena told us that this change was due to the volume decline on the Fleetwood–Larne route between September 2009 and April 2010 (when the forecasts were made). It said that the volume reduction for a three-vessel operation, with costs remaining the same, meant that the 2010 projection was far worse than it had been in September 2009. In contrast, it expected that reducing to a two-vessel operation as assessed in 2010 would not significantly reduce volumes beyond the levels forecast in September 2009 as these peak sailing times would be better able to retain traffic. This resulted in the two-vessel option not being significantly more loss-making that it was forecast to be in September 2009, whereas the three-vessel option was badly affected.

Stena's views

70. By June 2010, Stena thought the Seatruck expansion on to the Heysham–Larne route would cause an additional £[✂] million reduction to EBITDAc in each year (this is not included in the forecasts above). Stena said this would mean that the route would be losing around £[✂] million on an EBITDAc basis per year from 2011.

71. Stena explained that a volume reduction of approximately [✂] units per year was expected as a consequence of a two-vessel Seatruck operation on Heysham–Larne.

Seatruck started with one vessel in May 2010, and added an additional vessel in October 2010. The analysis undertaken by Stena forecast the expected volumes for each route in (what it termed) the northern corridor (ie routes to/from Scotland) and on the diagonal routes for 2010 and then forecast what effect it thought Seatruck's two-vessel service would have on these volumes. It forecast that Seatruck would gain [✂] units primarily from the other diagonal routes (Norfolkline's Heysham–Belfast route, Stena's Fleetwood–Larne route and Seatruck's own Heysham–Warrenpoint route). Stena anticipated that [✂] units ([✂] per cent) of the traffic on the new Seatruck route would come from the Fleetwood–Larne route, resulting in a C1 loss of £[✂] million.

72. The effect of an additional £[✂] million reduction in EBITDAc in each year is to reduce the five-year NPV to –£[✂] million.

73. [✂][20]

74. Stena told us that the updated projections for the Fleetwood–Larne route in the June 2010 presentation were included 'merely to show that the route projections had substantially worsened since the route closure decision was made in September 2009' and thus to reinforce the need to approve giving of notice to terminate the Fleetwood contract and to close the route. It said that these were not the focus of serious scrutiny at the board meeting as the route closure decision had already been taken.

Summary

75. Stena management made its decision on the basis of the EBITDAc forecast, but even on the basis of incremental contribution pre-capital costs, the financial performance does not appear strong. The route was not covering its incremental contribution and Stena's forecasts indicated that this would continue to be the case going forward.

76. The volume assumptions are fairly flat. However, given that actual volumes in 2010 were 98,000 units and only small growth is anticipated in the Irish Sea market as a whole, we did not think these were unreasonable.

77. We note that in December 2010, Seatruck's Heysham–Larne service carried around 2,700 units. On an annual basis, this would result in around 32,000 units. However, the second vessel had only been operating for two months and so we would anticipate further growth in the monthly units carried. On this basis, we do not think the assumption that the service would carry [✂] units per year to be unreasonable.

78. We considered the view that [✂] units would go from Stena's Fleetwood–Larne route to Seatruck's Heysham–Belfast route, and note that in June 2010 Stena was forecasting [✂] units for Fleetwood–Larne in 2010 and the actual outcome as 98,000 (ie a decline of [✂] units). The Seatruck Heysham–Belfast service had not been in effect for a full year and so further decline of [✂] is not unreasonable.

79. We note Stena's view that these forecasts were not scrutinized in detail. However, given our review of the assumptions, we do consider them to be indicative of the effect of the new Seatruck Heysham–Larne service and therefore consider the incremental contribution forecasts in Table 5 to be overstated. On the basis of the assumptions reviewed, the effect of the Seatruck service on the Fleetwood–Larne

[20] Stena's submission to the CC, Annex F, paragraph 17.

route could be up to an additional £[✂] million a year, taking forecast incremental contribution to around –£[✂] million a year.[21] Over a five-year period, this would result in an incremental contribution NPV of –£[✂] million.

80. Even if we were to assume that the port fees at Fleetwood were reduced from £[✂] million a year to nil, and that the capital costs in the years 2010 to 2015 were nil (as sunk costs), then the incremental contribution would not be breakeven. The incremental contribution pre-capital costs shown in Table 5 of –£[✂] million (2011) is not insignificant, and if the effect of Seatruck's new Heysham–Larne service were to increase this to –£[✂] million, then continuing to operate the route would be a significant cost for Stena.

Closure

81. Frontier compared the forecast profitability to the forecast closure costs. These were estimated at £[✂] million in September 2009 and £[✂] million in June 2010—see Table 6.

TABLE 6 **Estimated closure costs of the Fleetwood–Larne routes at September 2009 and June 2010**

		£ million
	June 2010	*September 2009*
Redundancy	[✂]	[✂]
Port dues	[✂]	[✂]
Sale of vessels*	[✂]	[✂]
Total	[✂]	[✂]
Annualized†	[✂]	[✂]

Source: Stena.

*Stena assumed that the vessels would be scrapped for £[✂] million each.
†Frontier calculated the annual interest forgone on the net closure costs estimated in September 2009 million using a discount rate of [✂] per cent.
‡CC calculation on same basis as Frontier September 2009 calculation.

82. Frontier considered that comparing the annualized[22] closure cost charge with the losses likely to be incurred in 2010 and 2011 if continuing with the route demonstrated that Stena's closure decision was justified. It compared short-run losses (the negative incremental contribution pre-capital costs in 2010 and 2011 from the F-max forecast) with a view of the closure costs on a perpetuity basis.

83. An alternative approach would be to compare the £[✂] million cost in the year of closure with the NPV of other options. All of the options considered for Fleetwood–Larne had negative NPVs of more than £[✂] million.

Other options available to Stena

84. Following the decision to close the Fleetwood–Larne route in September 2009, Stena undertook a review of the opportunities to relocate the service to alternative ports. Stena considered operating *(a)* Heysham–Belfast or *(b)* Liverpool–Belfast services. This review was presented to the Stena board in June 2010. Frontier reviewed these assessments in its report. We consider the analysis below.

[21] Average (mean) 2010–2014.
[22] This is the closure cost expressed as an annual charge in perpetuity.

85. Stena reviewed these projects on the basis of EBITDAc and C4 NPV calculations over the [seven- to twelve]-year period [✂]. In these projections there was no difference between C4 and C5 (ie there was no adjustment for fuel hedging). [✂]

86. As for the Fleetwood–Larne options, we have used an NPV (of incremental contribution) approach to allow comparison of the options. In these options, which assume a two-year implementation period, we use 2010 as the base year and 2012 when the proposed routes would be operational as year 2. We only incorporate two years of Fleetwood–Larne performance (2010 and 2011) where stated.

87. Stena assumed that it would move directly into a river berth at Liverpool, which Peel Ports had indicated would take [✂] to be operational. Also Stena required access to Belfast under either the Heysham or Liverpool options, and [✂]. It therefore assumed that it would not be able to start these routes until 2012.

88. We note that Stena/Frontier use the same figure for assumed common costs on these proposed route options as they did under Fleetwood–Larne. Common costs are allocated on the basis of revenue share. There may be differences in the common costs that would be allocated to different route options; for the purpose of this analysis we use £[✂] million as earlier.

Heysham–Belfast

89. Stena considered operating either *(a)* the *Stena Pioneer* and *Stena Leade*r vessels or *(b)* the *Stena Pioneer* and *Stena Seafarer* vessels on the Heysham–Belfast route. It did not consider alternative vessels. Frontier said that options requiring the purchase of new vessels were unlikely to be viable given the financial projections using existing vessels. We accept that the existing Fleetwood vessels have a lower capital cost than alternative tonnage (due to their age) and we do not think that the existing vessels would have been able to operate until [✂] ([✂]).

90. Stena's projections for the use of the *Stena Pioneer* and *Stena Seafarer* vessels on the route were significantly worse than those for the use of the *Stena Pioneer* and *Stena Leader.* The reason for this was that operating the route with two vessels of different sizes created operational difficulties as customers offered space one day would be frustrated the next when the smaller vessel was scheduled. Stena said that this was a particular problem for unaccompanied operators. On that basis, we do not consider the *Stena Pioneer* and *Stena Seafarer* forecasts further.

Stena Pioneer and Stena Leader

91. Table 7 sets out the forecast IC figures for operating the *Stena Pioneer* and *Stena Leader* on a Heysham–Belfast route.

TABLE 7 **Forecast incremental contribution figures: *Stena Pioneer* and *Stena Leader* on Heysham–Belfast**

£ million

	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
C1	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
EBITDAc	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
Common costs	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
IC* pre-capital costs	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
Capital costs	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
IC*	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
NPV of IC*	[✂]									

Source: Stena data and CC calculations.

*Incremental contribution.

Assumptions

92. The forecasts rely on the following key assumptions:

(a) Stena's estimate of freight volumes that would divert to Heysham–Belfast if Fleetwood–Larne were closed. Freight volumes were estimated to grow at around [✂] per cent a year. However, Stena assumed [✂] for freight volumes on this service. The estimated freight pricing was based on the Fleetwood–Larne rates at the time the analysis was done. Rates were assumed to increase at [✂] per cent a year (in line with Stena's inflation assumptions).

(b) Stena's competitors were expected to continue to operate the same capacity on the Irish Sea going forwards. The revenue estimates do not take into account the impact of Seatruck's Heysham–Larne service.[23]

(c) £[✂] million of port upgrade costs which would be incurred by Peel Ports and then recouped from Stena through higher port charges was incorporated into the C1 contribution figures. The port of Heysham was seeking a [✂]-year commitment from Stena as a condition of making this investment.

(d) Stena would spend £[✂].

(e) Cost and salaries were assumed to increase by [✂] per cent a year.

(f) Oil price (bunker) costs were assumed to be US$[✂] per barrel averaged over the period to [✂].[24]

93. In terms of diversion of Fleetwood–Larne traffic to a Stena Heysham–Belfast service, Stena assumed that [✂] units would transfer from Fleetwood–Larne to a Stena Heysham–Belfast service. This was at a time when Stena was forecasting 2010 volumes for Fleetwood–Larne of [✂] units.

Stena's views

94. Stena management had also considered the following in making its decision:

(a) Seatruck's new Heysham–Larne route was now in operation and was expected to further reduce the EBITDAc estimate by £[✂] million annually.

[23] Stena confirmed that the amount required from Peel Ports was £[✂] million, not £[✂] million.
[24] Foreign exchange rate assumed to be £1=$ 1.5714.

(b) Stena expected that the continued use of vessels would lead to additional costs and loss of custom through increased unreliability and that these vessels would need to be replaced in the near future, resulting in higher capital costs.

95. Frontier also noted that the closure costs on the Fleetwood–Larne route would not be avoided under this option, although redundancy costs might be reduced.

Summary

96. We considered whether Stena's view that investing in new vessels would not be profitable given the forecasts based on existing vessels was reasonable. We questioned whether this necessarily followed, in that, while new vessels might have higher capital costs (the capital costs for the three Fleetwood vessels are very low as they are old and Stena uses a reducing balance policy for interest charges), newer vessels might bring benefits in terms of better reliability, more capacity etc, which could increase revenues to compensate for the capital costs. We noted Stena's comments on the constraints at Heysham port. It told us that there was some limitation to the length and draught of the vessels that could be used but that there were numerous options for vessels that could operate from Heysham; for example, old 12pc roro vessels and newer vessels such as Seatruck's Heysham-max could operate. Stena told us that while new ships of the same size as the existing Fleetwood vessels might realize a potential modest increase in revenue relative to using the existing vessels through greater reliability, such gains would not compensate for the higher capital costs of new vessels. Stena said that the berth at Heysham would not accommodate a vessel larger than the *Stena Leader*, and that designing vessels to optimize capacity utilization in the port was expensive (about £[✂] million for two ships).

97. We also considered whether the use of [✂] was a sensible forecasting assumption (this was the base assumption with annual inflation assumed at [✂] per cent). Stena told us that there was limited transparency in pricing so it was unable to confirm whether there was a significant difference in the revenues that could be charged to customers at different ports. Anecdotal evidence suggested to Stena that rates were broadly competitive across all diagonal routes, and customers frequently reported being offered better pricing by competitors to encourage Stena to lower its Fleetwood–Larne rates.

98. The forecast in Table 7 shows that the incremental contribution under this option would not be positive for the foreseeable future. Indeed if Stena is correct that in fact a second Seatruck service on Heysham–Larne would impact Fleetwood–Larne by an additional £[✂] million, then it seems likely that the forecasts here are also overstated, as an impact would also be expected on a Stena Heysham–Belfast service.

99. We also accept the view that new tonnage would be needed in the medium to long run, as the Fleetwood vessels would not be able to continue reliably through to [✂].

Liverpool–Belfast

100. Stena considered operating either *(a)* the *Stena Pioneer* and *Stena Leade*r vessels or *(b)* two 'new' vessels which were assumed to have characteristics similar to those of the [✂].

101. The forecasts under this option include £[✂] million of investment costs which Peel Ports would incur and would recoup through higher port charges; this is incorporated into the C1 contribution in Tables 8 and 9 below. Peel Ports sought a [✂] in order to

make this investment. Peel Ports told us that building this terminal would take between two and two and a half years. It had a short-term option that Stena could have used within the Liverpool lock system. Stena forecast its options on the basis that it would move into the river berth in 2012, ie in two years. As with the Heysham–Belfast option, £[✂] million needed to be spent at Belfast to convert the berth for use by a ropax vessel.

102. In the presentation to the board, Stena assessed the financial forecasts [✂], ie before inclusion of the assumed two additional years at Fleetwood.[25] We note that Stena's forecasts for the Belfast–Liverpool route included transfer of freight customers from Fleetwood–Larne to the new route, ie they had been made on the assumption that Fleetwood–Larne continued operating until the new route opened.

Stena Pioneer and Stena Leader

103. The projections for operating the *Stena Pioneer* and *Stena Leader* on the Liverpool–Belfast route showed it not to make a positive contribution throughout the period and on a pre-capital basis only make a small contribution from 2014 onwards. Table 8 sets out the forecasts.

TABLE 8 **Forecast incremental contribution figures: *Stena Pioneer* and *Stena Leader* on Liverpool–Belfast**

£ million

	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
C1	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
EBITDAc	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
Common costs	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
IC* pre-capital costs	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
Capital	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
IC*	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
NPV of IC*†	[✂]									

Source: Stena data and CC calculations.

*Incremental contribution.
†Using 2010 as base year (ie 2012 is year 2).

Assumptions

104. The forecasts rely on the following key assumptions:

(a) Stena's estimate of freight volumes that would divert to Liverpool–Belfast if Fleetwood–Larne was closed. Freight volumes were estimated to grow at around [✂] per cent a year in the market as a whole and Stena forecast that its freight volumes would increase by [✂] per cent in 2013 and 2014 and [✂] thereafter. [✂] Stena said that head-to-head competition with DFDS might have led to significant price pressure, although this was not factored into the forecasts.

(b) Stena's competitors were expected to continue to operate the same capacity on the Irish Sea going forwards.

(c) Stena did not take account of Seatruck's Heysham–Larne service on these forecasts, as it considered that there would be relatively minor impact on a Liverpool–Belfast service from this route.

[25] We note that in the supporting calculations Stena considered the [✂] including two years of Fleetwood–Larne operations. These included Fleetwood–Larne on the basis of EBITDA in 2010 of –£[✂] million and in 2011 of –£[✂] million.

(d) For passenger revenues, Stena's estimates were based on the traffic carried by DFDS's Liverpool–Belfast route. It considered that it could obtain similar volumes on its own route with additional volumes coming from market growth.

(e) £[✂] million of port upgrade costs which would be incurred by Peel Ports and then recouped from Stena through higher port charges were incorporated into the C1 contribution figures.

(f) Cost and salaries were assumed to increase by [✂] per cent a year.

(g) Oil price (bunker) costs were assumed to be US$[✂] per barrel averaged over the period to [✂].[26]

105. As for the Heysham–Belfast option, we considered these assumptions reasonable.

106. In terms of diversion of Fleetwood–Larne traffic to a Stena Liverpool–Belfast service with the *Pioneer* and *Leader*, Stena assumed that in total in the first year of operation Stena would carry [✂] units. At the time of this forecast, Stena was forecasting 2010 volumes of [✂] units on Fleetwood–Larne.

Stena's views

107. Stena pointed out issues with using the vessels currently employed on Fleetwood–Larne, in addition to the issues noted previously with declining reliability, higher maintenance costs and the need for replacement driving up capital costs. Stena also thought that these vessels with a slower service speed of around 17 knots would struggle on the longer Liverpool–Belfast route, with maintenance and reliability issues leading to lost revenues. Stena explained that factoring in the time for loading and unloading, the speed of the vessels would be insufficient to permit a round trip per day. To make the trip in 8 hours and offer a competitive schedule, they would theoretically have to operate at a maximum speed from departure to arrival and this is not possible due to speed restrictions in the port areas. Stena noted that the *Lagan Seaways* and *Mersey Seaways* which operate on Liverpool–Belfast operate at a speed of 20 knots at open sea. In addition, the engines on the ex-Fleetwood vessels are less powerful increasing the risk of the ships encountering difficulties on the long Irish Sea sailing with rough weather.

108. The Stena board decided that the expected ongoing losses associated with the Liverpool–Belfast option were of a scale which could not be justified in light of the Fleetwood–Larne closure costs that might be avoided.

Summary

109. The NPV of the forecast incremental contribution was –£[✂] million, and this assumed that the existing Fleetwood vessels could be used reliably for many more years or that vessels with similarly low capital costs could be found.

[✂] type vessels

110. The estimated incremental profitability of using two [✂] type vessels between Liverpool–Belfast is set out in Table 9.

[26] Foreign exchange rate assumed to be £1=$ 1.5714.

TABLE 9 **Estimated incremental contribution figures: two [✂] type vessels on Liverpool–Belfast**

£ million

	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
C1	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
EBITDAc	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
Common costs	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
IC* pre-capital costs	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
Capital costs	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
IC*	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
NPV of IC*†	[✂]									

Source: Stena data and CC calculations.

*Incremental contribution.
†[✂]

Assumptions

111. The forecasts rely on the following key assumptions:

(a) Stena's estimate of freight volumes that would divert to Liverpool–Belfast if Fleetwood–Larne was closed. Freight volumes were estimated to grow at around [✂] per cent a year in the market as a whole. Stena assumed [✂] of its own freight units in the period to 2016 and no growth thereafter. [✂]

(b) Stena's competitors were expected to continue to operate the same capacity on the Irish Sea going forwards.

(c) Stena did not take account of Seatruck's Heysham–Larne service on these forecasts, as it considered that there would be relatively minor impact on a Liverpool–Belfast route from this rote.

(d) For passenger revenues, Stena's estimates were based on the traffic carried by DFDS's Liverpool–Belfast route. It considered that it could obtain similar volumes on its own route with additional volumes coming from market growth.

(e) £[✂] million of port upgrade costs which would be incurred by Peel Ports and then recouped from Stena through higher port charges were incorporated into the C1 contribution figures.

(f) Cost and salaries were assumed to increase by [✂] per cent a year.

(g) Oil price (bunker) costs were assumed to be US$[✂] per barrel averaged over the period to [✂].[27]

112. Stena assumed that in the initial year of operation (2012) there would be [✂] units of freight.

Stena's views

113. Frontier argued that whilst there was a positive EBITDAc from 2014[28] onwards, when the ship costs, and the fact that Stena would have to incur £[✂] million of upgrade

[27] Foreign exchange rate assumed to be £1=$ 1.5714.
[28] Frontier actually said 2015 onwards but the figures it provided show positive EBITDAc in 2014.

costs in Belfast, are also factored in, then it suggests that a relocation from Fleetwood–Larne to Liverpool–Belfast would not be a viable alternative.

114. Additionally, Frontier pointed out that the figures assumed that Stena could find two vessels which were similar (and have similar book values) to the [✂] and transfer them to the route. Stena does not have such vessels in its fleet and so would have to purchase or charter them. Stena suggested that purchasing or leasing the vessels would have an assumed capital charge of £[✂]. The expected performance of the route would therefore be significantly worse than that shown in Table 9 above (where capital costs are less than £[✂] million a year). Stena told us that its analysis was based on a scenario in which Stena had exited Fleetwood but faced head-to-head competition from DFDS on the new diagonal routes as well as competition from Seatruck. It said that there would remain significant overcapacity in the market, affecting volumes and revenues. It considered overcapacity to be a key driver of the losses.

115. It said that for other operators it might be easier to achieve profitability if available berths were used and suitable vessel(s) could be found. It noted that Seatruck would shortly take delivery of new vessels for which it was already committed to the capital costs and that it thought P&O could relatively easily open up a Liverpool–Larne service because of its ownership of the port.

116. [✂][29] Stena said that the economic recession and the overcapacity on the diagonal routes made entry no longer financially viable. It was conscious that Seatruck was to receive four new additional vessels and said that new capacity would depress prices and further undermine the case for investment.[30]

Summary

117. The EBITDAc is positive under this option within two years of starting out; however, the incremental contribution is negative throughout the forecasts. As noted in paragraph 146, [✂].

118. The capital costs under this option are significantly more than under the Fleetwood vessel options, demonstrating that the Fleetwood route has been benefiting for a number of years from low capital rates.

119. The scale of the negative incremental contribution is high in the first ten years (£[✂] million on an NPV basis).

Other vessel options considered

120. Other options Stena considered only in the back-up to the June board presentation (and not covered by the Frontier report[31]) were: [✂].

Assumptions

121. The core assumptions used in these forecasts were as for the Liverpool–Belfast options above (see paragraph 111):

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[29] Stena's submission to the CC, paragraph 4.26.
[30] Stena's submission to the CC, paragraph 4.27.
[31] The Frontier report noted that Stena had considered the use of two larger 2,400 lane metre vessels, but rejected this possibility and did not include it in its full presentation.

(a) In terms of diversion of Fleetwood–Larne traffic to a Stena Liverpool–Belfast service, Stena assumed that in total [✂] units would be transferred from its Fleetwood–Larne service ([✂] accompanied freight and [✂] unaccompanied) with the rest going to competitors' routes. It also assumed that it would attract [✂] units from competitors' routes. Together this totals [✂] units. The assumption used in the [✂] forecasts was that in the first year of operation Stena would carry [✂] units.

(b) Stena then assumed that freight volumes on a [✂] service would increase by [✂] per cent in the years [✂], by [✂] per cent in the years [✂] and [✂] per cent thereafter. So in [✂] Stena was forecasting carrying [✂] units.

(c) For the [✂] costs forecast Stena assumed slightly slower growth than for [✂] but still faster than the market as a whole.

122. Stena said that it had assumed faster growth than the market as a whole as [✂] it would expect to gain market share over time.

123. At the time of this forecast (June 2010), Stena was forecasting 2010 volumes of [✂] units on Fleetwood–Larne. In 2010, Stena carried [✂] units.

Forecasts

124. Stena reviewed these projects on the basis of C4/5 NPV calculations over the period [✂]. The C4 and C5 in these forecasts were the same. Table 10 sets out the [seven- to twelve]-year NPV calculations undertaken by Stena in relation to these options.

TABLE 10 **[Seven- to twelve]-year NPV calculations, [✂], for other vessel options on a Liverpool–Belfast route**

		£ million
	[✂]	[✂]
EBITDAc	[✂]	[✂]
C4	[✂]	[✂]

Source: Stena.

Stena's views

125. Stena had calculated the C4 NPV [✂] for the [✂] option as £[✂] million, ie positive. It dismissed this option as the vessels were not available. [✂]

126. [✂]

127. The vessels were considered, as in terms of size, speed and other characteristics they were attractive ships to operate on the route. Stena had no knowledge of equivalent ships available in the market at that time.

128. An internal email dated 18 March 2010, which commented on the potential of the [✂] to be used between Liverpool and Belfast, noted that in 'the medium to long term (2–3 years) we see a clear need for [✂] lane metres boats, but we also need both PC and cabins'. We asked Stena how many vessels with similar dimensions to the [✂] were available in the world shipping markets.

129. Stena told us that there were [✂]. None of these were available for charter in June 2010 nor were available for charter today (ie as at March 2011). Stena's view is

informed by Stena RoRo, a division that specializes in vessel acquisition and chartering. Stena explained that vessels of this size were typically manufactured bespoke for an operator to use on a particular route, and as such were only likely to be available for charter if an operator no longer wished to continue the operation for which they had been ordered (as was the case with the [✂]). In terms of how frequently vessels of this size became available, Stena said that given the rarity of the ships, this was a case by-case issue. It believed that vessels of this size rarely became available either within Stena's fleet or on the charter market as there was an increasing demand for larger vessels but not many had been built.

130. In terms of building vessels of this size, Stena said that two new [✂] lane metre ropax vessels would take two to three years to build and in 2010 the estimated costs for [✂] ships was $[✂] million per vessel (£[✂] million at that time).

131. The [✂] costs option was forecast to have a C4 NPV of –£[✂] million over the period [✂]—see Table 11. This option was not discussed by the board as the forecast results were negative. Additionally, the option was based on hypothetical vessels (ie such vessels do not exist, so would have to have been purpose built for Stena). We noted that for the [✂] option, if common costs are added back then the incremental contribution of this option is positive over ten years (£[✂] million). This would be negative if the years 2010 and 2011 at Fleetwood–Larne were incorporated into the forecast.

Summary

132. The best option (the option with the highest NPV) is the [✂] option, subject to acquiring existing or new vessels with the same specification.

133. DFDS told us that vessel supply currently outweighed demand and that attractive prices were achievable for a prospective buyer/charterer. It told us of four vessels that were available for charter in March 2011 with 2,500 lane metres, 120 passenger car spaces and berths for approximately 300 persons. It said that while the lane metres appeared lower than 3,100, combined with the passenger car capacity these were equivalent to a regular 'Visentini 3,100 lane metres' vessel. Stena explained that such vessels would not in its view be equivalent to the [✂] as they did not include space for cars, only freight. Stena said that car capacity might come on top of the [✂] lane metres. It said that the Visentini theoretical freight capacity was significantly less than the large ropax of [✂] plus lane metres of freight capacity and that it would have a very different business projection more akin to the unprofitable forecasts for the hypothetical [✂] costs option. We note that Stena's plans for Liverpool–Belfast included the transport of passengers and cars.

134. [✂]

135. Table 11 sets out a combined ten-year forecast for a Liverpool–Belfast route using new vessels from 2012, and continuing with Fleetwood–Larne until 2012.

TABLE 11 **Combined Fleetwood–Larne and Liverpool–Belfast option**

£ million

	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
Discount rate	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
C4			[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
Assumed common costs			[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
Capex difference*			[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
IC	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
Discounted IC	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
NPV	[✂]									

Source: CC from Stena data.

*Difference due to new vessels having lower capex than [✂].

136. As shown in Table 11, if we incorporate two years of Fleetwood–Larne losses (as assessed in June 2010, without the £[✂] million additional loss on Fleetwood–Larne due to the additional Seatruck vessel) with the [✂] forecasts, the incremental contribution NPV over the [✂] window that Stena typically assesses an investment would be –£[✂] million, and over [✂] years ([✂] being the last year of Stena's forecasts) it would be a positive of £[✂] million.

137. As noted in paragraph 79, we consider that excluding the £[✂] million loss overstates the incremental contribution. If we incorporate two years of Fleetwood–Larne losses (as assessed in June 2010, with the £[✂] million additional loss on Fleetwood –Larne due to the additional Seatruck vessel) with the [✂] forecasts, the incremental contribution NPV over the [✂] window that Stena typically assesses an investment would be –£[✂] million, and [✂] it would be a marginally positive at £[✂] million.

138. Whilst these forecasts over a [✂] period start to look positive, we note that Stena makes its investment decisions based on a [seven- to twelve]-year window. Once the effect of the Seatruck service is considered, the [✂] position is marginal. These forecasts are subject to uncertainty. If some additional risk was factored into these forecasts, for example if the demand was less than forecast over the next ten years or the vessels took three rather than two years to arrive and losses had to be incurred on Fleetwood–Larne for longer, under either of these scenarios the NPV result would decline.

139. Stena uses a [seven- to twelve]-year window to assess its investment options. In this time frame the option to move to Liverpool–Belfast is not forecast to have a positive NPV when the losses to be incurred on Fleetwood–Larne prior to the new route opening are considered. While we consider that an operator could look over the lifetime of the vessels to be used on a Liverpool–Belfast route and take a view to invest, we consider that in the economic environment prevailing on the Irish Sea (in terms of overcapacity and subdued demand), it is unlikely that Stena would have taken a large investment decision (involving long-term commitments to capital costs at both ports and in new vessels) to start a new route in two to three years' time on the basis of these forecasts and with the more certain short-term forecasts of incremental contribution on the Fleetwood–Larne route (–£[✂] million a year).

140. We asked Peel Ports (the owner of Heysham, Birkenhead and Liverpool ports) how far discussions had progressed with regard to Stena moving to a new port, prior to Stena's acquisition of the Belfast routes. It told us that it had made an outline offer on 31 March 2010 and that there had been no other formal correspondence, just a series of informal discussions. These appear to have been occurring until at least July 2010 (see Appendix C, paragraph 56). It told us that the discussion had so far

been about Peel Ports proposing ideas and costs to Stena, but it had not received any feedback from Stena as to which of the options it was most likely to undertake. Peel Ports did not feel it was in a position to speculate on which of the proposals absent the merger Stena was more likely to act on (Heysham, Liverpool sea berth, Liverpool river berth). Peel Ports said that it considered it was in competition with the existing service Stena had at Fleetwood.

Other route options

141. In Stena's board presentations of May 2010 we note that it referred to the repositioning to Liverpool–Belfast as 'the ultimate goal'. Stena explained to us that its business model was to be a provider of ropax services combining both passenger and freight services. It had a long-term commitment to the markets in which it operated (such as the Irish Sea) and the Liverpool–Belfast corridor was an area in which it could develop its business model (particularly as it was the only diagonal route with a substantial passenger element). We also note Stena's view that operating a diagonal route was only a suitable option if it was financially viable.

142. [✂][32] Setting up operations at another port would increase overheads.[33] We therefore consider that the port of Belfast was particularly attractive for Stena since it would provide a hub in Northern Ireland for its operations. However, for completeness we considered whether Stena could have explored options for operating on other diagonal routes, rather than just those into Belfast. We considered the use of Larne, Warrenpoint, Greenore and Bremore.

143. We thought the use of Larne unlikely given Stena's commitment to Belfast Harbour (through its investment in the Victoria Terminal 4 (VT4)) which is in close proximity, and Stena's view that its customers preferred Belfast as a destination. Warrenpoint Harbour Authority confirmed that it could provide facilities for another roro operator, subject to gaining access to some additional land. However, Stena told us that sharing the berth at Warrenpoint with Seatruck would require fitting in with Seatruck's existing schedule and would likely require operating an off-peak and less attractive service to customers. As with Larne, our view is that Stena's existing commitments at Belfast port meant that expansion using Warrenpoint was unlikely.

144. None of the parties we spoke to suggested that the use of Greenore or Bremore by roro or ropax operators was likely. P&O explained that Bremore was currently only a pilot development and that roro traffic on the central corridor would rather use the port of Dublin given the onward journeys of the hauliers. It noted that there were no roro facilities at either Greenore or Bremore at the moment and so investment would be needed. These are untested ports (and indeed Bremore's position just outside Dublin means that it is not considered to be a diagonal route port). Seatruck told us that investment in and operation from these ports in the current market was unlikely.

Summary

145. Our view is that the use of any of these alternative ports for a diagonal route service was not a likely option for Stena absent the transaction with DFDS.

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[32] Stena submission to CC, Annex F, paragraph 48.
[33] Seatruck told us about the hub effect of using one port. It said that it would not consider operating from Fleetwood as it already had a cost centre in nearby Heysham. In addition to cost benefits, it also thought there were customer benefits in operating from a hub.

Stena's assessment of Fleetwood–Larne compared with other routes

146. As noted in paragraph 27 above, [✂].

147. Table 12 sets out the performance of Fleetwood–Larne compared with this assessment basis.

TABLE 12 **Fleetwood–Larne KPI measures, 2004 to 2011**

	2004	*2005*	*2006*	*2007*	*2008*	*2009*	*2010*	*2011(B)**
C5 (£m)	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
C5 (%)	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
EBITDAc (£m)	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
EBITDAc (%)	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]

Source: Stena.

*(B) = budget.

148. Fleetwood–Larne had positive C5 until 2007. Its EBITDAc performance was particularly poor in 2010 and is forecast to be poor in 2011.

149. Stena has taken decisions to continue with other [✂] routes, which might indicate that it does not make decisions on routes purely on the basis of the short-term financial performance.

Other routes

150. Review of the management accounts and Stena's outlook forecasts for Stena's other Irish Sea routes showed that: [✂].

151. This indicates [✂] and [✂] as possible 'problem' routes. We therefore assessed the decisions taken by Stena in relation to the [✂] and [✂] routes to see if there was a reason for the continued operation of these routes that might equally apply to the Fleetwood–Larne route.

[✂] route

152. Table 13 sets out the historic and expected performance of the [✂] route.

TABLE 13 [✂] **KPI measures, 2004 to 2013**

	2004	*2005*	*2006*	*2007*	*2008*	*2009*	*2010*	*2011(B)**	*2012 (O)†*	*2013 (O)†*
C5 (£m)	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
C5 (%)	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
EBITDAc (£m)	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
EBITDAc (%)	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]

Source: Stena.

*(B) = budget.
†(O) = outlook.

153. [✂]

154. Stena said that the decision to continue rather than exit the route differed from that adopted on Fleetwood–Larne, but that the reasoning was consistent as continuing the route had a higher C5 than exiting. The costs of closing the route in the period

before 2011 were more expensive than continuing with the route, hence Stena's decision to continue with the route in the period to 2011.

155. [✂]

[✂] route

156. Table 14 sets out the historic and expected performance of the [✂] route.

TABLE 14 [✂] **KPI measures, 2004 to 2011**

	2004	*2005*	*2006*	*2007*	*2008*	*2009*	*2010*	*2011(B)**
C5 (£m)	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
C5 (%)	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
EBITDAc (£m)	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]
EBITDAc (%)	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]

Source: Stena.

*(B) = budget.

157. [✂]

158. [✂]

Summary

159. In each case, Stena assessed the closure options for the routes against alternatives and chose the option that was most profitable. We note that the choice at Fleetwood was different from the other cases in that the costs of closing the route were very low compared with the cost of running the route and compared with closing routes elsewhere (as the port agreement at Fleetwood had a break clause and at Larne had a 12 months' notice clause).

160. On the basis of this analysis, our view is that the decision taken to close Fleetwood–Larne was consistent with the decisions taken on [✂] and [✂]. Accordingly, Stena's decision to close the Fleetwood–Larne route and not close the other loss-making routes appears to be reasonable.

Strategic reasons for route operation

161. Third parties raised three potential strategic reasons for continuing to operate a route other than its direct financial contribution. These were: *(a)* reputation, *(b)* network benefits, and *(c)* effect of actions on rivals. In addition, we considered *(d)* avoiding customer reacquisition costs if a new route were to be opened in the future.

Reputation

162. Reputational issues were cited by a number of market participants as a reason for the continued operation of routes. ABP suggested that there were some benefits in terms of showing commitment to the Irish Sea, and that Stena had a clear strategy to operate on the diagonal routes (as demonstrated by its acquisition of the Fleetwood–Larne route). It said that it did not believe exiting the northern diagonal routes would form any part of Stena's strategy.

163. The advantages in reputation from continuing to run the Fleetwood–Larne route seem modest in the context of Stena's wider Irish Sea operations. The evidence we have gathered indicates that the issues with operating from Fleetwood were widely known. It is not clear that withdrawal from Fleetwood–Larne would signal a weakening commitment by Stena to the Irish Sea as a whole, particularly given that Stena operates on all the other corridors and has recently made a significant investment in its new Loch Ryan Port facility.

Network benefits

164. P&O told us that on occasions there could be valid reasons for operating a loss-making route, if it contributed to a network benefit. It did not believe that it had such strong network effects in its Irish Sea business. P&O said that after the transaction Stena was in a position to have 'a stranglehold on their network'. It said that if Stena opened a Birkenhead–Dublin route, it would then have a northern route, diagonals and two central corridor routes which would provide an opportunity to lock in customers. [34]

165. Seatruck told us that there was a benefit, since Stena could offer its European customers an end-to-end ferry service for journeys terminating in Northern Ireland or the Republic of Ireland. It said that having a wider range of routes encouraged customers to use the company.

166. Stena told us that it would operate a diagonal route only if there were a direct financial benefit as there were few broad network effects on the Irish Sea. We noted that no operator on the Irish Sea had routes on all corridors. We saw no evidence that suggested that operating on Fleetwood–Larne would be core to a Stena network of routes.

167. Accordingly, we were not persuaded that there were reasons to operate a diagonal route as part of a network of routes on the Irish Sea that were sufficiently strong to justify running a route at a significant and persistent loss.

Effect on competitors

168. Irish Ferries told us that an operator might continue with a route that was marginally loss-making if there was a risk that, by closing the route, the damage from competitors to the overall business would be greater than the ongoing losses in maintaining the route.

169. Our review of Stena's internal documents (Appendix C) showed that it might consider maintaining a route to avoid creating opportunities for competitors to expand or to avoid gifting a competitor extra customers.

170. We consider that disadvantaging rivals is not a compelling reason for continuing to operate the Fleetwood–Larne route, because there is already capacity available in Northern Ireland for an operator to use, although not at Larne, so in leaving, Stena made space available for Seatruck and/or P&O. However, the cost of continuing with the route solely to avoid customers being gained by competitors appears prohibitive on the basis of the June 2010 forecasts—see paragraph 79.

[34] We note that this would be three central corridor routes as in addition to Stena's Dublin–Holyhead service it also currently offers Holyhead–Dun Laoghaire.

Avoiding customer reacquisition costs

171. We considered the likelihood of avoiding customer reacquisition costs by continuing to operate the Fleetwood–Larne route until Stena was able to migrate the customer base to a new Liverpool–Belfast route. It appeared to us that the costs of doing so were likely to be prohibitive (see paragraph 80) and additionally the volumes of freight using Fleetwood in 2010 were lower than Stena had forecast, making its assumptions about migration to a new route likely to be overstated (see paragraph 123). Accordingly, we do not think that continuing to operate the Fleetwood–Larne route for this purpose would be likely.

DFDS routes

172. According to the DFDS management accounts shown in Table 15, the DFDS Irish Sea routes were loss-making overall and in 2009 and 2010 only the Belfast–Liverpool route made a profit.

TABLE 15 **Financial performance of the DFDS routes**

£ million

	2007	*2008*	*2009*	*2010*
Belfast–Liverpool				
Revenue	[✂]	[✂]	[✂]	[✂]
Contribution	[✂]	[✂]	[✂]	[✂]
Belfast–Heysham				
Revenue	[✂]	[✂]	[✂]	[✂]
Contribution	[✂]	[✂]	[✂]	[✂]
Dublin–Liverpool				
Revenue	[✂]	[✂]	[✂]	[✂]
Contribution	[✂]	[✂]	[✂]	[✂]
Dublin–Heysham				
Revenue	[✂]	[✂]	[✂]	[✂]
Contribution	[✂]	[✂]	[✂]	[✂]

Source: DFDS.

173. The contribution shown in Table 15 is the 'contribution to fixed costs and allocations' (ie direct contribution after depreciation). DFDS told us that this overstated the position and that in fact all routes were loss-making. DFDS explained that if fixed costs (primarily corporate costs and interest) were allocated to the routes and the net result was considered, then in 2010 the Belfast–Liverpool route was making a loss of £[✂] million, the Belfast–Heysham route was making a loss of £[✂] million, the Dublin–Liverpool route a loss of £[✂] million and the Dublin–Heysham route a loss of £[✂] million.

174. DFDS had contracts relating to the two ropax vessels it used on its Belfast–Liverpool route, which ran to 2015 at an annual cost of €[✂] million. There was no option to terminate the agreement early. The total commitment for the vessels was therefore €[✂] million (although this might have been reduced if they could have been re-deployed elsewhere). The Belfast port agreement ran to 2022 at an annual cost of £[✂] million. The contract at Birkenhead had a break clause in June 2012; the annual commitment was €[✂] million. The Dublin port contract ran to 2012, and the

annual commitment was €[✂] million.[35] At Heysham there was no remaining contractual commitment.

175. As noted in paragraph 15, to the extent that costs are sunk then they are not relevant to a route closure decision. According to DFDS (see paragraph 173), the losses on the Belfast routes totalled £[✂] million, adding back £[✂] million for the contract at Belfast and, say, half of the Birkenhead annual agreement on the basis that these are sunk costs suggests the routes could be breakeven/make a positive contribution. This is not the same for the Dublin routes: the losses on the Dublin routes total £[✂] million; adding back the Dublin port agreement and half the Birkenhead agreement does not provide a positive contribution. We do note that the calculations include contribution to corporate costs (some of which may be common costs) but consider them supportive of DFDS's statements regarding its likely actions in the counterfactual.

[35] DFDS has since negotiated a termination fee of €2.5 million.

Stena's actions with regard to the Fleetwood–Larne route

1. This appendix sets out evidence relevant to our assessment of Stena's decision to close the Fleetwood–Larne route. In paragraphs 2 to 9, we set out the details of the vessels used on the route and Stena's initial plans for the route and the vessels. This evidence is relevant to our assessment of whether Stena would have continued to operate the Fleetwood–Larne route absent the acquisition of the Belfast routes. In paragraphs 11 to 61, we review the internal documents of Stena in relation to the Fleetwood–Larne route and Irish Sea business strategy; this is relevant to our assessment of the linkage between the decision to close Fleetwood–Larne and the decision to acquire the Belfast routes. In paragraphs 62 to 86, we review the actions that Stena took in closing the Fleetwood–Larne route, to enable us to assess whether the closure was linked to the acquisition of the Belfast routes.

Background

2. Stena acquired the Fleetwood–Larne route from P&O in 2004. The route had been in operation since 1975. Stena operated three vessels on the service, namely the *Stena Seafarer, Stena Pioneer* and *Stena Leader*. Table 1 sets out the specification of these ferries.

TABLE 1 **Properties of the vessels used on Fleetwood–Larne**

Vessel	*Length (m)*	*Capacity (lane metres)*	*Draught (m)*	*Passenger capacity*	*Service speed (knots)*	*Age (years)*
Stena Seafarer	141	1,050	4.7	65	17	35
Stena Pioneer	142	1,350	4.7	96	16	35
Stena Leader	158	1,300	4.3	87	18.5	35

Source: Stena.

3. Stena told us that there were very few vessels with these characteristics (length/ draught) in the world markets.

4. Stena accounts for its roro and ropax vessels using an estimated useful life of [20–25] years. It has a straight-line depreciation policy.[1] Other operators told us that they depreciated assets over 25 to 35 years.[2,3,4,5] The vessels were 29 years old when Stena acquired them, and so Stena was aware that investment/replacement would be necessary in the near future.

5. Stena told us that when it acquired the Fleetwood–Larne route in 2004, it had planned to operate the route indefinitely. The *Stena Seafarer, Stena Pioneer* and *Stena Leader* were assumed to have a remaining useful economic life of seven years when they were acquired (ie they would be fully depreciated by 2011).[6]

[1] [✂]
[2] Seatruck uses 25 years (down to zero/scrap value).
[3] Irish Ferries uses passenger ships. The hull and machinery are depreciated over 30 years for conventional ferries, 15 years for fast ferries.
[4] P&O uses 25–35 years.
[5] DFDS uses 25 years for ropax and cargo vessels.
[6] [✂]

6. Stena considered building bespoke vessels for Fleetwood port (the F-max vessels). Stena Teknik (a Stena group company) designed the desktop concept from 2006 to 2007, and price indications were discussed with Stena RoRo. Stena told us that price indications ranged from £80 million (in 2006) to £85 million (in 2009) for each of two vessels and that these prices reflected a volume discount for ordering two identical ships. [7]

7. The F-max vessels were designed to be the best possible for use in shallow tidal conditions at Fleetwood. The size was 2,500 lane metres (ie significantly larger than the existing Fleetwood vessels). Stena said that any significant investment in Fleetwood was a high-risk venture (due to the inherent problems with the port), and due to high shipyard prices it had repeatedly delayed making this investment as it waited to see how the market developed.[8] As competition from Seatruck and DFDS increased, Stena considered that the indicative capital cost was disproportionately high compared with the estimated revenue increase and so did not request any more quotes from shipyards. As an indication of the difference in price between bespoke and more standard vessels, Stena said that a [✂] lane metre ropax vessel ([✂] built) and suitable for operation between Belfast and Liverpool was around £[✂] million (compared with £[✂] million for an F-max vessel).

8. We reviewed a document titled 'Fleetwood–Larne 2008' which appears to have been presented in 2007 to support the budget and strategy for 2008. The document noted that Stena was considering an option to lengthen two of the existing ships in Fleetwood and extend their lives by ten years. Initial studies had suggested that this was possible. However, Stena told us that a financial assessment demonstrated that the investment was not viable (the additional [✂] freight units per year required to justify the investment was too high). With regard to F-max vessels, the document noted that 'at the present time the cost of building Fmax would be too expensive, affecting viability of the project'. It considered that the financial review showed that this could be a profitable option based on costs of £[✂] million per ship. The document also showed that Stena had met with Liverpool port to discuss options there; Stena considered Liverpool the only Great Britain port with potential for new operators in the diagonal corridor.

9. Stena told us that it had been looking in the market for existing vessels which might be brought in to replace the Fleetwood vessels immediately. It had found no suitable vessels given the need for shallow draught and ability to withstand the rough weather on the Irish Sea. Stena's search identified five vessels, the youngest of which was 33 years old. It found these vessels too old and too small to merit any investment as these would not be an improvement on the existing vessels.

10. We noted that Stena had considered a number of enquiries regarding charter/sale of the Fleetwood vessels. None of these came to fruition:

    (a) An internal email dated 24 August 2009 noted the possibility of selling a Fleetwood vessel if Stena wanted to go down from three to two vessels.

    (b) An internal email from dated 4 February 2010 provided details of the *Stena Pioneer* and *Stena Seafarer* in the context of charter tonnage. [✂]

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[7] Stena confirmed that these figures were in sterling.

[8] This is supported by the [✂] Board minutes for February 2008 (and other months in 2008), which included a schedule of actions from previous meetings. This schedule noted an action from March 2007 in relation to F-max on the Irish Sea: proposal and plan, with a comment that this was on hold.

(c) An internal email from dated 11 August 2010 suggested that [✂]. The email was seeking clarification of the technical specification of the vessels.

Board minutes and internal documents

11. We received board minutes and related presentations which concerned either the [✂], the acquisition of the Belfast routes from DFDS or the closure of the Fleetwood–Larne route. [✂]

12. We also received all relevant internal documents (including emails) generated relating to business strategy in the Irish Sea since 2008.

2008 (pre-acquisition opportunities)

13. We looked at board minutes from 2008 for commentary on the Fleetwood–Larne route, ie prior to discussions with [✂] DFDS.

14. This review showed that in 2008, Stena considered moving the Fleetwood service from Larne to Belfast as part of a wider agreement with the Port of Belfast. [✂][9]

2009 [✂]

15. [✂]

16. [✂]

17. [✂]

18. [✂]

19. [✂]

20. We have not found evidence that prior to June 2009 management considered a possible closure of Fleetwood–Larne.

Interest in Irish Sea routes grows

21. A 'freight comments and observations' note prepared on 2 September 2009 by a member of the Irish Sea freight team who was not party to discussions at board level and was not therefore aware of the detail of Stena's strategic thinking either in relation to the closure of Fleetwood–Larne or [✂] which was then under consideration, included comments on Fleetwood–Larne such as:

    (a) Should Fleetwood–Larne close, the expectation of [✂] per cent of accompanied traffic and [✂] per cent of unaccompanied traffic diverting to Birkenhead was realistic, but should not be increased. With existing ships, the transfer of this volume of accompanied business would compromise the deck space available for unaccompanied business to transfer mid-week, undermining weekend volumes which the route would rely on for overall volume performance.

    (b) The risk of a third party stepping into Fleetwood with a 12 passenger capacity would be very real; equally this could be the case with any routes/ports left open

[9] [✂]

either by Stena's actions, or remedies imposed by the competition authorities, as might expect be expected.[10]

(c) Operating Heysham–Belfast, should this be an option, would be favourable to operating ex Fleetwood, but would displace a not insignificant volume of customers who currently preferred Larne as a destination over Belfast. Stena estimated that at least [✂] per cent and possibly more of chiefly unaccompanied business would prefer Larne if the alternative remained available.

(d) Potential operators moving into an unaccompanied Fleetwood–Larne service would then include Seatruck and P&O but should Stena succeed in their acquisition then it was possible that DFDS would consider its options to enter the Irish Sea market. P&O Port of Larne would be extremely anxious to replace lost volumes and revenue and would pursue a replacement with vigour.

(e) If Stena were to maintain (or was allowed to maintain) the service in Fleetwood, then it imagined that Heysham–Belfast would need to be divested.

(f) The option to operate Fleetwood–Larne with two 12-passenger-capacity ships could be feasible but additional volumes would need to be generated as Stena relied heavily on accompanied traffic on its current peak sailings. Operating a 'shoulder' and off-peak trip pattern would be a tactical option with peak volume being pushed to Birkenhead. It was felt that 12-passenger-capacity vessels, suitable for Fleetwood, would be much easier to obtain and have lower operational costs than the existing, aged vessels when they required replacement, or before.

22. In summary, this document shows that Stena was considering the effect of continuing to operate Fleetwood–Larne, or closing it, [✂]. It also suggests that vessel options other than existing vessels were possible but would require a move to unaccompanied freight. Stena also considered that other operators could operate a route from Fleetwood on an unaccompanied basis.

23. [✂]

24. In relation to the Irish Sea, the September 2009 presentation included a slide titled 'Fleetwood–Larne business plan—no future?' This showed the forecast for the route to 2018, with F-max vessels from 2015 (with estimated cost €[✂] million/vessel).[11] In 2018, the EBITDA was forecast to be €[✂] million and C5 [✂]. The EBITDA was forecast to progressively increase. The capital costs were reducing year on year following the investment in 2015 ([✂]).[12]

25. The document also noted that:

(a) There was a weak future outlook for the current ropax operation between Fleetwood and Larne (huge ship investments required in a couple of years, ie F-max vessels).

(b) There was a possible need for replacing Fleetwood–Larne by another route such as Liverpool–Belfast, the rationale being 'maintaining and developing a diagonal service, grow more into RoPax on the diagonal'.

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[10] [✂]
[11] We note that Stena has confirmed that vessels were forecast to cost £[✂]–£[✂] million.
[12] We note that the forecast in this document was more profitable than the F-max forecast presented to the [✂] board on 22 September 2009. This was based on the 'Forecast 2' and the forecast presented on 22 September 2009 were based on 'Forecast 3'.

(c) The closure of Fleetwood–Larne in 2010 (unprofitable, also long term) would result in synergies as some volumes would be transferred to Liverpool–Belfast.

(d) If Fleetwood–Larne was closed, Larne would have free capacity. The effect on the northern corridor was posed as a question.

26. This document shows that the closure of Fleetwood–Larne was considered alongside the acquisition possibilities and that transfer of trade from Fleetwood–Larne to an acquired route was a relevant factor in this consideration.

27. [✂]

28. [✂]

29. [✂]

30. The [✂] Board minutes of 29 September 2009 noted: [✂].[13]

31. The supporting presentation for this meeting stated that Fleetwood continued to be popular with customers and reported that Norfolkline's Liverpool–Belfast route was 'performing similarly to Fleetwood–Larne and in line with the market'.

32. The board minutes and presentation shows that other alternatives to closing the Fleetwood–Larne route were considered alongside the acquisition possibilities.

33. [✂]

34. An internal email dated 12 October 2009 noted that Seatruck's old 'Esco' boats could go into Fleetwood.[14] The context for this email was that Stena was considering whether it would be possible for Seatruck (or another operator using the Seatruck vessels) to enter at Fleetwood after Stena had exited. Stena found that the Esco vessels could go into Fleetwood provided that they had primarily unaccompanied loads. For accompanied traffic/trailer loads, they would need more than 5 metres draught, and the maximum at Fleetwood was 4.8 metres.

35. The 2010 budget presentation for Fleetwood–Larne (an internal email dated 14 October 2009) showed that an option to reduce the capacity on the route was concerned with the potential withdrawal of the *Stena Seafarer*. Included in the implications for this was a suggestion that the traffic loss could be 'a lifeline' to other operators. It also said that customers might view a reduction in capacity as a lack of commitment to the market and gradually move traffic away from Stena. It said that if the plan was to use two Airmax ships, then contraction at this time would make it very difficult to recover lost traffic for these vessels.[15]

36. The minutes of the [✂] board meeting of 4 December 2009 confirmed the decision of the last meeting to close the Fleetwood–Larne route. [✂]

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[13] [✂]
[14] Seatruck confirmed that its 'R series vessels' could go into Fleetwood but would have some draught restrictions.
[15] Stena confirmed that the Airmax ships referred to in this document were the same as the F-max vessels. Stena said that the budget presentation was made by route management who were not aware of the closure decision made in September 2009 as awareness of this decision was restricted to ensure that customers and staff were retained for as long as possible while diagonal route options were considered.

2010 (Project Stream)

37. An internal email dated 23 February 2010 noted that Stena was investigating how the diagonal routes were connected with Loch Ryan 'before deciding about Fleetwood–Larne'.

38. The extracts from the minutes of the [✂] Board meeting held on 16–17 March 2010 noted:

    (a) Fleetwood–Larne development: trading performance was worse than the prior year and negative C5 and EBITDAc was expected regardless of whether freight volumes rebounded to budgeted levels in the second half of the year. At the next [✂] Board meeting there would be a full presentation of alternatives including route closure.

    (b) Consolidation Irish Sea: various scenarios were discussed on the basis of the background material.

    (c) DFDS: postponed due to time constraints.

39. The Irish Sea discussion material for the [✂] Board 16–17 March 2010 listed the options for Fleetwood–Larne as: as is, reduce from three to two vessels, F-max, two roro and closure. The presentation also considered the likely transfer of Fleetwood–Larne customers to other routes. It assumed that the Norfolkline (DFDS) routes would pick up [✂] per cent of the volumes. It noted that [✂].

40. It said that the freight market was subject to large overcapacity and price pressure, and under a list of 'possible DFDS alternatives' (by which it told us that it was considering the options DFDS had for its routes), it considered:

    (a) deploying smaller vessels on Heysham–Belfast;

    (b) closing down Heysham–Belfast as being too expensive (due to port contracts);

    (c) closing down Heysham–Dublin;

    (d) cooperation with Seatruck in Heysham, which was described as 'difficult due to anti-trust issues and complementary products (Warrenpoint vs Belfast)'; and

    (e) selling Birkenhead–Dublin to Seatruck or cooperate. This was noted as 'ok from an anti-trust perspective but more difficult from a commercial point of view?'

41. By 'cooperation', Stena told us that it meant some kind of space/slot charter arrangement, whereby an operator bought capacity on another operator's vessels but would market and sell that capacity under its own brand.

42. The Fleetwood–Larne additional material for the [✂] Board 16–17 March 2010 listed internal options as: two-ship option; reduce to 12-driver capacity (ie unaccompanied freight vessel); Heysham/Liverpool move (earliest 2011); and close. The April board meeting planning section noted: decision on ships, review market analysis, calculations for Heysham/Liverpool move and close down option.

43. On 25 March 2010, there was a meeting between Stena and DFDS to discuss a potential purchase of certain Irish Sea routes following a DFDS proposal. The parties agreed that Stena should sign a non-disclosure agreement and receive access to information in order properly to evaluate the business.

44. In summary, the documents described above show that in Q1 2010 the option to continue with Fleetwood–Larne was considered against alternative configurations, other diagonal routes and the acquisition of DFDS's Irish Sea routes.

45. An internal email dated 9 April 2010 commented on strategic options for the diagonal routes. [✂]

46. An email discussion regarding Seatruck's plans for Heysham–Larne, in which there was a suggestion that Seatruck expected Stena to move to Belfast from Larne, dated 18 April 2010 said that Stena would be operating in Larne until at least October/ November 2011 when LRP would open. We asked Stena which route it thought would be operating from Larne in 2011. It told us that the email was confusing because of the overly-casual language used. It said that the email should have read: [✂].

47. By this it meant had Stena continued operating from Fleetwood it would not have been able to switch from Larne to Belfast until late 2011. Stena asked that the CC consider whether a literal interpretation of the email made sense in the context of the contemporaneous board materials that showed that Fleetwood would close by the end of 2010.

48. The minutes of the [✂] Board meeting held on 27 April 2010 noted that freight market shares were being lost on Fleetwood–Larne. There was a presentation of alternatives at Fleetwood–Larne and the board decided that 'ultimately a closure still seems to be the right decision, as the alternatives of starting up in either Heysham or Liverpool will be very costly'. The board agreed to terminate the Fleetwood port contract not later than 30 June and to prepare a final business case to [✂] on 6–7 June.[16] An initial business case on Project Stream was also presented.

49. An internal email dated 10 May 2010 requested an understanding of the 'potential impact on Heysham–Larne if we close Fleetwood–Larne'.

50. The [✂] board minutes of 7 June 2010 noted that the situation on Fleetwood–Larne had worsened during 2010 due to increased capacity from direct competitors, notably Seatruck's Heysham–Larne service. It was decided to terminate the Fleetwood contract [✂]. The board also decided to negotiate a short extension in Fleetwood for the sake of any potential delay in negotiations. The board noted that the options to start up on Belfast–Heysham or Belfast–Liverpool were not economically viable solutions.

51. The decision to terminate the Fleetwood port contract was taken at the same time as consideration of diagonal route acquisition opportunities.

52. The 15 June 2010 [✂] Board minutes noted that there was a declining trend in freight on the diagonal and northern corridors of the Irish Sea. They also reported that the Fleetwood contract had been terminated and that Larne would be terminated after the summer. A closing schedule was to be presented by the next board meeting.

53. The board was also updated on Project Stream with the latest status and business base case on the indicative bid offered to DFDS on 28 May 2010. The presentation on Project Stream prepared for the meeting, described the strategic objectives noting that 'Fleetwood–Larne has no future and has to close down', [✂].

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[16] The [✂] Board's decision required agreement by the [✂] board.1

54. The Fleetwood port contract was terminated in June 2010 when discussions with DFDS were well under way.

55. An internal email from dated 24 June 2010 stressed a concern that if there was not a [✂]. It said that as soon as the Fleetwood–Larne closure was known in the market, then leakage of business would accelerate sharply. [✂] replied stating that there was no indication that anything would happen with Norfolkline/DFDS and that the route closure was a separate issue.

56. An internal email dated 5 July 2010 reported that there was a meeting that morning with Peel Ports to discuss requirements should Stena wish to move the Fleetwood service to Heysham. It noted that a meeting would be held in Liverpool to look at the Mersey site too.

57. The [✂] Board minutes of the 1–2 September 2010 meeting reported that the closing plan for Fleetwood–Larne was presented and that official announcement and termination of the remaining agreements would be made as soon as the SPA was signed on Project Stream. This was reiterated in the minutes of the 23 November 2010 meeting.

58. The final valuation of the Belfast routes of €[✂] million was supported by an Excel spreadsheet which showed consideration of the closure of Fleetwood–Larne in the assessment (as the decision to close Fleetwood–Larne had already been taken). This spreadsheet included both the assumed diversion of customers to the Belfast routes from Fleetwood–Larne (included in the valuation) and the closure costs of the Fleetwood–Larne route (not included in the valuation).

59. Stena told us that the reason it included the closure cost of Fleetwood–Larne in its assessment (although not valuation) was that Stena in its investment valuations wanted to have a complete view of the yearly EBITDAc and C5 performance on its diagonal route operations, which in this year would include an overlap between the closure of Fleetwood–Larne and the acquisition of the Belfast routes. It stressed that [✂].

60. Stena told us that the acquisition would not have met Stena's required investment criteria without the likely additional freight units from Fleetwood–Larne. Stena was clear that the opportunity to acquire the routes from DFDS was particularly attractive because Stena had decided to close the Fleetwood–Larne route and expected to see volume from that route move to the routes it was acquiring. Without any impact from the closure of Fleetwood–Larne (ie with no closure costs and no volume overflow), Stena said that over ten years the return would have been [✂] per cent but the result margin would have only been [✂] per cent. Stena required a return margin of at least [✂] per cent.

61. We noted that the valuation of Belfast–Heysham on its own would not have met the Stena investment criteria and that the board reports considered this route to be [✂] to the Belfast–Liverpool route. Stena explained that it considered there to be obvious benefits in establishing a 'hub' for more than one route, and benefits from efficiencies in terms of ports serving multiple routes. Stena would be using Belfast as a hub.

The closure decision

62. Stena said that there were clear examples of actions showing its determination to pull out of the Fleetwood–Larne route regardless of the acquisition. We consider the key steps taken below.

Steps taken

Board decision

63. [✂] decided to close the Fleetwood–Larne route on 22 September 2009 and reaffirmed this decision in June 2010 (see paragraphs 28 and 50).

64. While the board made this decision, this was not something that was irrevocable. This is demonstrated by the continued review by Stena of the situation from September 2009 to June 2010 when the options considered for Fleetwood–Larne continued to list continuing with the route as a possibility.

65. The decision to close the Fleetwood–Larne route in 2009 was not followed by any immediate action to close the route; the board requested a closure plan at its next meeting. The presentation at the December [✂] meeting did not set out a clear closure timeline but noted the option in the Fleetwood port agreement to terminate in 2010 without further penalty and recommend closure in 2010.

66. Stena said that it had an interest in minimizing its losses on Fleetwood–Larne, and once it had concluded that operating another diagonal route would not be profitable, it had no further interest in delaying the closure of the route. However, acquiring the DFDS Belfast routes would have been far harder to secure if DFDS had been aware that Stena had already decided to close the Fleetwood–Larne route.[17]

Port contracts

67. Stena held port agreements at Fleetwood and Larne. It had no other routes operating from either of these ports.

Fleetwood

68. A provision in the contract meant that if Stena gave notice in June 2010, it could terminate the contract in December 2010 without further penalty; if the notice was not given, Stena was committed to the contract for a further four years until December 2014. Stena estimated that port dues in 2011 to 2014 would be £[✂] million.

69. Stena gave notice on 9 June 2010 with effect from December 2010.

70. A third party told the OFT that serving a termination notice particularly in the current financial environment 'often' occurred as a tactic to renegotiate. ABP said that on receiving the notice it had entered into an email discussion with Stena discussing the termination notice, and that it had interpreted this as an intention to renegotiate the contract. However, Stena said that it engaged in email correspondence with ABP to disguise its true intentions.

71. We asked other port operators and shipping operators if they were aware of this tactic: no one else was aware of this tactic ever being used. However, Stena's response to the OFT issues statement noted that [✂].

72. The email correspondence between ABP and Stena between July 2010 and November 2010 show that ABP made a number of attempts to meet with Stena to discuss arrangements for 2011. The responses from Stena provided reasons for not

[17] Submission to CC, Annex F, paragraph 40.

being able to attend the meetings and did not include any comment on terms that Stena may have been seeking for 2011.

73. It is not clear to us that Stena would have needed to agree terms much in advance of the year end. It appears to us that Stena was in a strong negotiating position with regard to ABP, it had negotiated concessions from the port in terms of fees in 2010 without needing to provide any further commitment and there was no pressure from other operators to take up the berth should Stena not chose to renegotiate. ABP, believing Stena would renegotiate, had not sought alternative customers.

74. We note that the [✂] minutes of 7 June 2010 (see paragraph 50) show that the board decided to negotiate a short extension in Fleetwood for the sake of any potential delay in negotiations. Stena was keen to ensure that its plans did not become public knowledge as it did not want DFDS to have reason to increase the price or withdraw from the transaction. With regard to the decision to negotiate an extension, Stena told us that it decided to close Fleetwood–Larne at the end of December and that it would end negotiation with DFDS before then (either successfully or unsuccessfully), so an extension was not necessary.[18]

Larne

75. Stena had requested berthing slots for the Fleetwood–Larne service for the whole of 2011, and these were granted in November 2010. Stena gave formal 12 months' notice (as required under its Port User Agreement with Larne Harbour) on 3 December 2010 to terminate the agreement. Stena indicated orally to Larne Harbour on 24 January 2011 that it would not be restarting the service but there had been no formal written confirmation from Stena of the route closure nor cancellation of the berthing slots. However, given the lack of use since 24 December 2010, Larne Harbour was not anticipating that Stena would restart the service.

76. Stena took the decision to delay giving notice at Larne until it had announced closure of the route, as it did not want its competitor P&O to gain any competitive advantage by knowing in advance of Stena's strategic plans. Stena said that it was prepared to incur costs to limit the information its competitors had prior to the public announcement.

77. No actions were taken prior to the acquisition to close operations at Larne.

Other contracts

78. Stena gave the following examples of its intention to close the Fleetwood–Larne route:

(a) Spare parts and maintenance would have had to be ordered before December 2010 if the route was to continue. Orders were cancelled in October 2010.

(b) Stena failed to book dry-docking for annual maintenance for the vessels on Fleetwood–Larne in October 2010. Stena asked [✂] management consultancy to carry out a strategic procurement review of all Stena's group companies but asked it not to look at the dredging contract at Fleetwood (despite it being the most significant external cost other than port fees).

[18] Subsequent to the route closure, Stena was given a three-month lease of Fleetwood port to allow removal of office buildings and restore the port to the condition required under termination of the lease. This extension was at a nominal cost of £[✂] per month.

79. It is not clear that any irreversible action was taken that would prevent Stena using the vessels. We note that Stena had already negotiated heads of agreement with DFDS in August 2010; it is therefore possible that cancellation was motivated by the prospect of acquiring the new routes.

The vessels

80. The witness statement of [✂] suggested that the vessels could only be operated effectively until 2011/12 and would be in danger of losing classification society certification without which they could not operate. Stena later submitted to us that these were only suitable for scrap. We note that the vessels had reached the end of the normal economic life of a vessel (25 to 35 years).

81. However, a number of the options assessed by Stena suggested that, albeit with additional maintenance costs, the vessels could have continued to be operated until new/alternative vessels were found (some of the scenarios had these vessels operating until 2015 and beyond). We were told by some operators that vessels were often used beyond their depreciable lives. However, all agreed that the vessels were likely to be scrapped following use at Fleetwood, and that whilst they may have been able to be used slightly longer, they were nearing the end of their lives.

82. The *Stena Seafarer* has been used as a relief vessel for Stena in the first quarter of 2011, demonstrating that the vessels could be used beyond 2010, albeit not necessarily for a significant length of time.

83. It is not clear that any action was taken that would prevent Stena using the vessels.

Disclosure

84. Stena announced the closure on 2 December 2010, following the announcement of the acquisition.

85. Stena said that it did not want to announce the closure before completing the transaction because it did not want DFDS to increase the price or withdraw from the discussions given that the acquired routes were a more attractive proposition in the absence of Fleetwood–Larne.

86. No actions were taken prior to the acquisition to disclose Stena's intentions.

Assessment of closeness of competition for freight services

Background

1. This appendix sets out the evidence we gathered and the analyses we undertook in assessing the closeness of competition between routes in different corridors.

The routes operated and shares of corridors

2. Table 1 lists the ferry services in the three main corridors (central, diagonal and northern) in 2010 prior to the merger, the closure of Stena's Fleetwood–Larne route on 24 December 2010, and the 2011 closure of DFDS's Heysham–Dublin and Liverpool–Dublin routes. The table also presents shares calculated using freight volumes.[1]

TABLE 1 **List of routes and traffic volumes, 2010**

	Great Britain	*Northern Ireland/ Republic of Ireland*	*Corridor*	*Operator*	*Freight units (volume) in 2010*	*Share within corridor %*	*Note*
1	Liverpool	Belfast	Diagonal	Acquired Business	[✂]	[31–40]	
2	Heysham	Belfast	Diagonal	Acquired Business	[✂]	[11–20]	
3	Fleetwood	Larne	Diagonal	Stena	[✂]	[21–30]	No longer in service
4	Heysham	Warrenpoint	Diagonal	Seatruck	[✂]	[11–20]	
5	Heysham	Larne	Diagonal	Seatruck	[✂]	[0–10]	Started in May 2010
6	Stranraer	Belfast	Northern	Stena	[✂]	[21–30]	
7	Cairnryan	Larne	Northern	P&O	[✂]	[61–70]	
8	Troon	Larne	Northern	P&O	[✂]	[0–10]	
9	Holyhead	Dublin	Central	Stena	[✂]	[21–30]	
10	Holyhead	Dun Laoghaire	Central	Stena	[✂]	[0–10]	
11	Holyhead	Dublin	Central	Irish Ferries	[✂]	[11–20]	
12	Liverpool	Dublin	Central	Seatruck	[✂]	[11–20]	
13	Liverpool	Dublin	Central	P&O	[✂]	[21–30]	
14	Heysham	Dublin	Central	DFDS	[✂]	[0–10]	No longer in service
15	Liverpool	Dublin	Central	DFDS	[✂]	[11–20]	No longer in service

Source: CC calculation from operators' route level data.

3. Table 2 splits freight volumes into accompanied and unaccompanied freight. Irish Ferries did not provide us with the split of its freight and so we do not present the shares for the central corridor where this operator has a major presence.

[1] The Acquired Business noted that the figures reported by the CC include volumes for accompanied and unaccompanied freight, as well as 'trade cars' and 'mobile' units. It pointed out that the majority of analysis within the industry, eg by Shippax, IRN and DFDS/SLISF, is carried out purely on the basis of accompanied and unaccompanied units (excluding trade cars and mobile units). Our view is that excluding 'trade cars' and 'mobile' units would itself potentially distort the comparison as we found that these vary between different operators.

TABLE 2 **List of routes and traffic volumes split into accompanied and unaccompanied freight, 2010**

	Great Britain	*Northern Ireland/Republic of Ireland*	*Corridor*	*Operator*	*Accompanied units (volume)*	*Share within corridor %*	*Unaccompanied units (volume)*	*Share within corridor %*
1	Liverpool	Belfast	Diagonal routes	Acquired Business	[✂]	[41–50]	[✂]	[31–40]
2	Heysham	Belfast	Diagonal routes	Acquired Business	[✂]	[0–10]	[✂]	[21–30]
3	Fleetwood	Larne	Diagonal routes	Stena	[✂]	[31–40]	[✂]	[11–20]
4	Heysham	Warrenpoint	Diagonal routes	Seatruck	[✂]	[0–10]	[✂]	[21–30]
5	Heysham	Larne	Diagonal routes	Seatruck	[✂]	[0–10]	[✂]	[0–10]
6	Stranraer	Belfast	Northern	Stena	[✂]	[31–40]	[✂]	[11–20]
7	Cairnryan	Larne	Northern	PO	[✂]	[61–70]	[✂]	[61–70]
8	Troon	Larne	Northern	PO	[✂]	[0–10]	[✂]	[11–20]
9	Holyhead	Dublin	Central	Stena	[✂]	N/A	[✂]	N/A
10	Holyhead	Dun Laoghaire	Central	Stena	[✂]	N/A	[✂]	N/A
11	Holyhead	Dublin	Central	Irish Ferries	[✂]	N/A	[✂]	N/A
12	Liverpool	Dublin	Central	Seatruck	[✂]	N/A	[✂]	N/A
13	Liverpool	Dublin	Central	P&O	[✂]	N/A	[✂]	N/A
14	Heysham	Dublin	Central	DFDS	[✂]	N/A	[✂]	N/A
15	Liverpool	Dublin	Central	DFDS	[✂]	N/A	[✂]	N/A

Source: CC calculation from operators' route level data.

4. The data above confirms that diagonal routes cater mainly for unaccompanied freight (by about factor of 4.5 in relation to accompanied freight). More accompanied than unaccompanied freight (by about factor of 1.5) is shipped on the northern corridor whereas the split on the central corridor is more even as this corridor includes both short and long crossings (ie Liverpool–Dublin).

Competition between routes from different corridors

5. We assessed whether competition between ferry services takes place primarily between overlapping routes, as argued by Stena, and which routes between different ports constrain each other. We considered four types of evidence:

   (a) movements over time in freight volumes, capacity and revenue;

   (b) the CC's survey of freight customers using the Irish Sea routes;

   (c) data on origin and destination of Stena's freight customers; and

   (d) customer-level data from the operators.

Movements over time in freight volumes, capacity and revenue

6. We considered the monthly route-level data on freight volumes, revenue and capacity which we collected from Stena and other ferry operators, split into accompanied and unaccompanied where possible.[2] From this data we also calculated the average revenue per unit of freight shipped. We considered whether we should attempt to estimate how the operators' demand varies with their own prices and the prices charged by their competitors. This would allow us to assess directly the extent to which services on different routes constrain each other.

7. However, after talking to the operators, and examining the average revenue data, we decided not to proceed with demand estimation. The operators told us that they did not publish freight prices and that these were individually negotiated with customers on a client-by-client basis. They told us that the underlying fundamental driver for price was volume, with higher-volume clients obtaining better rates. The operators also told us that prices paid might vary even between two equally-sized customers with identical trading patterns, depending on their negotiating skills. Further, different types of products are charged different rates (eg hazardous and fragile products' rates are higher), but we only have aggregate freight volume.

8. In these circumstances, we could not be confident that the observed changes in our estimates were a result of changes in underlying prices, which is what we need in order to estimate demand, rather than changes in the passenger mix on a route. This is even more so because the operators told us that prices were set on an annual basis and, in general, ran from January to December with some limited scope for revision due to changes in the market during the year.

9. Rather than attempting to estimate how demand varies in response to price, we focused on assessing how the operators' revenue and volumes vary in response to changes in relative capacity and quality of services for which we had better data. If two routes are in a close competition with each other, we would expect their volumes

[2] Only Stena and DFDS provided us with historic capacity figure on a monthly basis.

and revenues to be affected by the changes in the relative capacity and service levels.

10. The operators provided us with lists of key events on the Irish Sea, which could be expected to have impact on their volumes, values and profitability. From these lists we identified four recent changes in capacity and service levels:

(a) Diagonal corridor, Mar/Oct 2009: Norfolkline (NFL, DFDS's predecessor) introduced two E-type vessels to Heysham–Belfast route. This improved NFL's quality of service and increased the capacity on that route. In May 2010, Seatruck commenced the Heysham–Larne service and expanded the service to a two-ship operation in October 2010.

(b) Central corridor, November 2008: Stena replaced *Seatrader* with *Nordica* on the Holyhead–Dublin route. This improved Stena quality of service and increased the capacity on the central corridor.

(c) Northern corridor, November 2009: Stena reduced the number of trips operated by the high-speed service (HSS) vessel *Voyager* from four to two per day. Instead, it introduced a slower vessel which suffered from poor reliability of service.

(d) Diagonal corridor: Stena's closure of its Fleetwood–Larne route in December 2010.

Diagonal corridor event—introduction of E-type vessels and Seatruck's introduction of Heysham–Larne route

11. In 2009, NFL introduced two E-type vessels to the Heysham–Belfast route. These new, larger and more efficient vessels allowed NFL to improve service levels and reliability on the route, and increased the capacity by about 40 per cent. Seatruck started its Heysham–Larne service in May 2010 and expanded this service to two ships in October 2010.

12. Figure 1 plots the freight volumes (separately for accompanied and unaccompanied freight) for Stena's Fleetwood–Larne service, DFDS's Heysham–Belfast service and Seatruck's Heysham–Larne services. Figure 2 shows the same data but adjusted to remove seasonal variation.[3]

FIGURE 1

Freight volumes in diagonal corridor

[✂]

Source: CC calculation from operators' route level data.

[3] We transformed the data using the 12-month moving average.

FIGURE 2

Freight volumes in diagonal corridor—seasonally adjusted series

[✂]

Source: CC calculation from operators' route level data.

13. The key observations are:

    (a) Until the middle of 2009, Stena's freight volumes remained broadly at the same level year-on-year for both accompanied and unaccompanied traffic. Following the introduction of new E-type vessels by NFL in March/October 2009, there was a marked decline in Stena's freight volumes (both accompanied and unaccompanied) until the service was terminated in December 2010.

    (b) Shortly after Seatruck started its service from Heysham to Larne (May 2010) and it expanded this service to two ships in October 2010, there was a sharp drop in both accompanied and unaccompanied freight on Stena's Fleetwood–Larne service (November and December 2010).[4]

14. In response to our analysis, the Acquired Business told us that traffic volumes fluctuated significantly for various reasons, including cancellation, seasonal effects and weather factors, and that, therefore, attributing a change in volumes to any one event could be misleading. We controlled for the effect of seasonal factors in Figure 2 above. We acknowledge that there may be other factors that shape traffic volumes. That said, we think that the effect of the events we considered is clearly apparent from the data shown in Figures 1 and 2.

15. We compared the change in the freight volumes carried by each operator between December 2010 (which was the last month of operation for Fleetwood–Larne) and December 2009. This shows that the year-on-year reduction in the freight carried by Stena on Fleetwood–Larne ([✂] units) broadly corresponds to the sum of the additional freight carried out by DFDS on Heysham–Belfast ([✂] units) and Seatruck ([✂] units) over the same period. Assuming that there was not much organic growth of freight traffic on this route, virtually all of the traffic lost by Stena on Fleetwood–Larne appears to have diverted to Seatruck and DFDS in broadly similar quantities and nothing to other corridors.

16. We assessed competition between Liverpool–Belfast and Fleetwood–Larne in Figure 3.

FIGURE 3

Freight volumes in diagonal corridor

[✂]

Source: CC calculation from operators' route level data.

17. Figure 3 shows that both services lost unaccompanied traffic around the time that new vessels were introduced at Heysham. However, it can also be seen that a

[4] This is apparent from Figure 1 but not from Figure 2 because of data transformation as explained in the footnote to paragraph 23 below.

reduction in accompanied traffic on the Fleetwood–Larne route coincides with an increase in accompanied traffic on the Liverpool–Belfast route.

18. We next examined trends in NFL's capacity on DFDS's Heysham–Belfast route and trends in Stena's revenue. This is shown in Figure 4.

FIGURE 4

DFDS's capacity versus Stena's revenue in diagonal corridor

[✂]

Source: CC calculation from operators' route level data.

19. Again, the same picture emerges: a sharp drop in Stena's revenue around the middle of 2009 coincides with a sharp increase in NFL's capacity.

20. Finally, we consider whether the introduction of the additional capacity on Heysham–Belfast can be related to changes in Stena's freight traffic in other corridors. If so, this would be consistent with services from different corridors competing against each other. This evidence is shown in Figures 5 and 6, which plot respectively the freight volumes on Stena's Stranraer–Belfast and Holyhead–Dublin services.

FIGURE 5

Freight volumes on Stena's Stranraer–Belfast service

[✂]

Source: CC calculation from operators' route level data.

FIGURE 6

Freight volumes on Stena's Holyhead–Dublin service

[✂]

Source: CC calculation from operators' route level data.

21. Figures 5 and 6 display different trends, neither of which appear to be related to the introduction of extra capacity and improvement in service levels by DFDS in the diagonal corridor. This is also consistent with the Acquired Business's submission that it did not target routes in other corridors following the introduction of new capacity on its Heysham–Belfast route.

22. In addition to plotting the data on a graph, we used regression analysis in an attempt to quantify the effect of improvement in DFDS's services and Seatruck's entry on the freight volumes on Stena's Fleetwood–Larne services. The regression analysis also allows us to control for the effect of the changes in economic growth which can be expected to have a substantial effect on demand for freight shipping.

23. We ran separate regressions for accompanied and unaccompanied freight where, for each regression, we related the freight volumes to the following variables:[5]

(a) Stena's capacity on Fleetwood–Larne route;

(b) index of industrial production for the Republic of Ireland;

(c) variables controlling for seasonal impact on freight volumes;

(d) variable representing the expansion of DFDS (from March 2009); and

(e) variable representing Seatruck's entry (from May 2010).

24. The parameter estimates for *(d)* and *(e)* measure the percentage impact of those events over their duration on Stena's freight volumes. The results of regression analysis show the following:[6]

(a) For unaccompanied freight, the percentage adverse impact on Fleetwood–Larne's freight volumes of Seatruck's entry is within the range of 13 to 25 per cent and for DFDS's expansion is between 6 and 21 per cent.

(b) For accompanied freight, the percentage impact on Fleetwood–Larne's freight volumes for Seatruck's entry is within the range 11 to 20 per cent. The estimated impact from the DFDS entry was not statistically significant, nor was the impact of the industrial production index.

Central corridor event

25. Stena replaced the *Stena Seatrader* (a roro vessel) with the larger-capacity, faster ropax *Stena Nordica* on the Holyhead–Dublin route on 12 November 2008. According to Stena, this increased freight capacity on the central corridor and improved Stena's quality of service.

26. Figure 7 plots Stena's and Irish Ferries' freight volumes on the Holyhead–Dublin route.

FIGURE 7

Irish Ferries' and Stena's freight volumes in the central corridor

[✂]

Source: CC calculation from operators' route level data.

27. It can be seen that a downward trend in Irish Ferries' volume on Dublin–Holyhead commenced around the time Stena introduced new capacity and improved the service level. However, there was no corresponding increase in the volumes carried by Stena on the same route over and above the historic trend. We explore this further in Figure 8, which plots Stena's capacity on Holyhead–Dublin and the freight volumes carried by Irish Ferries on the same route.

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[5] We have estimated all regressions using both the OLS method and the IV method where we instrumented the own capacity with its lagged values. The two regression methods produced similar estimates. We have also estimated these regressions where the variables were expressed as the change on the year before rather than levels. The results of those regressions also suggest that the impact of Seatruck entry was more pronounced than the impact of DFDS adding capacity and improving service levels.

[6] Based on 95 per cent confidence intervals.

FIGURE 8

Stena's capacity versus Irish Ferries' volumes in the central corridor

[✂]

Source: CC calculation from operators' route level data.

28. The above data indicates the adverse impact of the change in Stena's capacity on the volume of freight carried by Irish Ferries. One plausible interpretation of the above data is that Stena's volumes would otherwise have been lower due to the impact of the recession in the Republic of Ireland and so that there was switching of traffic from Irish Ferries to Stena in response to the change in capacity even though we did not observe an increase in Stena's volumes relative to the historic trend.

29. Figure 9 explores whether changes in the volumes of the accompanied freight on the diagonal corridor can be related to Stena's changes in the capacity and service levels on the central corridor. We focus on accompanied freight, given that the availability of capacity for this type of freight is more limited on the diagonal routes as Seatruck operates roro vessels with limited capacity for accompanied freight (maximum 12 drivers). If there is competition between the two corridors, it is likely to focus on the accompanied freight. We added together the volumes carried by Stena and DFDS/NFL so as not to confuse the switching between the two that took place when NFL introduced additional capacity on the diagonal corridor with the developments on the central corridor.

FIGURE 9

Stena's volumes in diagonal corridor versus Stena's volumes in central corridor

[✂]

Source: CC calculation from operators' route level data.

30. The volumes of accompanied freight on the diagonal routes have declined somewhat in recent years. However, this decline appears to be part of a longer-term trend rather than a downward shift coinciding with an increase in the capacity and improvement in service levels on the central corridor.

Northern corridor event

31. In November 2009, HSS trips on Stranraer–Belfast were reduced to two round trips per day. At the same time, an additional conventional vessel *Stena Navigator* was introduced in an attempt to keep costs as low as possible whilst still maintaining an acceptable service to customers. However, according to Stena, the loss of high-speed sailings, together with poor reliability of service due to the problems with *Stena Navigator*, resulted in a loss of driver-accompanied traffic to P&O's Cairnryan–Larne service.

32. Figure 10 plots the freight volumes carried by Stena on Stranraer–Belfast and P&O on Cairnryan–Larne routes.

FIGURE 10

Stena's versus P&O's volumes in northern corridor

[✂]

Source: CC calculation from operators' route level data.

33. The impact appears to be visible though its magnitude appears small. P&O's freight volumes were falling until November 2009 after which they stabilized and remained at broadly the same level. At the same time, there appears to be a drop in volumes carried by Stena after the same date. Similar inferences can be drawn from Figure 11, which plots the annual growth rates for the accompanied freight carried by the two operators.

FIGURE 11

Stena's versus P&O's volumes in the northern corridor (growth rates)

[✂]

Source: CC calculation from operators' route level data.

34. Figure 12 plots the annual growth rates for accompanied freight carried by Stena on its Stranraer–Belfast route and the accompanied freight carried by DFDS and Stena in the diagonal corridor.

FIGURE 12

Stena's volumes in the northern corridor versus Stena's volumes in the diagonal corridor (growth rates)

[✂]

Source: CC calculation from operators' route level data.

35. It can be seen that the spikes in the growth rates of freight on one corridor correspond to troughs in growth rates of freight on the other corridor.

36. Stena pointed out that there was also a strong negative correlation between accompanied freight on Stranraer–Belfast and the growth in total volumes on P&O's Cairnryan–Larne services. Stena argued that, given that the other evidence pointing to the importance of head-to-head competition on the Irish Sea, and the obviously substitutable characteristics of the Stranraer–Belfast and Cairnryan–Larne services in terms of location, pricing, sailing time etc, it was the competition from Cairnryan–Larne, not the diagonal routes, that was affecting traffic growth on Stranraer–Belfast.

Diagonal corridor event: closure of Fleetwood–Larne

37. We considered data from January to March 2011 in an attempt to ascertain what happened to the Fleetwood–Larne freight following its closure in December 2010, namely whether it switched to Seatruck's Heysham–Larne or DFDS's Heysham–Belfast, or whether it was switched away from the diagonal corridor.

38. We carried out two types of analysis. First, we compared traffic volumes in the diagonal corridor between January and March 2010 and January and March 2011

and used these to estimate diversion ratios. Implicit in this analysis is an assumption that, absent closure of Fleetwood–Larne, the traffic levels on each route in January to March 2010 and January to March 2011 would have been similar.

39. We recognize that traffic levels in equivalent periods may vary between consecutive years due to a large number of different factors, including the wider economic conditions. In order to take this into account, for accompanied freight we used regression analysis which allowed for data to trend over time, and which took into account the effect of economic growth on freight volumes.

40. Table 3 compares the freight carried by Stena in first quarter of 2010 on Fleetwood–Larne with the freight carried by Seatruck and DFDS (on an incremental basis, ie relative to first quarter of 2010) in the diagonal corridor.

TABLE 3 **Traffic diversion following Fleetwood–Larne closure**

		Accompanied units	*Unaccompanied units*	*Total units*
1	Fleetwood–Larne, Jan–Mar 2010	[✂]	[✂]	[✂]
2	DFDS Heysham–Belfast, Jan–Mar 2011 less Jan–Mar 2010	[✂]	[✂]	[✂]
3	DFDS Liverpool–Belfast, Jan–Mar 2011 less Jan–Mar 2010	[✂]	[✂]	[✂]
4	Seatruck Heysahm–Larne, Jan–Mar 2011 less Jan–Mar 2010	[✂]	[✂]	[✂]
5	Seatruck Heysham–Warrenpoint, Jan–Mar 2011 less Jan–Mar 2010	[✂]	[✂]	[✂]
6	Total (2) – (5)	[✂]	[✂]	[✂]
	(1) – (6)	[✂]	[✂]	[✂]

Source: CC calculation from operators' route level data.

41. The data shows that there appears to be some 'loss' of traffic overall in the diagonal corridor in that the total increase in volumes on non-Stena services ([✂] units) are smaller than the volumes carried by Stena on Fleetwood–Larne in the first three months of 2010 ([✂]), but only just. Taken at the face value, the figures suggest that approximately [61–70] per cent (ie [✂]) of the accompanied freight from Fleetwood to Larne diverted to other routes within the diagonal corridor. For unaccompanied freight, the incremental gain in 2011 on other diagonal routes is greater than the volumes shipped on Fleetwood–Larne in 2010 which implies no diversion outside diagonal corridor.

42. However, we note that the accompanied freight at Fleetwood–Larne before its closure showed a long-term downward trend and so that the traffic volumes for January–March 2010 on this route may overestimate the volume of traffic that was available for redistribution. This in turn suggests that our estimate of the volume of the accompanied freight diverted to other corridors is likely to be an overestimate. This is because we have calculated this volume by subtracting from the 2010 Fleetwood–Larne volumes the freight carried by Seatruck and DFDS (on an incremental basis, ie relative to first quarter of 2010) in the diagonal corridor.

43. Further, as explained in paragraphs 14 and 39, the difference in traffic between the two periods (ie before and after the closure of Fleetwood–Larne) could be due to a range of different factors unconnected to competition.

44. For this reason, we also used a regression analysis to assess the effects of the closure of Fleetwood–Larne on Stena's other routes, namely Stranraer–Belfast and Holyhead–Dublin. We used the following approach:

(a) transform the volumes series to express it as the percentage change on the year before. This is done in order to guard against the problem of spurious regression, and to control for seasonal effects;

(b) develop a model for the accompanied freight before the closure of Fleetwood–Larne (that is, using only the data before the closure of Fleetwood–Larne);

(c) add a dummy variable that represents the timing of the route closure;

(d) re-estimate the model, including the new dummy variable, over the entire period; and

(e) interpret the coefficients of the dummy variable as measures of the effect of the intervention.

45. The results are presented in Table 4.

TABLE 4 **Regression results (maximum likelihood estimation with moving average errors)**

	Liverpool–Belfast	*Stranraer–Belfast*	*Holyhead–Dublin*
Intercept	0.002	.–0.015*	0.074**
Index of industrial production	0.281*	0.161*	1.231**
Autoregressive term	0.722**	0.782**	0.577**
Fleetwood–Larne closure dummy	0.141**	–0.026	–0.063
Observations	62	86	86
R^2	0.48	0.35	0–.62

Source: CC's analysis using operators' data.

*Significant at 10 per cent.
**Significant at 5 per cent.

46. The results of our analysis suggest that the growth of the accompanied traffic on the Liverpool–Belfast route accelerated by about 14 per cent following the closure of Fleetwood–Larne. We did not find evidence of the change in growth on Stranraer–Belfast and Holyhead–Dublin that could be attributed to the closure of Fleetwood–Larne. However, we note that the explanatory power of these regressions is modest and treat these results with caution.

Survey results

47. The survey methodology and results are described fully and published on our web-site.[7] For the purpose of assessing the competitive effects, we used the survey results to calculate diversion ratios between the routes in different corridors in order to provide us with an indication of the changes in incentives on the part of Stena to increase price for accompanied freight as a result of the merger.

48. Specifically, under the counterfactual where Stena replaces DFDS in the diagonal corridor, the acquisition removes any competition between the acquired routes in the diagonal corridor and Stena's northern (Stranraer–Belfast) and central routes (Holyhead–Dublin). This might give incentives to Stena to increase prices and/or worsen service level on those routes for accompanied freight. Therefore, given the counterfactual, we were particularly interested in the following diversion ratios:

(a) from Liverpool–Belfast (now Stena, DFDS under counterfactual) to Stranraer–Belfast (Stena) and Holyhead–Dublin (Stena);

(b) from Heysham–Belfast (now Stena, DFDS under counterfactual) to Stranraer–Belfast (Stena) and Holyhead–Dublin (Stena);

[7] www.competition-commission.org.uk/inquiries/ref2011/stena_dfds_merger_inquiry/CC_commissioned_research_surveys.htm.

(c) from Stranraer–Belfast (Stena) to Liverpool–Belfast (now Stena, DFDS under counterfactual) and Heysham–Belfast (now Stena, DFDS under counterfactual); and

(d) from Holyhead–Dublin (Stena) to Liverpool–Belfast (now Stena, DFDS under counterfactual) and Heysham–Belfast (now Stena, DFDS under counterfactual).

49. The survey did not ask the diversion ratio question for the Holyhead–Dublin route as on that route there is an overlapping service provided by Irish Ferries.

50. We report two sets of results from the survey. One is where each response is weighted by the quantity of freight shipped by the respondent on the relevant route. This is useful in giving us an overall picture of what would happen if Stena were to increase its prices to all of its customers. The second is where results are disaggregated according to the size of haulier, to take into account that ferry operators, including Stena, charge different prices to different customers often related to traffic volumes with higher-volume clients obtaining better rates.

51. Specifically, we split the survey respondents into three groups according to the size of their annual expenditure on ferry services:[8]

(a) less than £10,000—small hauliers;

(b) £10,000–£49,999—medium hauliers; and

(c) £50,000 and over—large hauliers.

52. An important point to note is that a Holyhead–Dublin service is operated by both Stena and Irish Ferries so that the diversion ratios associated with switching to that route are an overestimate of the diversion to Stena's service.

Weighted results

53. Table 5 presents the weighted results.

TABLE 5 **All customer diversion—route closure (weighted)**

per cent (volume)

			Specific route					
	Don't know	*Other route but don't know which*	*Diagonal corridor*	*Stranraer –Belfast*	*Cairnryan– Larne*	*Holyhead –Dublin*	*Others*	*Total*
Liverpool–Belfast	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	99% (1,627)
Stranraer–Belfast	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	100% (5,797)

Source: CC's calculation using data from GfK survey.

Note: Freight units in brackets.

54. The key findings are as follows:

(a) In the case of the hypothetical closure of Liverpool–Belfast, 38 per cent would divert to Holyhead–Dublin, 10 per cent of freight would divert to other diagonal routes and 2 per cent would divert to Stranraer–Belfast.

[8] This refers to annual spend on the ferry service across Irish Sea.

(b) In the case of the hypothetical closure of Stranraer–Belfast, 45 per cent would divert to P&O's Cairnryan–Larne service, 15 per cent to other diagonal routes and 12 per cent to Holyhead–Dublin (we note that Stena operated both the Holyhead and Stranraer routes before the acquisition and so the diversion between those two routes is not affected by it).

Unweighted results

55. Table 6 presents the unweighted results.

TABLE 6 **Diversion by customer size—route closure (unweighted)**

per cent (number)

				Specific route					
		Don't know	*Other route but don't know which*	*Diagonal corridor*	*Stranraer –Belfast*	*Cairnryan–Larne*	*Holyhead–Dublin*	*Others**	*Total*
Liverpool –Belfast	Small	29% (10)	3% (1)	3% (1)	24% (8)	0	26% (9)	15% (5)	100% (34)
	Medium	24% (8)	3% (1)	24% (8)	3% (1)	3% (1)	35% (12)	9% (3)	101% (34)
	Big	32% (6)	11% (2)	11% (2)	5% (1)	0	37% (7)	5% (1)	101% (19)
		Don't know	*Other route but don't know which*	*Diagonal corridor*		*Cairnryan–Larne*	*Holyhead–Dublin*	*Others*	
Stranraer –Belfast	Small	28% (29)	4% (4)	17% (17)		22% (23)	24% (25)	5% (5)	100% (103)
	Medium	23% (14)	2% (1)	16% (10)		33% (20)	17% (10)	9% (5)	100% (60)
	Big	15% (2)	0	0		69% (9)	15% (2)	0	99% (13)

Source: CC's calculation using data from GfK survey.

*Liverpool Dublin, Troon–Larne, Fishguard–Rosslare, Pembroke–Rosslare.
Note: Customer numbers in brackets.

56. Overall, an unusually large proportion of respondents said that they 'didn't know' what they would do if their first choice was not available or, if switching, to which route they would switch. This being the case, we were reluctant to reallocate the 'don't knows' to other choices pro rata (which is our normal practice in order to avoid underestimating diversion ratios). We were concerned that doing this might distort our results significantly. We also note that because we had relatively few respondents for each option, margins of error around diversion ratios were likely to be high.

57. The key results are as follows:

(a) In the case of Liverpool–Belfast's hypothetical closure, very few customers, irrespective of the size, would remain within the diagonal corridor. Approximately equal numbers of small customers would switch to Holyhead–Dublin (26 per cent) and to Stranraer–Belfast (24 per cent). In contrast, most large and medium-sized customers would switch to Holyhead–Dublin.

(b) In the case of the closure of Stranraer–Belfast, marginally more small customers would switch to Holyhead–Dublin (24 per cent) than to the nearby P&O's Cairnryan–Larne service (22 per cent). A sizeable number of small customers (17 per cent) would also switch to the diagonal corridor. In contrast, most large and medium-sized customers would switch to P&O's Cairnryan–Larne service.

58. One notable result is the apparent willingness of small customers to divert to Holyhead–Dublin and to the diagonal corridor (41 per cent in total) in the case of the closure of Stranraer–Belfast. These two options involve significant drive-time from Stranraer (8 hours in the case of Holyhead, point to point), unlike the nearby P&O service that departs from Cairnryan.

59. We wanted to understand this result and spoke to P&O in order to find out whether there are aspects of its service (eg price, frequency) that would not be attractive to small customers. P&O told us that its customer mix included both small and larger customers and that its services were competitive in terms of both pricing and frequencies.[9]

60. P&O suggested that the industry referred to both Stranraer and Cairnryan services as Stranraer services and that thus some respondents might have interpreted the survey question referring to Stranraer–Belfast to include the P&O Cairnryan–Larne service. This was also suggested to us by Stena. We accept that there are valid concerns over the diversion ratios from Stranraer–Belfast.

61. Equally, this may affect the diversion ratios we derived for switching from Liverpool–Belfast to Cairnryan–Larne and Stranraer–Belfast where we observed that 24 per cent of small customers would switch to Stena's Stranraer–Belfast service and none to P&O's Cairnryan–Larne service.

62. Another result that we note from the survey is that very few customers indicated that they would remain in the diagonal corridor in the case of the closure of Fleetwood–Larne.

63. We were told by Stena that even though Seatruck used only roro vessels, it had spare capacity to accommodate accompanied traffic. We explored this issue in more detail. In particular, we considered whether Seatruck has sufficient capacity in the diagonal corridor to accommodate the volumes of accompanied freight that are currently being shipped by small customers using the Acquired Business's Liverpool–Belfast service. We estimated Seatruck's annual spare capacity based on its current fleet and the timetable for Heysham–Larne and Heysham–Warrenpoint services. From that, we subtracted the volumes of the accompanied freight shipped by the small and the medium-sized customers on Fleetwood–Larne in 2010 to give us an estimate of the expected 'spare' capacity for the accompanied freight on Seatruck's Heysham–Larne services.

64. Using the GfK survey, we categorized 'small' customers as those who spent less than £10,000 on both accompanied and unaccompanied freight across the whole Irish Sea. For the purpose of our capacity assessment, we have defined 'small' customers using Fleetwood–Larne and Liverpool–Belfast as those customers who spent less than £10,000 on accompanied freight on each of those routes individually. This means that the customers who are treated as 'small' for the purpose of our capacity assessment are in fact larger than the equivalent customers categorized as 'small' in GfK survey.

65. The results are presented in Table 7.

TABLE 7 **Capacity assessment for accompanied freight in diagonal corridor**

Seatruck's spare capacity on Heysham–Larne and Heysham–Warrenpoint	[✂]
Less Fleetwood–Larne accompanied freight small customers	[✂]
Total	[✂]
Volumes of accompanied freight on Liverpool–Belfast in 2010	
Small customers	[✂]

Source: CC's calculations using operators' data.

[9] The average revenue per unit of accompanied freight is similar on the two routes.

66. The table shows that Seatruck could easily accommodate the accompanied freight shipped by small- customers on the Liverpool–Belfast route.

Origin and destination of Stena's freight traffic

67. Stena provided us with the aggregated origin/destination of its freight traffic for all its Irish Sea routes, derived from surveys it carried out in 2007, 2008 and 2010. In each of those years, this data was collected during a two-week period. The data was collected from freight drivers (for accompanied freight) or delivery drivers (for unaccompanied freight) on arrival at port. The drivers were asked the following questions:

    (a) What was your last point of collection (or, if originating from Continental Europe, their port of entry)?

    (b) What is your first point of delivery (or, if shipping to Continent, what is the exit port)?

68. The collected geographical data was then coded by broad categories (eg Scotland, Northern England, Northern Wales etc).

69. We used this data to analyse the overlap in catchment areas between different ports on both the British and the Irish side of the Irish Sea.

70. Both Stena and the Acquired Business[10] told us that catchment area analysis was not informative for the purpose of assessing the extent of competition in the market. Stena said that it would be misguided to think that routes had specific catchment areas. According to Stena, routes had overall journey time and cost profiles, and a time-sensitive customer from Town A moving freight to Town B was likely to choose a different route from a cost-sensitive customer carrying out the same journey.

71. We accepted this, but disagree with the view that catchment area analysis is not informative for our purpose. While the catchment areas analysis does not directly provide information on the sensitivity of freight shippers to prices charged by ferry operators (which is what we are interested in), it can be informative about the likely degree of competition between ferry services from different ports. Specifically if all the freight that originates in a given area uses one port exclusively, we consider that it is probable that shippers operating from this area are less likely to switch in response to a price or quality change than if a significant proportion of freight from that area uses another port.

72. In any case, if the catchment areas analysis for different ports is not informative, it is not clear to us as to why Stena undertook such analysis for three years. We also note that the information on the catchment areas of Stena's customers was provided as part of the presentation [✂] for the Stena [✂] Board meeting which took place in August 2009.

73. Stena also told us that it did not believe that undue weight should be placed on the survey data, due to various limitations, including the significant number of 'unknown' responses, and the possibility (with regard to unaccompanied freight) that delivery drivers may not be well informed regarding destination. We acknowledge these points and interpret our findings with caution.

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[10] We spoke to managers of the DFDS routes that are now employed by Stena.

74. We first present the aggregated data on the freight originating from the British side of the Irish Sea in 2010. We do not present data for other years (ie 2007 and 2009) as it is broadly consistent with the data for 2010. We did not observe large differences between accompanied and unaccompanied freight and so we do not split the data in this way.

75. Table 8 shows the last point of collection for freight travelling from Great Britain to the island of Ireland.

TABLE 8 **Last point of collection for freight transported from Great Britain to island of Ireland**

	Stranraer–Belfast		*Fleetwood–Larne*		*Holyhead–Dublin*	
	Total freight		*Total freight*		*Total freight*	
Origin Great Britain	*Customers*	*% of total*	*Customers*	*% of total*	*Customers*	*% of total*
Scotland	[✂]	[41–50]	[✂]	[0–10]	[✂]	[0–10]
Northern England	[✂]	[21–30]	[✂]	[61–70]	[✂]	[21–30]
North Wales	[✂]	[0–10]	[✂]	[0–10]	[✂]	[0–10]
South & Central Wales	[✂]	[0–10]	[✂]	[0–10]	[✂]	[0–10]
West Midlands	[✂]	[0–10]	[✂]	[11–20]	[✂]	[11–20]
East Midlands & East Anglia	[✂]	[0–10]	[✂]	[0–10]	[✂]	[11–20]
South-West	[✂]	[0–10]	[✂]	[0–10]	[✂]	[0–10]
South-East	[✂]	[0–10]	[✂]	[0–10]	[✂]	[21–30]
Europe	[✂]	[0–10]	[✂]	[0–10]	[✂]	[21–30]
Total	[✂]	100	[✂]	100	[✂]	100

Source: CC calculation from Stena's origin and destination survey on freight traffic.

76. The data shows that Fleetwood–Larne and Holyhead–Dublin each carry 0 to 10 per cent freight from Scotland unless shipments also include freight from England. This interpretation follows from the way in which the question to the hauliers was formulated (see paragraph 67). At the same time, 50 to 60 per cent of Stranraer–Belfast traffic originates from England and Wales. 20 to 30 per cent of Stranraer–Belfast traffic originates from northern England where Fleetwood–Larne is situated.

77. Table 9 shows the first Great Britain destination of the traffic that originates from the island of Ireland.

TABLE 9 **First Great Britain destination of the traffic that originates from the island of Ireland**

	Stranraer–Belfast		*Fleetwood–Larne*		*Holyhead–Dublin*	
	Total freight		*Total freight*		*Total freight*	
Destination Great Britain	*Customers*	*% of total*	*Customers*	*% of total*	*Customers*	*% of total*
Scotland	[✂]	[41–50]	[✂]	[0–10]	[✂]	[0–10]
Norther England	[✂]	[21–30]	[✂]	[51–60]	[✂]	[0–10]
North Wales	[✂]	[0–10]	[✂]	[0–10]	[✂]	[11–20]
South & Central Wales	[✂]	[0–10]	[✂]	[0–10]	[✂]	[0–10]
West Midlands	[✂]	[0–10]	[✂]	[11–20]	[✂]	[11–20]
East Midlands & E Anglia	[✂]	[11–20]	[✂]	[0–10]	[✂]	[11–20]
South-West	[✂]	[0–10]	[✂]	[0–10]	[✂]	[0–10]
South-East	[✂]	[0–10]	[✂]	[11–20]	[✂]	[21–30]
Europe	[✂]	[0–10]	[✂]	[0–10]	[✂]	[21–30]
Total	[✂]	100	[✂]	100	[✂]	100

Source: CC calculation from Stena's origin and destination survey on freight traffic .

78. This data shows the same pattern as the data in Table 9, namely that Fleetwood–Larne and Holyhead–Dublin each carry 0 to 10 per cent traffic which is exclusively destined for Scotland, and that 50 to 60 per cent of Stranraer–Belfast freight is destined for England and Wales.

79. Table 10 shows data on the last point of collection for freight that originates from the island of Ireland.

TABLE 10 **Last point of collection for freight that originates from the island of Ireland**

	Stranraer Belfast		*Fleetwood Larne*		*Holyhead Dublin*	
	Total freight		*Accompanied freight**		*Total freight*	
Origin IRE	*Customers*	*% of total*	*Customers*	*% of total*	*Customers*	*% of total*
N Ireland–Belfast	[✂]	[41–50]	[✂]	[0–10]	[✂]	[0–10]
N Ireland (north)	[✂]	[21–30]	[✂]	[51–60]	[✂]	[0–10]
N Ireland (south-east)	[✂]	[11–20]	[✂]	[11–20]	[✂]	[0–10]
N Ireland (west & Donegal)	[✂]	[0–10]	[✂]	[11–20]	[✂]	[0–10]
ROI (north)	[✂]	[0–10]	[✂]	[0–10]	[✂]	[0–10]
ROI (west & central)	[✂]	[0–10]	[✂]	[0–10]	[✂]	[0–10]
ROI (north & north-west of Dublin)	[✂]	[0–10]	[✂]	[0–10]	[✂]	[0–10]
ROI–Dublin	[✂]	[0–10]	[✂]	[0–10]	[✂]	[41–50]
ROI (south & south-west of Dublin)	[✂]	[0–10]	[✂]	[0–10]	[✂]	[0–10]
ROI (south-east)	[✂]	[0–10]	[✂]	[0–10]	[✂]	[0–10]
ROI (south-west)	[✂]	[0–10]	[✂]	[0–10]	[✂]	[0–10]
Total	[✂]	100	[✂]	100	[✂]	100

Source: CC calculation from Stena's origin and destination survey on freight traffic.

*No Irish origin data available for unaccompanied freight at Fleetwood–Larne route, so only the accompanied freight origin is reported.

80. The broader catchment areas (ie Republic of Ireland vs Northern Ireland) appear to be well defined. Virtually all of Fleetwood–Larne and Stranraer–Belfast freight has its last point of collection in Northern Ireland, whereas [81–90] per cent of Holyhead–Dublin has its last point of collection in the Republic of Ireland.

81. Table 11 shows the first destination of the freight that originates from Great Britain.

TABLE 11 **First destination of freight that originates from Great Britain**

	Stranraer–Belfast		*Fleetwood–Larne*		*Holyhead–Dublin*	
	Total freight		*Total freight*		*Total freight*	
Destination Ireland	*Customers*	*% of total*	*Customers*	*% of total*	*Customers*	*% of total*
N Ireland–Belfast	[✂]	[51–60]	[✂]	[11–20]	[✂]	[0–10]
N Ireland (north)	[✂]	[21–30]	[✂]	[61–70]	[✂]	[0–10]
N Ireland (south-east)	[✂]	[0–10]	[✂]	[0–10]	[✂]	[0–10]
N Ireland (west & Donegal)	[✂]	[0–10]	[✂]	[0–10]	[✂]	[0–10]
ROI (north)	[✂]	[0–10]	[✂]	[0–10]	[✂]	[0–10]
ROI (west & central)	[✂]	[0–10]	[✂]	[0–10]	[✂]	[0–10]
ROI (north & north-west of Dublin)	[✂]	[0–10]	[✂]	[0–10]	[✂]	[0–10]
ROI–Dublin	[✂]	[0–10]	[✂]	[0–10]	[✂]	[81–90]
ROI (south & south-west of Dublin)	[✂]	[0–10]	[✂]	[0–10]	[✂]	[0–10]
ROI (south-east)	[✂]	[0–10]	[✂]	[0–10]	[✂]	[0–10]
ROI (south-west)	[✂]	[0–10]	[✂]	[0–10]	[✂]	[0–10]
Total	[✂]	100	[✂]	100	[✂]	100

Source: CC calculation from Stena's origin and destination survey on freight traffic.

82. This data shows the same pattern as the data in Table 10, namely that virtually all of Fleetwood–Larne and Stranraer–Belfast freight has a last point of collection in Northern Ireland whereas almost as much of the freight which uses Holyhead–Dublin is destined for the Republic of Ireland.

83. The above analysis shows that there is some overlap in catchment areas between Stranraer–Belfast and Fleetwood–Larne. On the Great Britain side, a significant proportion of traffic comes from northern England (approximately [✂] per cent for Stranraer–Belfast and [✂] per cent for Fleetwood–Larne).

84. On the Irish side, virtually all of Stranraer–Belfast's and Fleetwood–Larne's freight comes from or is destined for Northern Ireland. However, at a more granular level, the catchment area overlap is modest. For example, the Belfast area accounts for

approximately [✂] per cent of Stranraer–Belfast freight, but for only around [✂] per cent (averaged across origins and destinations in Tables 10 and 11) of Fleetwood–Larne freight traffic. Fleetwood–Larne and Holyhead–Dublin have sizeable overlaps in broad catchment areas on the Great Britain side—virtually all of their traffic comes from England, but again less so on a more granular level. There is very little overlap between the catchment areas for those two routes on the Irish side. Around [✂] per cent of Fleetwood–Larne traffic comes from, or is destined for, Northern Ireland, whereas Holyhead–Dublin draws similar percentage of traffic from the Irish Republic.

Customer-level data from the operators

85. We obtained detailed customer lists from Stena and DFDS which show the quantity of freight shipped by them in every year between 2007 and 2010 on each of their routes, but not the origin and destination of the freight. We also obtained customer lists from Seatruck, Irish Ferries and P&O, but without the route level or origin and destination information. Data from DFDS includes information on its customers using diagonal routes but not the Liverpool–Dublin and the Heysham–Dublin services. We combined these lists in order to address two questions:[11]

    (a) In the diagonal corridor: how many of Stena's customers that use Fleetwood–Larne also use services from Seatruck and DFDS? The operators told us that many hauliers had accounts with their competitors so that they could switch freight easily to obtain a better combination of price and quality. Therefore, the overlap in customers may give some indication as to which of the two (Seatruck or DFDS) is the closer competitor to Stena. For example, if we find that the number of customers who use both Stena and Seatruck is much greater than the number of customers that use Stena and DFDS, this would suggest that Seatruck is closer competitor to Stena than DFDS.

    (b) Globally: how many of DFDS's and Stena's customers who use diagonal routes also use ferry services on other corridors?[12] This may indicate the level of competition between services from different corridors. Specifically, if we find that very few customers use services in different corridors, this suggests that there may be little switching of freight between different corridors, and that therefore hauliers may not view these services as close substitutes. The opposite finding, namely a large number of customers using different corridors, would need to be interpreted with caution. The fact that operators use multiple routes may be purely a function of the origin and destination of the freight, and not the result of any switching of freight between different corridors.

86. Table 12 shows the number of shippers that in 2010 used either Stena's, DFDS's or Seatruck's services in the diagonal corridor, or some combination of those.[13,14] We also include in the table the information on those shippers that had an account with an operator in 2010 but did not ship any freight ('inactive accounts'). We consider those shippers as potential switchers.

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[11] We were not able to split this data into accompanied and unaccompanied freight.
[12] We could not robustly carry out this analysis across all the operators as we were not confident that we could identify all the customers who use more than one operator from their lists due to differences in how customer names are recorded.
[13] Some of Stena's customers closed their accounts in the past three years. Given that we do not have closing time information, we include these customers in our sample for completeness. We assume that the active customers of DFDS in the past three years have accounts with DFDS, which is consistent with other operators who provided a list of their customers from 2008 to 2010.
[14] Stena told us that if these findings were represented in terms of volumes shipped instead of customer numbers, this would show a far higher degree of freight shipped by customers with multiple accounts.

TABLE 12 **Diagonal corridor multiple routes usage**

	Active account	*Inactive account*	*Total accounts*
Stena	[✂]	[✂]	[✂]
DFDS	[✂]	[✂]	[✂]
Seatruck	[✂]	[✂]	[✂]
Stena & DFDS	[✂]	[✂]	[✂]
Stena & Seatruck	[✂]	[✂]	[✂]
DFDS & Seatruck	[✂]	[✂]	[✂]
All three	[✂]	[✂]	[✂]

Source: CC calculation from Stena, DFDS and Seatruck's customer data.

87. The data shows that relatively few customers who have accounts with Stena ([✂]) have accounts with all three operators. There are more customers who have accounts with both Stena and DFDS ([✂]) than those who have accounts with Stena and Seatruck ([✂]). The difference, though, is not big ([✂]). A similar picture emerges when we focus on active accounts alone (ie those where transactions actually took place in 2010): [✂] for Stena and DFDS and [✂] for Stena and Seatruck. This suggests that DFDS and Seatruck were equally close competitors to Stena in 2010.

88. Table 13 shows the number of Stena's and DFDS's customers who use one or more corridors to ship their freight.[15]

TABLE 13 **Stena/DFDS customers distribution—by corridors, 2010**

	Total freight	*Accom-panied*	*Unaccom-panied*	*Total account*
Only diagonal	[✂]	[✂]	[✂]	[✂]
Only central	[✂]	[✂]	[✂]	[✂]
Only northern	[✂]	[✂]	[✂]	[✂]
Diagonal and central	[✂]	[✂]	[✂]	[✂]
Diagonal and northern	[✂]	[✂]	[✂]	[✂]
All three corridors	[✂]	[✂]	[✂]	[✂]
Total	[✂]	[✂]	[✂]	[✂]

Source: CC calculation from Stena's and DFDS's customer data.

89. The data shows that the number of customers who use both the diagonal and the northern corridor ([✂]) is only marginally bigger than the number of customers who use the diagonal and the central corridor ([✂]). If we could assume that the multi-corridor use is a proxy for the degree of switching that takes place between different corridors, this would lead us to conclude that customers who use the diagonal corridor view central and northern routes as equally good substitutes. This finding applies equally to accompanied and unaccompanied freight.

90. However, the fact that operators use multiple routes may be solely a function of the origin and destination of the freight, and not the result of any switching of freight between different corridors in response to changes in price and/or quality of service.

[15] The data for DFDS does not include customers who used Liverpool–Dublin and Heysham–Dublin. Some of Stena's customers closed their accounts in the past three years. Given that we do not have closing time information, we include these customers in our sample for completeness. And we assume that the active customers of DFDS in the past three years have accounts with DFDS, which is consistent with other operators who provided a list of their customers from 2008 to 2010.

Barriers to entry, expansion and exit

1. This appendix sets out the evidence we have gathered with regard to barriers to entry, expansion and exit for ferry operators on the Irish Sea in the course of our investigation, in particular:

   (a) regulatory barriers;

   (b) barriers to entry and expansion;

   (c) exit costs; and

   (d) customer switching costs.

Regulatory barriers

2. There are many safety and pollution regulations which apply to the operation of ships at sea, which, for example, require annual certification of vessels and general ship management. Since its adoption in 1993 by the International Maritime Organisation (IMO), the ISM Code (International Safety Management Code for the Safe Operation of Ships and Pollution Prevention) has established a global standard for the safe management and operation of ships. The ISM Code sets out mandatory rules for the organization of company management of ships in relation to safety and pollution prevention and most importantly for the implementation of Safety Management Systems (SMS).

3. The EU has made provisions for relevant administrations of European countries concerning the implementation of the ISM Code under the Commission Regulation No 1998/0179 on the safety management of roro passenger ferries. The body in the UK that ensures compliance for passenger ferries is the Maritime Coastguard Agency (MCA). The MCA is an executive agency of the Department for Transport (DfT).

4. Stena told us that the ISM code applied to companies rather than individual vessels and that compliance with these requirements could be outsourced to a third party such as a ship management provider.

5. The regulatory requirements for operating passenger vessels are somewhat greater than for operating freight-only vessels. A vessel is considered to be a passenger vessel if it carries more than 12 passengers. Stena told us that the only regulatory-related cost differences between operating a freight-only service and a passenger service were crew training and compliance with the ISPS Code.[1] It did not consider these differences to be significant and said that an operator could be 'up and running' with a ropax service within a month if the vessel was in class and had the appropriate certificate and qualified crew.

6. Other ferry operators also told us that obtaining the necessary classification society certification became more difficult with the age of the vessel. DFDS told us that

[1] International Ship and Port Facility Security Code and SOLAS amendments 2002. Stena said that the purpose of the ISPS Code was to ensure that there were sufficient measures and procedures to prevent acts of terrorism which threatened the security of passengers and crews and the safety of ships. The ISPS Code was an amendment to SOLAS and it was therefore a mandatory requirement.

30 years was a critical age for a roro vessel as major investment might be needed to pass classification and there would be limited time (five years) to recover the investment.

Entry and expansion

7. Stena told us that established operators (in particular with recognized brand names and an existing customer base) would not find it difficult to start a new service.[2] It told us that the costs of launching a new service on the Irish Sea varied significantly depending on the type of service (eg freight/passenger) the operator wished to provide. Exit costs could be low, with scope to charter or redeploy vessels and terminate agency crewing arrangements relatively quickly.

8. Stena told us that entry costs included the costs of intra-fleet transfer, chartering or acquisition of a suitable vessel including crew, acquiring slot times at ports, and entering into relevant port contracts for calls and port handling.

9. P&O told us that the costs and timing of introducing a new route into the Irish Sea was highly route specific and that it was unwise to generalize. The kinds of consideration relevant were port and vessel availability, the likely traffic on a route and any other necessary costs.

Vessel costs

10. In considering vessel costs, we distinguish between unaccompanied and accompanied freight, as unaccompanied freight can be shipped using both roro and ropax vessels whereas accompanied freight is predominantly shipped using ropax vessels. This is because roro vessels can accommodate a maximum of 12 drivers and so can devote little space to accompanied freight. Ropax vessels must be able to accommodate significant numbers of passengers, which entail direct costs in terms of cabins, facilities and canteens, but also indirect costs in terms of health and safety standards.

Purchase—ropax

11. With regard to vessel costs, Stena said that the cost would vary dramatically. It had introduced vessels (eg ropax vessel *Stena Navigator)* at a total investment cost of [£5–£10] million. However, it was possible to obtain pure freight tonnage at a lesser cost, while a large new ropax vessel may cost over £100 million.

12. We were told that demand for ropax vessels was limited and bespoke: certain routes had specific demands both in terms of navigation (ie length, draught and operating conditions, such as the challenges of the Irish Sea) but also in terms of passenger requirement (eg number and configuration of cabins, children's play areas or cinemas). The Acquired Business told us that an attractive onboard experience helped in marketing services to drivers and ultimately haulage companies. It gave the example of refurbishment of the cabins on its Heysham–Belfast service, including installing televisions in its cabins, which had improved the driver experience, and this might have been a useful marketing feature as a way of attracting business from the haulage companies those drivers worked for.

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[2] Submission to CC, paragraph 6.2.

13. Given the lack of standard specification, it appears that the cost of ropax vessels is typically higher than for roro vessels (see paragraph 19). Stena agreed that in relation to vessels of exactly the same age, size and conditions, the cost of a ropax would typically be higher than for a roro vessel. Stena noted that investment decisions in vessels primarily reflected the ability to make a profitable return on investment, and that in the case of a ropax operation, this would include revenue streams from passenger traffic as well as a greater mix of accompanied traffic than compared with a roro service.

14. Stena told us that roro vessels could also be bespoke with certain routes (or terminals) having specific demands which also applied to roro vessels. For example, the bespoke ('Heysham-max') vessels that Seatruck had ordered were designed to have optimal operation out of Heysham. Stena said that vessels were more 'standard' where they were produced in series without reference to a specific port, and said that there were several such vessels (both roro and ropax) in use on the Irish Sea. It told us that 10 out of 23 ropax vessels currently used on the Irish Sea could be considered as standard (the others were categorized as: two large; three old; and eight ferries).

15. Stena told us that there was a publicly available international database (the 'Shippax database') listing available roro and ropax vessels. This database allowed operators to check which vessels were used and where, and operators might be able to infer availability from current usage. In addition, Stena provided us with the so-called 'Open Tonnage' list that is updated regularly by Stena RoRo, Stena's in-house broker (which also has external clients). This list contains an overview of different ropax/roro vessels that are either available, or may be available, in the market for purchase or for charter. Stena said that vessels that were available for purchase were very often also available for charter, and vice versa.

16. According to Stena's 'Open Tonnage' list in March 2011, [over 20] ropax vessels (which can be used to ship both accompanied and unaccompanied freight) are available with a broad range of specifications in terms of lane metres, passengers, speed and price. For example, the cheapest ropax vessel listed is [✂], while the most expensive ropax vessel is [✂].

Purchase—roro

17. Seatruck told us that in the last five years it had expanded the Warrenpoint service by adding two new roro vessels which cost in excess of [over €30] million each. In the last five years Seatruck had purchased another operator (Celtic Link) in 2007, and added two new vessels to this route which each cost [over €30] million.

18. According to Stena's 'Open Tonnage' list in March 2011, there are [around ten] roro vessels available [✂].

19. We attempted to compare purchase prices of ropax and roro vessels. This proved difficult as there are fewer roro vessels with listed prices. The comparison suggested that for similar lane metres and age, a ropax vessel typically cost more than roro vessels. For example, the ropax vessel *Translubeca*, built in 1990 with 1,800 lane metres and facilities for 84 passengers, cost €[✂] million, while the roro vessel *Commodore*, built in 1992 with 1,880 lane metres, only cost €[✂] million. Another example is where *Transeuropa*—a 15-year-old ropax vessel with 3,200 lane metres and facilities for 114 passengers, which cost €[✂] million—is more expensive than a new roro vessel *Odense 222* with 3,650 lane metres which cost €[✂] million.

Charter—roro and ropax

20. According to Stena, given that investment in new vessels carried a significant capital cost (which was typically depreciated over around 20 years), if there was a need to increase capacity in the short term, this was more likely to be done by chartering a vessel, or switching vessels within an operator's fleet (for example, by moving an underperforming large vessel on one route to replace a capacity-constrained small vessel on another route).

21. There were several recent examples where entry was undertaken by chartering a vessel. The most recent example is Seatruck's entry on to the Heysham–Dublin route in February 2011 following DFDS's exit. Seatruck chartered the *Anglia Seaways* from DFDS for 12 months.

22. However, our understanding is that while entry can take place with chartered vessels, most operators subsequently employ their own vessels (see Table 1). The current situation (of ownership versus chartering on the Irish Sea) is presented in Table 1. This shows that of the 33 ships that are currently employed on the Irish Sea, five (or 12 per cent) are chartered and the rest are owned by the operators.

TABLE 1 **Vessels' current ownership on Irish Sea**

Operator	*Route*	*Vessel*	*Type*	*Ownership*	*Owner*
Stena	Stranraer–Belfast	*Stena Voyager*	HSS	Owned	
		Stena Caledonia	Ropax	Owned	
		Stena Navigator	Ropax	Owned	
	Holyhead–Dublin	*Stena Adventurer*	Ropax	Owned	
		Stena Nordica	Ropax	Owned	
	Holyhead–Dun Laoghaire	*Stena Explorer*	HSS	Owned	
	Fishguard–Rosslare	*Stena Europe*	Ropax	Owned	
		Stena Lynx 3	HSC	Owned	
	Fleetwood–Larne (closed 2010)	*Stena Leader*	Ropax	Owned	
		Stena Pioneer	Ropax	Owned	
		Stena Seafarer	Ropax	Owned	
	Heysham–Belfast	*Scotia Seaways*	Roro	Owned	
		Hibernia Seaways	Roro	Owned	
	Liverpool–Belfast	*Lagan Seaways*	Ropax	Charter	Lagan Viking Ltd, Hong Kong
		Mersey Seaways	Ropax	Charter	Mersey Viking Ltd, Hong Kong
Seatruck	Heysham–Larne	*Arrow*	Roro	Owned	Clipper Group
		Clipper Ranger	Roro	Owned	Clipper Group
	Heysham–Warrenpoint	*Clipper Point*	Roro	Owned	
		Clipper Panorama	Roro	Owned	
	Liverpool–Dublin	*Clipper Pace*	Roro	Owned	
		Clipper Pennant	Roro	Owned	
	Heysham–Dublin (open 2011)	*Anglia Seaways*	Roro	Charter	DFDS
P&O	Troon–Larne	*European Mariner*	Freighter	Owned	
		Express	Fast ferry	Charter	Los Cipreses SA
	Cairnryan–Larne	*European Causeway*	Ropax	Owned	
		European Highlander	Ropax	Owned	
		Express	Fast ferry	Charter	Los Cipreses SA
	Liverpool–Dulbin	*Norbay*	Ropax	Owned	
		Norbank	Ropax	Owned	
		Norcape	Freighter	Owned	
Irish Ferries	Holyhead–Dublin	*Ulysses*	Ropax	Owned	
		Jonathan Swift	HSC	Owned	
	Pembroke–Rosslare	*Isle of Inishmore*	Ropax	Owned	

Source: CC analysis.

23. Stena told us that a switch from chartered to owned did not always occur. It noted that on [✂].

24. Stena told us that there was an active market for the purchase and lease of second-hand vessels, especially since vessels were not intrinsically linked to a particular route and could be adapted to be used by different operators for different purposes and redeployed around the globe, subject to size and seaworthiness restrictions.

25. We noted that in assessing options for a Liverpool–Belfast ropax service, Stena considered a variety of vessels. The option that was forecast to be most profitable was the option with the largest capacity vessels. Stena was seeking vessels with [✂] lane metres and capacity for [✂] passengers. It told us that vessels of this size were rarely available in the charter market. This suggests that entry with an owned vessel is more likely to be the case where larger vessels are required to make the service profitable.

26. Seatruck also told us that in 2007 there was limited availability of tonnage but that this had changed, as the open charter market was currently over-supplied (in March 2011). It appeared that charter availability of ropax vessels was more limited than for roro vessels. Such vessels often only became available for charter towards the end of their commercial lives, or if the original purchaser no longer needed them on the route for which they had been ordered (this could include situations where chartering out the vessel provided the most beneficial financial return, as in the case of [✂]).

Port costs and berth availability

Costs

27. Stena said that the initial investment cost necessary in port infrastructure varied from zero or low to very high depending on the port infrastructure already available.

28. We were told by port operators that it was the port that typically undertook any investment necessary, but the port ensured that it recovered such costs through a contract with the ferry operator. In effect, it was the ferry operator that ended up bearing the cost, although the port that would own the asset and any value it retained at the end of the contract (and bore the risk of ferry operator default).

29. According to Stena, a new entrant could have a low or zero initial investment cost in port infrastructure. Existing ramp infrastructure might not need any investment to receive the entrant's vessel. However, it might need adjustments to be able to berth the chosen vessel. Such investment could vary considerably but would be somewhere between £2 million and £15 million as an estimate.

30. If no port infrastructure was available, the required investment could be considerable and may require a long-term agreement with minimum revenue via a minimum volume clause with the port operator. The length of such agreement would vary with scale of investment. For example, Stena estimated that it would cost approximately £[✂] million to build an in-river facility (ie a berth outside of the lock system) in the port of Liverpool in 2009. In return for making the investment, Peel Ports (the owner of the port of Liverpool) sought a [✂]-year commitment from Stena. In contrast, upgrading the berth and building a new linkspan at Heysham for use by Stena would cost £[✂] million and Peel Ports sought a [✂]-year commitment. Additionally, major investment may take time to implement. For example, if Peel Ports were to develop an in-river facility at Liverpool as discussed with Stena in 2010, this would take two to two and a half years to complete. Upgrading at Heysham would take one year to 18 months to complete.

31. Also, investments may differ if an operator intends to offer a ropax or roro service. Roro might require greater space on the quayside to park trailer or other equipment

and on-shore freight-handling capabilities (in terms of tug-masters and trained staff), although similar services would need to be provided on a ropax service as unaccompanied freight is also carried. A ropax service catering for passengers would need a terminal; this would not be the case for a ropax route operating freight-only services, as drivers need limited facilities.

32. The port of Belfast invested £[✂] million in the Victoria Terminal 4 currently used in Belfast. This terminal provides both passenger and freight facilities. The need for shore-side space, reclamation (the process to create new land from sea or river-beds), terminal facilities etc all contribute to the size of investment necessary.

Berth availability

33. Stena said, and others agreed, that spare berthing capacity was available on both sides of the Irish Sea and that there were suitable locations where port capacity could be added at reasonable cost.[3]

34. Table 1 in Annex 1 sets out the available port capacity on the diagonal corridor based on the information that we received from the ports and the ferry operators. This shows that there are some spare port facilities to accommodate new entrants on both sides of the Irish Sea.

35. More specifically, in Northern Ireland:

(a) The port of Larne said that expansion at its Continental Quay was an option, although accommodation of any larger ships would require some modifications to the berthing facilities. The cost of these changes was estimated to cost at least £3 million, which would require a relatively long port agreement to be justified. Larne said that the work would take about 12 months. Exposure could be a problem; consultants were looking at this. The Continental Quay was currently not fully available as it was being used for Seatruck's Heysham service. The Curran Quay was available between 19:00 and 06:00.

(b) Belfast Harbour Commissioners said that it could accommodate more traffic in the absence of further infrastructure investment, and that timings and the availability of berth slots were also considerations for ferry operators. It said that, while the current generation of ships operating on the Irish Sea to and from Liverpool could be accommodated at Belfast's VT2 terminal, alterations would be required to the former Stena facility at Albert Quay to accommodate these sizes of vessels because of draught and depth restrictions. The Albert Quay facility could accommodate an additional Liverpool service if the operator elected to utilize vessels of a similar size to those currently engaged on routes into Heysham. Belfast could accommodate more traffic from Heysham or Fleetwood with vessel size restrictions more of an issue at the English end of those routes. Belfast Harbour Commissioners also confirmed that it considered that the VT4 terminal could accommodate a Fleetwood service or a new Liverpool/Birkenhead service subject to the operator's view on the marketability of the berth times available.

(c) Warrenpoint Harbour Authority said that it could expand roro business on its existing ramp. In respect of further expansion of infrastructure, the layout of the port was such that it did not envisage conversion of another berth to roro as this would impact adversely on the diversity of customers that it was able to accom-

[3] Submission to CC, Annex J, paragraph 32.

modate. The Warrenpoint Harbour Authority saw availability of land as the more significant constraint, especially in respect of unaccompanied traffic.

36. In north-west England:

(a) At Liverpool/Birkenhead, Peel Ports explained that since DFDS closed its Birkenhead–Dublin route it had spare capacity at Twelve Quays (which could accommodate any of the ships currently operating on the Irish Sea), and that further development within the wider port estate was also possible. In particular, Peel Ports had obtained a Harbour Revision Order for a new in-river roro facility at Langton on the north-east side of the Mersey. The capital costs of this development at Liverpool (Langton) would be higher than any necessary modification to the Birkenhead facility.

(b) Peel Ports said that there were limited time slots available at Heysham (10.00–16.00 and 22.00–04.00). Peel Ports added that, as part of a broader reconfiguration of services, it anticipated ferry operators introducing larger vessels. It was therefore undertaking a survey of the hydrography at Heysham in order to assess the practicability of accommodating these bigger ships. Peel Ports explained that landside facility constraints would necessitate investment over and above simply upgrading the linkspan.

(c) Fleetwood Port is currently unused and is available.

37. Accordingly, it appears to us that at the moment, while there are berths available on both sides of the Irish Sea, availability at peak times is more limited, ie a pair of slots allowing early morning arrival in Northern Ireland and a late departure from north-west England.

38. Larne appears to have slots available at Curran Quay, if the berth could be vacated by 06.00. Stena also considered that a peak service could be operated around the P&O fastcraft service. There appear to be slots at Belfast (roro or ropax); again these require vacating the berths by 05.30. At Warrenpoint (which only has a roro linkspan), we note that Stena considered sharing the berth with Seatruck but that would require fitting in with Seatruck's existing schedule and would likely require operating an off-peak and less attractive service to customers.[4]

39. We note that Heysham has limited slots (that are off-peak) and limited passenger facilities. Fleetwood is available (both roro and ropax), but we doubt its attractiveness to potential entrants (see paragraphs 7.27 to 7.30). At present there is opportunity to run a ropax (accompanied and/or passenger) service from Birkenhead as a peak service and there are options to develop berths at Liverpool.

40. Most ports we spoke to (Larne, Belfast, Heysham, Fleetwood, Liverpool/Birkenhead) considered that further infrastructure development was possible, but this would take some time, and involve some expense—considerable in certain cases.

Likely entrants

41. Stena and others told us of the 'hub' effects of operating more than one route from a port. These include *(a)* economies of scale in terms of the overheads of the operator at the port and *(b)* economies of scope in terms of customers benefitting from a hub offering and therefore preferring to use the port.

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[4] Submission to CC, Annex F paragraph 48, bullet 4.

42. In terms of entry and expansion, this suggests that an operator is more likely to open a route from a port at which it already has a presence. It also suggests that entry by an existing operator is (depending on the route) easier than for a completely new entrant.

43. Stena accepted that existing operators were likely to prefer to start or expand a service using a port that they currently operated from, but explained that a hub was not essential to entry or expansion. Stena noted that no Irish Sea ferry operations currently involved a hub at both ends, and that many had no hub operations at all. Stena considered that a new entrant could replicate the hub effect by operating from a port also used by other operators; we consider this may be true in terms of ability to attract customers, but note that there may only be limited cost benefits for the operator.

Exit costs

Vessels

44. As noted, vessels no longer needed on a given route may be sold or chartered out. Demand varies with broader economic conditions, but may be limited if ships were bespoke to specific routes and ports. For instance, Stena told us (and other ferry operators agreed) that a ropax vessel with an optimal design for a Fleetwood–Larne service would not necessarily be economic on other routes, and so could entail a significant exit cost. However, it should be noted that conditions at Fleetwood port were unusual compared with other ports on the Irish Sea, and such exit costs might be expected to be lower on vessels operating on other Irish Sea routes. We were told that in general, ropax vessels tended to be built with specific routes and conditions in mind, and so they may not be well suited to alternative routes. Roro vessels tended to be more generic, and so were easier to sell or charter out. We recognize Stena's view that more ropax vessels are being built as standard, with no particular route in mind, and noted views that linkspans could be adapted to meet the needs of different vessels.

Ports

45. With regard to port exit costs, Stena said that barriers to exit varied depending on the type of a contract with a port and in particular whether any long-term commitments had been made. Ports that undertook heavy investment in order to accommodate a ferry operator recovered that cost by means of (possibly long-term) contracts with the operator. A long-term commitment could create a liability of anywhere from £1 million to £36 million annually, based on Stena's experience on the Irish Sea.

46. P&O mentioned the following as barriers to exit: long-term port contracts, the level and cost of redundancies and alternative opportunities for the redeployment of vessels.

47. DFDS provided us with a worst-case scenario of its exit costs from the Irish Sea, which are set out in Table 2 below. These costs are substantial, amounting to €[✂] million. DFDS told us that it would have hoped to have been able to mitigate such potential losses. Indeed, with regard to the contract at Dublin, DFDS was able to agree a termination fee of €[✂] million, demonstrating that some negotiation is possible.

TABLE 2 **DFDS's costs of exit from the Irish Sea**

€ million

Contract	*Annual commitment*	*Years to expiry*	*Total commitment*
Bareboat contracts running to 2015	[✂]	5	[✂]
Birkenhead agreement running to 2022 (opt out possible 17 June 2012)	[✂]	2	[✂]
Belfast agreement running to 2022	[✂]	12	[✂]
Dublin agreement running to 2012	[✂]	2	[✂]
Minimum commitment if closing*			[✂]

Source: DFDS.

*The Belfast and Birkenhead agreements were in sterling (GBP) but were included as euros (understating costs) and amounts were not discounted (overestimating costs in 2010 terms).

48. Stena noted that exit costs which might be prohibitive in one year might be much reduced a few years later. As an example, it used the costs set out in Table 2 above. It said that as over half the exit costs for DFDS were ship costs which would have expired in 2015, and that coupled with the expiry of the Dublin and Birkenhead agreements in 2012, DFDS's exit costs would have been just £[✂] million by 2015.

49. Peel Ports, which controls Heysham, Liverpool and Birkenhead ports, told us that the period for a contract depended on the capital investment that the port needed to make and it was not related to the type of traffic (ie passenger, accompanied or un-accompanied freight). It may be as short as one year or as long as 25 years. There appear to be no differences of principle between exit costs for roro and ropax services.

Customer switching costs

50. Stena told us that both freight customers and passengers could switch easily between operators. Other operators agreed.

51. For both accompanied and unaccompanied freight customers, according to Stena, switching between operators on closely-competing routes (either completely or through altering the balance of traffic with each ferry operator) occurred regularly on the Irish Sea. [✂]

52. For passengers, the vast bulk of Stena's transactions are direct with the customer where the customer has a complete choice of ferry operator. On the buyer-to-buyer side (ie using an intermediary travel agent), the majority of accounts will have similar deals/relationships with all of the ferry operators.

53. Seatruck told us that, given the overcapacity and lack of any contractual commitments from customers, it was very easy for customers to move their business to other routes if they could save money in the process. Seatruck also told us that prices were set on an individual customer basis but without formal contracts, so that customers had full flexibility to change ferry operator at any time. According to Seatruck, this was the norm on the Irish Sea.

54. P&O told us that all customers were free to switch between ferry operators. Each customer normally had accounts with all ferry operators and would frequently allocate their volumes between operators. These allocation switches occurred on a regular basis and were demonstrated by the change in customer volumes over time.

55. ABP told us that there was a fair amount of route loyalty on the Irish Sea because trailer operators and operators of company trailerized business built up infrastructure revolving around certain ports.

56. We have seen evidence of customers switching from Fleetwood to Seatruck and DFDS's improved services from Heysham (see Appendix D, paragraphs 11 to 24).

Summary of current spare spaces of ports

	Port	*Berth slot*	*Availability**	*Constraints/physical characteristics*
Irish side	Belfast	Victoria Terminal 1	Available 23.00–05.30	
		Victoria Terminal 2	Available 23.00–05.30	
		Albert Quay	Available 20 hours a day up to 2015, then fully available†	Draught limitation of 5.5m may be restrictive for operation of a Liverpool service based on specification of current Irish roro services into Liverpool/Birkenhead.
	Larne	Curran Quay	Available 09.30–16.00 and 19.00–06.00	The berth has a single-deck linkspan.
	Warrenpoint	Warrenpoint	Available for one more vessel	Restricted to vessels of approx 160 metres (max) length due to the restraints of turning circle. Passenger facilities are not available.
UK side	Heysham	Linkspan 1‡	Available 10.00–11.30, 14.30–16.30 and 02.30–04.30	Subject to a dredging programme of approximate every 6 weeks. Mainly freight services.
		Linkspan 2	Available 10.00–16.00 and 22.00–04.00	An old small facility that some of the larger vessels cannot operate or can only partially operate on. Subject to a dredging programme of approximate every 6 weeks. Mainly freight services.
		Linkspan 3	Available 10.00–16.00	Subject to a dredging programme of approximate every 6 weeks. Mainly freight services.
	Liverpool/ Birkenhead	Twelve Quays	Available	
		Langton	Available	In river roro berth, permission to build obtained but no development to date.
		Liverpool - lock	Available	Options to develop roro berths within the port (beyond the lock gates).
	Fleetwood	Fleetwood	Available	A single winch operated linkspan. The channel and berth require a maintenance dredging programme in order to accommodate scheduled ferry services.

Source: CC.

*Larne Port Ltd notes that, for freight business, which generally requires a morning arrival time of around 06.00–07.00, arriving after 09.30 would be particularly unattractive.
†On a six-month spring and summer basis under the terms of a Slot Time Agreement between Belfast Harbour and Isle of Man Steam Packet Company (IOMSPC) to 2015 on a preferential use basis for a period of 2 hours before and 2 hours after all schedule sailings. Available outside IOMSPC hours.
‡Heysham Port Ltd notes that this linkspan is at full capacity and the small gaps are not realistic to run a service.
Note: This table lists the spare capacity of the ports of Belfast, Larne, Warrenpoint, Heysham, Liverpool/Birkenhead and Fleetwood, which the CC has surveyed and had hearings with.

Competitive effects with respect to passengers

1. This appendix sets out the evidence and analysis we undertook relevant to our assessment of the competitive effect of the acquisition on passenger traffic.

Analysis

2. As background, we present traffic volumes, prices and corridor shares for the routes which carry passenger traffic. We note that following the closure of Fleetwood–Larne, its traffic has now diverted to other routes (as it would under our counterfactual where Stena exits the diagonal routes). However, the traffic volumes on Fleetwood–Larne are relatively small and will have only a minor impact on the corridor shares post closure.

3. Table 1 shows traffic volumes and corridor shares in 2010.[1] Stena is now the only operator that provides a service to Belfast on the diagonal corridor. Its Liverpool–Belfast route was used by [170,000–210,000] passengers in 2010. Around 1.8 million passengers used each of the northern and the central corridor, and Stena's share in these corridors is around 50 per cent.

TABLE 1 **List of potential affected passenger routes, 2010**

	Great Britain	*Irish*	*Corridor*	*Operator*	*No of passengers (volume)*	*Share within corridor (%)*
1	Liverpool	Belfast	Diagonal	DFDS (Stena)	[✂]	[91–100]
2	Fleetwood	Larne	Diagonal	Stena	[✂]	[0–10]
3	Stranraer	Belfast	Northern	Stena	[✂]	[51–60]
4	Cairnryan	Larne	Northern	P&O	[✂]	[31–40]
5	Troon	Larne	Northern	P&O	[✂]	[11–20]
6	Holyhead	Dublin	Central	Stena	[✂]	[31–40]
7	Holyhead	Dun Laoghaire	Central	Stena	[✂]	[11–20]
8	Holyhead	Dublin	Central	Irish Ferries	[✂]	[41–50]
9	Liverpool	Dublin	Central	P&O	[✂]	[0–10]
10	Liverpool	Dublin	Central	DFDS	[✂]	[0–10]

Source: CC calculation based on companies' responses to market questionnaire.

4. Table 2 shows the prices (in real terms) over the period 2005 to 2010 for DFDS's and Stena's routes.[2]

TABLE 2 **Annual real prices for passenger**

	2005	*2006*	*2007*	*2008*	*2009*	*2010*	*% change*
Stranraer–Belfast (Stena)	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	6.2
Liverpool–Belfast (DFDS)	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	–8.2
Liverpool–Dublin (DFDS)	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	–7.0
Holyhead–Dublin (Stena)	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	18.9
Fleetwood–Larne (Stena)	[✂]	[✂]	[✂]	[✂]	[✂]	[✂]	–0.9

Source: CC calculation based on companies' responses to market questionnaire and ONS RPI statistics.

[1] The passengers here exclude the accompanied freight drivers. For Irish Ferries, we received that data on cars but not on the occupants. For the purpose of corridor share calculations, we have assumed that there are two passengers per one car.
[2] For Liverpool–Dublin and Liverpool–Belfast routes, 2006 prices are calculated as January to May, due to the missing revenue data from June to December.

5. In assessing the closeness of the competition between the routes in question, we considered the movements over time in passenger numbers and prices, in particular we:

(a) compared prices and their movements over time;

(b) considered how passenger volumes interact with each other over time; and

(c) carried out a catchment area analysis.

Price comparison

6. We start by comparing the prices and their movements over time for Liverpool–Belfast (DFDS now Stena), Fleetwood–Larne (Stena), Liverpool–Dublin (DFDS now P&O), Holyhead–Dublin (Stena) and Stranraer–Belfast (Stena). Stena, DFDS and Irish Ferries provided us with data on passenger revenue and volumes. From this data we calculated the average revenue per passenger, which is our measure of price. We were unable to obtain revenue data from P&O for either its central or northern corridor routes.

7. Figure 1 shows the price data for the five routes between January 2005 and December 2010, which is the longest time period for which data was made available to us on a consistent basis.

FIGURE 1

Passenger prices

[✂]

Source: CC calculations based on data provided by Stena and the Acquired Business.

8. We observe that:

(a) The gap between the two sets of prices (for short and long crossings) has narrowed over time. The price series for long crossings have remained broadly stationary (in nominal terms) whereas the prices on short crossings have increased over time.

(b) The two sets of prices are subject to different seasonal patterns. The prices for short crossings display a regular seasonal pattern which is characteristic of the leisure industry: prices peak in the summer months and around Christmas. The pattern on the diagonal routes appears to change from one year to another.

9. We next considered the pairwise correlation coefficients which allow us to quantify the observed relationships between the price series. These measure the strength of the linear relationship between two prices on a scale from 0 to 1 for a positive relation, and on a scale from 0 to –1 for a negative relation. In order to control for seasonality, we have also calculated correlation coefficients for the annual growth rates. Table 3 shows the correlation coefficient between prices and Table 4 between their growth rates.

TABLE 3 **Passenger price correlations**

	Holyhead–Dublin	*Stranraer–Belfast*	***Liverpool–Belfast***	*Liverpool–Dublin*	*Fleetwood–Larne*
Holyhead–Dublin	1				
Stranraer–Belfast	0.82	1			
Liverpool–Belfast	**0.39**	**0.42**	**1**		
Liverpool–Dublin	0.20	0.19	**0.5204**	1	
Fleetwood–Larne	0.55	0.64	**0.3495**	0.1563	1

Source: CC calculations.

Note: Number of observations: 65.

TABLE 4 **Passenger price correlations, annual growth rate**

	Holyhead–Dublin	*Stranraer–Belfast*	***Liverpool–Belfast***	*Liverpool–Dublin*	*Fleetwood–Larne*
Holyhead–Dublin	1				
Stranraer–Belfast	0.1117	1			
Liverpool–Belfast	**0.0202**	**0.1172**	**1**		
Liverpool–Dublin	–0.065	–0.1503	**0.4892**	1	
Fleetwood–Larne	–0.0106	–0.0219	**0.1949**	0.0718	1

Source: CC calculations.

Notes:
1. The high correlation between Holyhead–Dublin and Stranraer–Belfast (Stena routes) and between Liverpool–Belfast and Liverpool–Dublin (DFDS routes) may be due to the common ownership of these two pairs of routes.
2. Number of observations: 46.

Passenger volumes

10. We next considered how traffic volumes change in response to price changes. The passenger volumes data is presented in Figure 2 (this graph also includes data from P&O and Irish Ferries).[3]

FIGURE 2

Passenger volumes

[✂]

Source: CC calculation based on data provided by the parties.

11. The data is strongly seasonal which makes it difficult to assess the impact of competition between the operators on traffic volumes. For that reason, we focused our analysis on annual growth rates which should not be affected by seasonal variation. This is shown in Figure 3.

FIGURE 3

Passenger volumes—growth rates

[✂]

Source: CC calculation based on data provided by the parties.

[3] The traffic volumes here exclude the accompanied freight drivers. For Irish Ferries, we assume that one car carries two passengers on average.

12. The data shows that there were several instances in recent years where individual operators recorded exceptionally high or low growth rates. We explored whether this could tell us something about the nature of the competition between the operators, and in particular whether there was competition between Stena's short crossings (ie Holyhead–Dublin and Stranraer–Belfast) and its newly-acquired diagonal route Liverpool–Belfast.

13. We first considered how the growth rates on Liverpool–Belfast compare with the growth rates on the central corridor routes. This is shown in Figure 4.

FIGURE 4

Passenger volume growth rates, Liverpool–Belfast versus central corridor

[✂]

Source: CC calculation.

14. We identified four cases where at least one of the operators recorded exceptionally high or low growth rates (these are marked on the graph):

(a) Around February 2008. This shows a large positive spike for Stena's Holyhead–Dublin (in excess of [✂] per cent) and moderately-sized negative spike for the overlapping Holyhead–Dublin route ([✂] per cent) operated by Irish Ferries. In contrast, there is no discernable impact on the Liverpool–Belfast and the Liverpool–Dublin routes.

(b) Around January 2009. This again shows a large positive spike for Stena's Holyhead–Dublin route (around [✂] per cent). This follows an increase in capacity on that route at the end of 2008 when Stena replaced the *Stena Seatrader* (a roro vessel) with the larger-capacity, faster ropax *Stena Nordica*. We also observe a sizable reduction in the growth rate on the former DFDS's Liverpool–Dublin route ([✂] per cent), and little or no effect on the other two routes, including Liverpool–Belfast route.

(c) Around January 2010. This shows a large positive spike for the former DFDS's Liverpool–Dublin route (around [✂] per cent). We observed an increase in capacity by DFDS on that route around the same time (relative to the same period the year before) but could not attribute this to any other particular event on the list that was provided to us by the parties. We also observe a modest reduction in growth on Stena's Holyhead–Dublin route and little or no effect on the other two routes, including Liverpool–Belfast.

(d) Around August 2010. There is a large drop in the growth on DFDS's Liverpool–Dublin route and little or no impact on other routes. This coincides with a reduction in capacity on DFDS's Liverpool–Dublin route. Again, however, we were unable to link this to any other particular event.

15. We next considered how the growth rates on Liverpool–Belfast compared with the growth rates on the Northern corridor routes. This is shown in Figure 5.

FIGURE 5

Passenger volume growth rates, Liverpool–Belfast versus northern corridor

[✂]

Source: CC calculation.

16. The data is not particularly informative as there are few monthly growth rates that stand out from the rest of the data. The exception is April 2010 where all three routes experienced high growth due to the volcanic ash crisis which resulted in a suspension of air travel. However, this event is not informative for the assessment of the competition between ferry services.

17. We also note that in most cases the data is driven by common shocks which appear to have affected all the operators in a similar way (ie peaks for one operator correspond to peaks for the other operators and likewise troughs correspond to troughs).

Catchment areas

18. Stena provided us with the origin and destination data for its passengers who book online. These are mostly passengers with cars, as most foot passengers do not book with Stena directly. The origin data from Great Britain and Northern Ireland comes from Stena's vehicle bookers database. The data on passenger origin from the Republic of Ireland and all destination data is sample data from 2010 Car Lane Questionnaire. Stena told us that the two data sets (ie bookers database and 2010 Car Lane survey) are consistent in terms of passenger coverage, except that the destination information was not collected for Fleetwood–Larne passengers as it could not be justified on commercial grounds.

19. We used this data to assess the catchment area overlap between different routes. In particular, we are interested in the overlap between Stena's Fleetwood–Larne route and each of its short-crossing routes, namely Holyhead–Dublin and Stranraer–Belfast. For the reasons explained in the paragraph above, we can only make this comparison for the origin data from Great Britain.

20. Table 5 below shows passenger origin by route on the Great Britain side. We are primarily interested in the overlap between Fleetwood–Larne on the one hand, and Holyhead–Dublin and Stranraer–Dublin on the hand. This shows that for Stranraer and Fleetwood the majority of passengers originate from the area closest to the port that they chose to travel from. For Holyhead, most of the passengers come from the North-West of England, which is close to Holyhead in North Wales.

TABLE 5 **Passenger origin by route (Great Britain), 2010**

			per cent split
Area	*Holyhead*	*Stranraer*	*Fleetwood*
Scotland	[✂]	[✂]	[✂]
Wales	[✂]	[✂]	[✂]
North-east England	[✂]	[✂]	[✂]
North-west England	[✂]	[✂]	[✂]
South-east England	[✂]	[✂]	[✂]
Midlands	[✂]	[✂]	[✂]
London	[✂]	[✂]	[✂]
South-west England	[✂]	[✂]	[✂]
Other	[✂]	[✂]	[✂]
Total	100.0	100.0	100.0

Source: Stena's submission. Direct vehicle bookers, actual volumes and percentage splits.

Glossary

ABP	Associated British Ports, owner of Fleetwood port.
Accompanied freight	Freight transported on driver-accompanied freight vehicles.
Acquired Business	**DFDS Seaways Irish Ferries Limited** (now called Stena Line Irish Sea Ferries).
Act	The Enterprise Act 2002.
APMM	A P Moller Maersk A/S, a global shipping company.
Birkenhead	Used interchangeably with Liverpool, to refer to **ferry** services operating from/to the ports of Liverpool or Birkenhead.
C1	A Stena term referring to revenue from freight, cars and passengers less the cost of the goods sold on board and any amounts paid to the port, and is equivalent to the gross margin.
C4	A Stena term referring to **C5** pre-hedging costs.
C5	A Stena term referring to 'net margin' or **EBT**. Revenue from freight, cars and passengers less the cost of: the goods sold on board, amounts paid to the port, personnel, redundancy, advertising, route level overheads, fuels costs, ship operating costs, any charter expenses, head office cost allocation, capital costs of the vessels and all financial adjustments (eg fuel hedging) and provisions.
Capital cost	Depreciation and opportunity cost of financing.
CC	Competition Commission.
Central corridor	Irish Sea routes comprising short-sea routes between Holyhead and Dublin Bay and long-sea routes from north-west England to Dublin (Heysham–Dublin, Liverpool–Dublin, Holyhead–Dublin and Holyhead–Dun Laoghaire). These routes are referred to as 'central routes'.
DCF	Discounted cash flow.
DFDS	DFDS A/S, a **ferry** operator and land-based logistic provider, operating in Northern Europe.
DFDS Seaways Irish Ferries Limited	The **DFDS** subsidiary sold to **Stena** operating two Irish Sea routes: Heysham–Belfast and Liverpool–Belfast.
Diagonal routes	Irish Sea routes comprising routes between north-west England and Northern Ireland (Heysham–Larne, Heysham–Belfast, Liverpool–Belfast, Heysham–Warrenpoint and previously Fleetwood–Larne). Together these comprise the 'diagonal corridor'.
Dublin Bay	Includes Dun Laoghaire as well as Dublin ports.

EBITDA	Earnings before interest, taxation, depreciation and amortization.
EBITDAc	Earnings before interest, taxation, depreciation, amortization and charter costs.
EBT	Earnings before tax.
Fast craft	A high-speed tourist-only **roro ferry** carrying up to 900 passengers and 200 cars.
Fastnet	Fastnet Line operates the Swansea–Cork route car ferry to Republic of Ireland from Swansea in the UK.
Ferry	Includes **roro ferries, ropax ferries** and **HSS vessel**s.
F-max	Fleetwood max. Bespoke vessels Stena considered investing in for designed for the Fleetwood port.
Freight unit	A driver-accompanied freight vehicle, an **unaccompanied trailer**, or a container.
GfK survey	Irish Sea Ferries Survey: A research report prepared for The Competition Commission, April 2011. Provided by GfK Consumer Services.
Guidelines	The *Merger Assessment Guidelines, CC2*, form part of the advice and information published by the **OFT** and the **CC** under sections 106(1) and (3) respectively of the **Act**.
GVA	Gross value added. The contribution to the economy of each individual producer, industry or sector in the UK. An input into GDP calculation.
HSS vessel	High-speed ship, a fast **roro** catamaran carrying up to 30 **freight unit**s and 1,500 passengers and designed for fast loading and unloading.
IC	Incremental contribution.
Ireland	The whole of the island of Ireland.
Irish Ferries	Irish Ferries Limited, a **ferry** operator on the Irish Sea owned by Irish Continental Group plc.
KPIs	Key performance indicators.
Loch Ryan	Loch in Scotland from which P&O's Cairnryan–Larne and Stena's Stranraer–Belfast services operate.
Linkspan	A gangway between shore and ship suitable for vehicles.
Liverpool	Used interchangeably with Birkenhead, to refer to **ferry** services operating from/to the ports of Liverpool or Birkenhead.
MDHC	Mersey Docks and Harbour Company and Heysham Port Limited are under the control of Peel Ports Group and are the owners of Liverpool, Birkenhead and Heysham ports.

MoU	Memorandum of Understanding.
Northern corridor	Irish Sea routes comprising short-sea routes between Scotland and Northern Ireland (Troon–Larne, Cairnryan–Larne and Stranraer–Belfast). These routes are referred to as 'northern routes'.
NPV	Net present value.
OFT	Office of Fair Trading.
P&O	The Peninsular and Oriental Steam Navigation Company and its subsidiary companies.
Passenger vehicles	Cars, vans, coaches, caravans and campervans, whether used for tourism or business travel.
Passengers	Foot passengers or individuals travelling with **passenger vehicles**. Excludes drivers accompanying freight.
Pc	Passenger capacity.
Peak sailing	A freight **ferry** departure, in the direction Great Britain to island of Ireland typically at night-time and on a weekday, for which the highest prices are charged.
Peel Ports	Mersey Docks and Harbour Company and Heysham Port Limited are under the control of Peel Ports Group and are the owners of Liverpool, Birkenhead and Heysham ports.
ROCE	Return on capital employed.
Ropax	A **roro ferry** that can carry both freight and more than 12 passengers.
Roro	A **ferry** with roll-on/roll-off vehicular access. It may carry up to 12 drivers accompanying freight, or passengers.
RPI	Retail price index.
Seatruck	Seatruck Ferries Limited, a **ferry** operator on the Irish Sea owned by Clipper Group.
SLC	Substantial lessening of competition.
Southern corridor	Irish Sea routes comprising routes between South Wales and the southern part of the Republic of Ireland. These routes are: Fishguard–Rosslare, Pembroke–Rosslare and Swansea–Cork. These are referred to as the 'southern routes'.
SLBVH	Stena Line Holding BV.
SPA	Sale and purchase agreement.
Stena	Stena AB and its subsidiary companies.

Stena Sphere	The Stena Sphere consists of the three parent companies, wholly-owned by the Sten A Olsson family, Stena AB (publ), Stena Sessan AB and Stena Metall AB, and their wholly- or partly-owned subsidiaries.
Stena Teknik	A Stena business. Its activities consist of new building and conversion projects, general marine technical advice and procurement and contract support, as well as research and development in the marine sector.
Unaccompanied freight	Freight that is carried on ferries and is not driver-accompanied.
Unaccompanied trailer	The trailer of an articulated lorry without the tractor unit and, hence, a driver.
VT4	Victoria Terminal 4 at Belfast port.