

Economics of the Gourock-Dunoon Ferries

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Executive Summary

The ferry services between Gourock and Dunoon are a major link in the transport infrastructure in the west coast of Scotland. The route has two vehicle-carrying ferry operators, one (Western) is a commercial, unsubsidized operation and the other (CalMac) operates over a longer route between the two town centres and receives a subsidy for the passenger-carrying side of the operation. Western made an operating profit of £1.4mill on a turnover of £4.2mill in the last reported financial year, a remarkably high level of profitability for a UK-based ferry operator. CalMac is known to make a substantial operating loss on the Gourock-Dunoon run, though its results here are not reported separately. The frequency of the CalMac service is restricted by the Scottish Executive,

In 2000, the Scottish Executive, in conjunction with the two ferry operators CalMac and Western Ferries, published a report carried out by Deloitte Touche which raised the possibility that the least cost option from the perspective of the public purse would be an unsubsidized, frequent, vehicle-carrying ferry service on the CalMac route.

At the moment, the Scottish Executive are planning instead to continue to restrict the frequency of the public service on the CalMac route and issue a Public Service Order (PSO) for passenger-carrying on the CalMac route. We discuss here how the form of this PSO could lead to a monopoly on vehicle-carrying services across the Clyde by an unregulated private monopolist (Western Ferries) with potentially adverse consequences for the public interest.

We also update the original Deloitte Touche report and find that a commercial, frequent, vehicle-carrying service on the CalMac route could not only be profitable but could also protect current levels of passenger fares and service, precluding the need for a PSO and the threat of a Western monopoly. This would be in the interests of the operator, the users, the dependent communities, and the taxpayer. We also discuss how CalMac's particular position as a nationalized industry owned by Scottish Ministers may impede its being able to provide the necessary service, and that a third party which is a fully independent operator may find it easier to pursue the opportunities which this market offers.

Our major policy advice is that all parties and bodies (statutory and non-statutory) with an interest in the welfare of the users, dependent communities and the taxpayer, should do everything possible to encourage the development of competition on this route along the lines we have indicated in the report. At the same time, Western Ferries have publicly raised and discussed the prospect of their becoming the monopoly provider of vehicle-carrying services on the route. This is a case where the commercial interests come in conflict with the public interest. If Western obtain access to slots on the new publicly-funded linkspan at Dunoon breakwater, even if notionally just on a temporary basis to begin with, this will bring the prospect of such monopoly control closer and it is something that should be resisted from the point of view of the public interest.

The imminent completion of the new breakwater and linkspan at Dunoon will enable the deployment of a second frequent vehicle-carrying ferry service across the Clyde

between Gourock and Dunoon with the potential to help boost economic and social development on both sides of the river, at the same time eliminating the public subsidy that is currently being plowed into this service. It is absolutely essential that the once-in-a-generation opportunities this affords are seized and not wasted

Late news: Council advertising for ferry operator, October 27th 2004

As this report went to press, Argyll and Bute council put out an advert in various editions of the Glasgow Herald (e.g. see Herald, October 27th, page 29) under the title “Operational Services” inviting expressions of interest from suitably qualified ferry operators with an interest in “developing a vehicular ferry service across the Clyde from the new roll on roll off linkspan facility in Dunoon”.

The advert notes that it will be available for use from Spring 2005, is 35 metres long and 10.5 metres wide, is designed in accordance with the rules for design of linkspans as laid down in the Lloyds Register of Shipping. It also notes the linkspan has a load capacity of full HA or 30 units of HB loading (B55400). The operational range is given as 6.20 metres above Chart Datum to 1.30 metres above CD. The length of available new berth is indicated as 73.3 metres.

Interested parties are advised to contact Stewart Turner, Head of Roads and Amenity Services, Argyll and Bute Council, Operational Services, Manse Brae, Lochgilphead, Argyll, PA31 8RD, Tel 01546-604614

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1. Introduction

The ferry services between Gourock and Dunoon on the west coast of Scotland serve a similar transport function to that performed by the Forth bridges on the east coast of Scotland. The latter spans the north and south sides of the Forth Estuary, while the Gourock-Dunoon ferries link north and south sides of the Clyde Estuary. There are currently two ferry operators on the cross-Clyde market, Caledonian MacBrayne (CalMac) and Western Ferries. CalMac's service links the two town centres of Gourock and Dunoon, and connects to the Gourock railhead and other transport services for foot passengers. The Western Ferries service runs between McInroy's Point and Hunter's Quay on the outskirts of Gourock and Dunoon respectively.

In 2000, the Scottish Executive published a report carried out by Deloitte Touche (hence DT) "*Final Report: Options for the Ferry Services Between Gourock and Dunoon*"¹. The report on the future of the Gourock-Dunoon ferry services was jointly financed by The Scottish Office, Caledonian MacBrayne and Western Ferries. It was not the purpose of the study to make a single recommendation but to assess options, and report the possible costs and benefits of each

The study was originally intended to be completed by the end of August 1997. In the event, it was not published until the Spring of 2000.

The report looked at different strategic choices for the Gourock-Dunoon ferries. It highlighted one option (Option B) in particular and noted:

“...it will be seen that this option results in significant savings to the public purse, which are worthy of further investigation” (DT section 8.6).

The purpose of this study is to update the DT report and in particular investigate the consultants' comments that

“It should also be noted that this option is suitable for a stand-alone grant-free operation” (DT 8.6)

In other words, they were pointing out that a commercial subsidy-free service was possible on the CalMac public service route.

However, the Executive currently plans to put the Gourock-Dunoon route out to tender, the tender being separate from the main tender planned for the CalMac network as a whole². These tenders would be awarded under EC rules for maritime transport where a PSO is to be awarded:

¹ This is online at: <http://www.scotland.gov.uk/library2/doc15/fogd-00.asp>

² There are a number of publications of relevance to this issue, including: Delivering Lifeline Ferry Services 24/4/2000 Scottish Executive <http://www.scotland.gov.uk/consultations/transport/fese-00.asp>; Proposals for Tendering Clyde and Hebrides Lifeline Ferry Services: A Consultation Paper Scottish Executive 27/6/02 <http://www.scotland.gov.uk/consultations/transport/chfc-00.asp>; Proposals for Tendering Clyde and Hebrides Lifeline Ferry Services, Draft Invitation to Tender for Consultation, Scottish Executive, 27/6/02 <http://www.scotland.gov.uk/consultations/transport/chfd-00.asp>; Proposal for Tendering Gourock to Dunoon ferry services: a consultation paper

“A public service obligation is defined as an obligation imposed upon carriers to ensure the provision of a service that would otherwise not be economic. Article 4 of Council regulation 3577/92 on maritime transport or cabotage allows a member state, in certain circumstances, to impose a public service obligation as a condition for the provision of cabotage services on shipping companies participating in regular services to, from or between islands. However, it is obliged to do so on a non-discriminatory basis in respect of all Community ship owners. That would be achieved by competitive tendering.”³

In the case of Gourock-Dunoon, the PSO will apply only to the passenger carrying aspect of ferry service and it is currently intended that a frequency restriction of some sort will continue to apply to the service for reasons discussed below, though the final form of the tender specifications is still to be decided.

We do not believe a PSO order on the Gourock-Dunoon route is necessary because we believe that a commercial unsubsidised service that would protect passenger service and levels of fares (in real terms) would be feasible on the route.

Detailed analysis of costs and options for both operators has been put in the public domain through the Deloitte Touche report. In principle, it would be possible to conduct a follow up study given appropriate economic, financial, managerial, technical and maritime knowledge. We believe that is achieved by the expertise being drawn on by the present study.

2. The Gourock-Dunoon ferry services

In this section we look at some of the basic economic and technical characteristics of the Gourock-Dunoon ferry market

2.1 The current operators

The operator CalMac on the Gourock-Dunoon route receives a state subsidy on the basis that it provides a socially necessary passenger service. The subsidy is not route specific, but counts as a general contribution towards CalMac's operating costs in the broader network it serves. There is a standing commitment by the Scottish Executive to help ensure a continuing passenger service between Gourock and Dunoon. Any intention to withdraw this service would be subject to a reference to CMUC (a statutory body representing users).

CalMac is a nationalized industry wholly owned by Scottish Ministers and Headquartered in Gourock. It runs a network of routes on the Highlands and Islands of northwest Scotland. Since 1982, CalMac's frequency of service on the Gourock-

<http://www.scotland.gov.uk/consultations/transport/gdfsc-00.asp>; Proposal for Tendering Gourock to Dunoon ferry services: Draft Invitation to Tender for consultation, Scottish Executive 2003-03-22, <http://www.scotland.gov.uk/consultations/transport/gdfst-00.asp>; Separate tender for Gourock-Dunoon route, Scottish Executive news release 29/01/03: <http://www.scotland.gov.uk/pages/news/2003/01/seet252.aspx>

³ From: http://www.scottish.parliament.uk/S1/official_report/session-00/or060202.htm

Dunoon route has been restricted by the Scottish Office (subsequently the Scottish Executive) to a maximum of one per hour. The argument that has been used in the past is that the restriction is necessary “in order to ensure that the public subsidy is not used to undermine a private operator on the Gourock/Dunoon route” (DT section 1). In practice CalMac also runs two extra peak period return trips in the morning and one in the early evening.

Western Ferries (Clyde) Limited is a private company headquartered in Hunter's Quay. Western runs a basic half-hourly service through most of the day with frequency rising to a ferry every 15 to 20 minutes at busy periods. In the year to March 31st 2003, it made an operating profit of £1.4mill on a turnover of 4.2mill. This is an extremely high figure for UK-based ferry operations.⁴

2.2 The routes

The strategically important role played by these ferries (and their similarity to the Forth Bridges in these regards) is shown on Map 1 below.



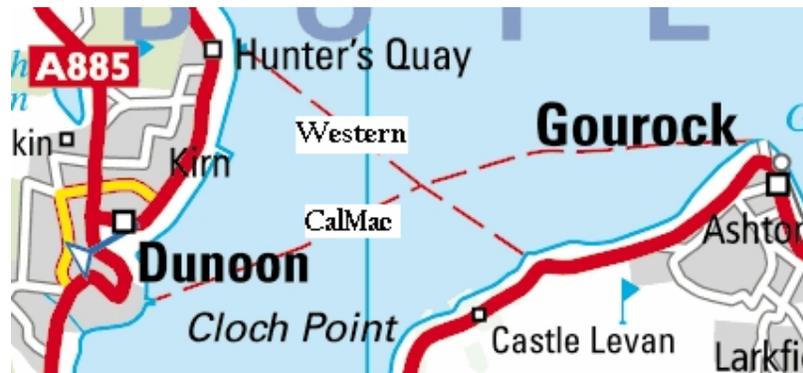
Map 1: Dunoon-Gourock ferries in context

Crossing the Clyde from Dunoon to Gourock by road rather than by ferry would add about an hour to the journey, or as much as two and a half hours extra in peak summer traffic (DT 4.1.1).

⁴ The DT report (section 7.3) compares the profitability of 8 UK-based ferry operators, including Western and CalMac.

Because of the town centre and public transport connections, CalMac is the obvious operator of first choice for most foot passengers. The two operators compete for vehicular traffic, though CalMac's ability to do so is limited by the frequency limitation.

Mat 2 shows both ferry routes as red dotted lines.



Map 2: The Gourock-Dunoon ferry routes

The CalMac route is approximately 4 nautical miles and is about 70% longer than the Western route. The crossing takes about twenty minutes for both operators. While the CalMac route has the disadvantage of being longer than Western's route, it has the advantage for many (potentially most) vehicle-based Gourock-Dunoon travellers of bypassing the busy and often congested section of road in Gourock between the town centre and McInroys Point. Western traffic has to contend with this section if they exit the ferry in the Glasgow direction. CalMac also has advantages in the foot passenger market as discussed above.

So although both compete in the vehicle-carrying market, both have some route-specific advantages to draw on.

Beyond these aspects, since the time of crossing is the same for both operators, the most obvious reason why the demand for Western Ferries is so much higher than for CalMac's service is that the supply of the latter's service is artificially limited by the government's frequency restriction, particularly in the crucial regular or frequent traveler segments of the market where fare discounts are offered by both operators.

In a nutshell, frequent travelers are more likely to buy frequent traveler tickets from the frequent traveler service.

DT notes that frequency is a major competitive weapon on this route (DT 5.3) and that Western makes a point of advertising the frequency of its service (DT 5.7)

CalMac adds further disincentives (compared to Western) to buying their frequent travel tickets by making the tickets specific to each car (a disincentive for multi-car households) and time-limiting validity for all users. However, there are probable

network-wide reasons why such restrictions might make sense in routes where CalMac does not face a private competitor, and it could be argued that removing them only in the specific case of Gourock-Dunoon could lead to calls from other parts of the network for similar treatment. Whether or not this is the case, the fact remains that Western’s ticketing flexibility is attractive to many users.

2.3 Traffic volumes

The linkspan at Dunoon Pier was out of action for several weeks during 2003 so the traffic figures for that year are not directly comparable with earlier years. Consequently we use 2002 as the latest reliable indication of traffic levels on the route.

*Traffic Volumes Gourock-Dunoon 2002 (thousands)*⁵

	<i>Passengers</i>	<i>Cars</i>	<i>CVs</i>
Western Ferries	1,164	504	17
CalMac	594	101	8

Western also indicate in Scottish Transport Statistics that figures for CV traffic for Western Ferries for 2002 and 2003 are not directly comparable with earlier years.

2.4 The vessels

The 12 knot side-and-stern loading CalMac “streaker” vessels on its route are approximately 30 years old, this despite the fact that CalMac has a policy of retiring its vessels after 20 years. The financial analysis in DT indicates that their operating costs are more than twice that of a comparable modern bow-and-stern loading service⁶. The vessels are expensive to upgrade, refurbish, and maintain, and are technologically obsolescent with the need for side-loading adding to costs

CalMac have replaced their extra peak period sailings by the Pioneer with a lease on the Ali Cat, a foot passenger only vessel previously used for summer excursions in the South of England. The Ali Cat is more vulnerable to cancellations than the streakers (it is only allowed to dock at Dunoon in wave conditions no more than 0.6 metres). A new relief vessel (MV Coruisk) in part designed to take over from the streaker during their annual maintenance period also replaced the MV Pioneer duties in this respect

Until recently, Western Ferries did not use new vessels on its route, its vessels were purchased second-hand, refurbished and refitted and normally operate at about 8 knots. Western recently departed from their policy of buying second-hand and commissioned two newbuild vessels from Fergusons shipyard “Sound of Scarba” (2001) and “Sound of Shuna” (2003). So Western now appear to be extremely confident of their commercial position on this route, a position which we shall see would appear to be warranted by Scottish Executive plans for the tender on the CalMac route.

⁵ From Scottish Transport Statistics 2004 <http://www.scotland.gov.uk/stats/bulletins/360/00360.pdf>

⁶ Computed by the authors from cost data in DT section 8

2.5 The terminals

Western Ferries has exclusive access to its privately owned and financed piers.

The charges at the "common user" piers of Gourock and Dunoon are composed of berthing dues (based on number of calls made) and traffic dues (based on the number of passengers carried) If a port has been in receipt of public funding, it is a "common user" pier, open to any qualified operator subject to infrastructure capacity and as long as appropriate charges are paid. So CalMac (and, in future, VesCo) must permit access to all vessels at Gourock Pier, and Argyll & Bute Council must permit similar access on the Dunoon Pier and the new breakwater and linkspan.

At the moment vehicle-carrying vessels docking at Dunoon have to use the linkspan at Dunoon Pier which requires a side-loading facility. Few vessels currently in operation have such a facility, CalMac's "streakers" were specially designed for this route, and its new Clyde relief vessel (MV Courusk) also was designed with a side loading facility for the Dunoon and Rothesay piers (the latter on the Rothesay-Wemyss Bay run).

Since the publication of the Deloitte Touche report, the Executive and the council have funded the construction of a new breakwater and linkspan close to Dunoon Pier on its south side. The linkspan and other shore-based infrastructure such as waiting area is designed to be able to accommodate modern bow and stern ferries of the type described under Option B of the Deloitte Touche report is due for completion November 2004. As of yet there is no announcement of any vessel or service to run from the pier. A recent article in the local paper, the Dunoon Observer raised the possibility - based on Council discussions - that the linkspan could remain unused for several years.

2. Options for the Gourock-Dunoon market

There are a number of issues that are raised by the Deloitte-Touche report in terms of feasible and desirable options. We outline these in this section and update the analysis of the report.

2.1 Options and main findings of the DT report

The analysis in DT assumed that for each of the options analysis is in real terms, no adjustment made for inflation, all costs in constant (1997) prices. The model assumed a 15 year lifetime for each option, and applied a 6% discount rate, consistent with the Treasury discount rate applying at the time, this rate applied to both operators

In particular, four other important assumptions underlying the Deloitte Touche assessment of Option B now warrant reconsideration in the light of new information. The old assumptions in DT were:

- 1) Market growth generally projected to be 1% a year
- 2) Future revenues and costs for both operators discounted by the current Treasury discount rate of 6%
- 3) Capital cost of new infrastructure factored into the estimates

4) Starting market base taken to be level of demand current at time of report

The main findings of Deloitte Touche were that over a 15 year planning period the Net Present Value (NPV) for major options (note all NPV figures negative) were:

- Option A: *status quo, 1.2 streakers*, projected NPV: -£7.8m
- Option A/1: *half-hourly service, two streakers*, projected NPV: -£17.2m.
- Option B: *half-hourly service, two bow & stern roros*, projected NPV: -£1.8m
- Option C: *half-hourly service, foot-passenger only*, projected NPV: -£8.8m

It was noted by the consultants that Option B (also called Option B/1 in the report) appeared to all but eliminate need for subsidy, and could even be considered a candidate for unsubsidised commercial operations. Option B was described as “an enhanced Gourock/Dunoon service”, under this option, the service operator responsible for the present CalMac Gourock/Dunoon ferry service would introduce two new bow-and-stern vessels. Suitable infrastructure would be created near Dunoon Pier to take the new vessels and the frequency restriction would be dropped.

Option B (or B/1) had been put forward late in the DT exercise by CalMac. Neither Western Ferries nor Deloitte & Touche were able to comment on its feasibility although Western Ferries expressed strong reservations about the proposal. Western argued that costs had been understated “for example, in areas such as fuel, insurance and back-up” (DT 8.6)

The consultants noted that Option B resulted “in significant savings to the public purse, which are worthy of further investigation and the Government have asked CalMac to prepare a more detailed analysis of costs and revenues upon which comments will be invited from those being consulted about these options.” (DT 8.6)

DT estimated that Option B would lead to a shift of market share of 3% in favour of the Gourock-Dunoon operator and away from Western. As for status quo (Option A) case, market growth for Option B was generally assumed to be 1% a year except for a temporary blip of 3% in the first three years from Western.

The service would run half-hourly from 06:30 a.m. to 19:00 p.m., afterwards hourly until midnight;

As a consequence, the reduction in costs and the gain in market share would turn what was an operating deficit of the Gourock/Dunoon service operator to an operating surplus of £600-900,000 annually over the 15 year period. The NPV for Western fell to about £5.8 million under this option.

DT conclude “It should also be noted that this option is suitable for a stand-alone grant-free operation, possibly as a subsidiary of CalMac. This has been put to CalMac, which has not rejected the idea” (DT 8.6)

It is not always clear in DT whether they are talking about “new” or “second-hand” vessels for Option B since they use both terms.

An “Addendum” to the final report subsequently concluded that the best option from the point of view of the taxpayer would be closure of the route. However, since this was not on the agenda, that advice was irrelevant to the subject under discussion. In any case, our update of the DT report is based on more recent information than was available to the authors of the Addendum, whose arguments were based on speculative conclusions which have subsequently proved misplaced in important respects. Also, the building of the new infrastructure (breakwater and linkspan) near Dunoon Pier has negated the original assumptions on which the Addendum was based. Our conclusions below confirm the tentative possibility mooted in the original report, that Option B would be the best outcome for the taxpayer, the users and the dependent communities. But it goes further than the NPV projections in the original report and suggests that it would be possible to run a frequent vehicle carrying service on the CalMac route without subsidy, while protecting passenger fares and levels of service.

2.2 A commercially viable non-subsidised ferry service on the CalMac route?

The possibility of a commercially viable frequent vehicle-carrying ferry service may be taken as the core issue we are concerned with here. DT noted:

“It should also be noted that this option (Option B) is suitable for a stand-alone grant-free operation, possibly as a subsidiary of CalMac. This has been put to CalMac, which has not rejected the idea” (DT 8.6).

But why should the consultants comment that the operation “is suitable for a stand-alone grant-free operation” and why should CalMac not have rejected the idea if it is projected to make a loss in the DT report? Part of the answer may lie in the very conservative assumptions regarding projected market growth, and the expected increase in market share that Option B could expect. On the latter count, Option B would double the frequency compared to most CalMac (hourly) sailings and it would extend the sailings into the late evening to match Westerns. As most users will testify, frequency and length of the working day are both areas in which Western has a competitive advantage over CalMac. A frequent traveller might be discouraged from buying books of tickets for an infrequent service, and even if there is a CalMac service for a user’s outgoing journey, they are less likely to buy return or books of tickets if there is a chance their return journey will be later than mid-evening, which is when the CalMac service closes down for the day. To the extent that an Option B type solution reduces or eliminates the disadvantages of frequency of operation and length of the working day, Westerns competitive advantage is correspondingly reduced or eliminated.

A commercially run Option B type operation separated off from the rest of the CalMac network (in DT possibly as a separate subsidiary) would also have the opportunity to eliminate other sources of competitive disadvantage, such as ticketing practices (referred to above).

So an Option B type service would have the opportunity to make the service much more attractive to users and increase market share. But in the DT report it was assumed that Option B would lead to the a very modest 3% increase in overall market share on the CalMac route from the 35% market share represented by the status quo in Option A. This would seem a very conservative assumption given the advantages that

an Option B type service would offer the operator. Nor is capacity a problem in reaching this breakeven. DT indicated (Fig 4.8 in DT) that CalMac was running at only 29% car capacity in 1996 with the status quo, and Option B would represent an effective doubling of capacity (Western's car capacity utilisation was 60%). In short, Option B would break even at very low level of car capacity utilisation, giving considerable room for increasing profitability at low marginal cost once the breakeven level is reached.

So for CalMac's then management's willingness to consider this as a commercial possibility is understandable.

Equally understandable perhaps is Western's "strong reservations about this proposal's feasibility" (DT 8.6).

A problem in trying to double check Option B costings is that they are presented in aggregate form by major categories we do not have further or deeper access to commercially confidential information. But DT does give information in its various chapters to help us construct a cost analysis and profitability comparison by another method, on a run-by-run basis.

For our purposes, we can take, as a starting point of comparison, Option B in the DT report and ask the question: how much more expensive would it be to run a 2-vessel 40-car 12-knot ro-ro service on the CalMac route, compared to the costs of running Western's service?

Again we come back to the point that the obvious cost disadvantage stems for the fact that the CalMac run is 70% longer than Westerns since it has to be to cater for foot passengers with connection to the town centres and other forms of public transport.

A rule of thumb might seem to be that since the CalMac route is 70% longer than Western's run this would be reflected in a corresponding effect on major operating costs. While there would be some fixed costs per run (such as embarkation/disembarkation) that both operators would face, the distance penalty that CalMac faces would seem to put this service at a major structural cost disadvantage to the private operator.

In fact this rule of thumb would be highly misleading. What has to be done is to work out the typical costs of *each run* made by Western and compare on it with a typical run for an Option B type service on the CalMac route. The main difference between an Option B type service on the CalMac run compared to Western run would be that it would be faster than the comparable Western run in order to keep to a 20-minute run journey time (as is the case at the moment with the streakers).

However, the main difference between Option B and the status quo is that it would bring down crewing levels and level of qualifications down to about Western levels. Since the time taken for length of the runs are the same at 20 minutes, this means that labour costs per run (number of crew, qualifications, hours worked) are likely to be similar for an Option B type service and Westerns current service. There would no longer be a substantial cost disadvantage from labour costs between the public service operator and Western.

This leaves fuel, capital costs and maintenance costs as the obvious major sources of cost disadvantage for the public service operator viz a viz Western.

Contrary to popular opinion, fuel is not a major component of operating costs on either run, even allowing for occasional spikes and volatility in fuel price and the higher fuel consumption of CalMac's vessels. DT analysed the cost structure of both operators, in 1997 CalMac spent £155,000 on fuel on the Gourock-Dunoon route and Western spent £180,000. CalMac expenditure on fuel represented 6% of its operating costs on this route, Western expenditure on fuel was about 9% of its costs.

However, we can also measure the cost of fuel per run. At the time of the report CalMac did 12,314 runs and Western did 25,852 runs (DT section 4.3)⁷. This represents a fuel cost of £12.6 a run for CalMac and £7.0 for Western, or a cost disadvantage of £5.6 fuel costs per run for CalMac relative to Western.

To put this in context, at the time of the report, on CalMac a car standard return was £12.10 and adult standard return was £4.70. The "bucket shop" ten-journey tickets were £28.60 for car and £12 for driver/passengers (DT section 4.8). A single holidaymaker paying the standard car/driver return of £16.80 would more than pay for CalMac's extra fuel costs relative to Western on his/her two CalMac journeys. But even at the heavily discounted bucket shop rates, the public service operator only has to attract an average of an extra one or two cars with their driver/passengers or an extra 5 passengers per run to pay for the extra fuel consumption that the CalMac route involves relative to Western. Bearing in mind that the public service operation already has a built in competitive advantage (and source of revenue) over the private operator in the foot passenger market, the higher fuel costs for the public service operation would not seem to be a major issue blocking the possibility of a commercially viable commercial service on the CalMac route.

This would seem to leave capital and maintenance costs as potentially the remaining major source of cost disadvantage on the CalMac route. On the face of it, maintenance costs are very high on the CalMac route, repairs and spares cost £294,000 in 1997 (DT 7.2). But this is explained by DT as being largely due to the fact that:

(CalMacs vessels) are *comparatively expensive to maintain*. Although the vessels have been well maintained and may be expected to last for some time to come, their maintenance has been on an annual cycle. This is because CalMac was not able to predict the eventual replacement date for its vessels with any certainty, since this was dependant on the public spending programme. Annual maintenance in this manner is more expensive than less frequent overhauls undertaken within a planned life cycle maintenance programme (*DT section 4.2.1, italics in original*)

The age of the vessels (almost twice the average age of the rest of the CalMac fleet and already about a decade beyond the normal planned time-to-replacement of a normal CalMac vessel) would also be expected to add to maintenance costs as for most kinds of aging capital assets. So these costs would not be expected to be indicative of maintenance costs for an Option B type service. The maintenance costs of two modern 40-car 12-knot roros on the CalMac route would not be expected to

⁷ These are 1996 figures, we are assuming this was indicative of the level of runs in 1997, which is what the cost figures relate to.

make a substantial major difference in the economics of the route compared to Westerns situation.

Finally, capital costs. It is difficult to say how much more a 40-car 12 knot bow and stern loading roro on the CalMac route would cost compared to a slower 40-car roro on the Western route, and the cost disadvantage this would represent (if any). The figures in DT were 1997 figures when DT estimated a new roro for the CalMac route would cost £3.8 mill (MV Coruisk cost £7.5mill in 2003, though it has a higher specification than is needed for the Gourock-Dunoon run since it is designed to be able to do the Mallaig-Armadale run as well). How the costs would compare would partly depend on whether the vessels were built new or bought on the second hand market (DT actually costs for new vessels, while in its discussion DT talks about CalMac possibly buying on the second hand market).

However, two points could be made about this. Firstly, to the extent there are any additional capital costs these additional costs would be spread over the whole life of the vessels, probably two decades or more (not just over DT's 15 years planning period). Secondly, much of the additional costs would be expected to reflect provision for the potentially higher numbers of passengers, especially foot passengers, on the CalMac route. Since these additional capital costs would be to provide for revenue generating business, they would be (in part or in whole) compensated through an additional revenue stream not open to Western (though care should be taken here not to double count, if we have set aside 5 extra passengers needed to compensate for the CalMac's extra fuel costs relative to Western, these must not be included as part compensation for any additional capital costs relative to Western).

To put this in context, in 1997 CalMac carried about 310,000 foot passengers in 1996 (DT Figure 5.5), an average of about 25 per run. Western carried about 120,000 foot passengers that year (DT figure 5.5), an average of about 5 per run. These extra 20 foot passengers per CalMac run compared to Western may be small in revenue terms compared to the value of the vehicle-carrying traffic, but as we have seen the overall cost disadvantage of the CalMac run relative to Western is also small if an Option B type service was deployed⁸. The extra foot passengers open to an operator on the CalMac route would help to pay for all the extra fuel costs and at least some (possibly all) of the extra capital and maintenance costs of the CalMac run relative to the Western run before we even begin to talk about the revenue generating possibilities from carrying vehicles and eating into Western considerable market share by deploying an alternative reliable and frequent cross-Clyde roro service between Gourock and Dunoon.

One uncertainty relates to the level of pier/berthing/harbour dues that the operator would face. Option B in DT assumes there would only be a small amount payable to Argyll and Bute Council though it recognises that this could rise if payments were also made for use of the pier as a breakwater (in fact there will now be an actual breakwater available with the new council plans). It also assumed no payment for berthing at Gourock because CalMac owned its own pier, though now any roro operator would be expected to pay berthing dues to Vesco (or CalMac if commercial operations using Gourock Pier start before Vesco takes over this asset). DT notes that

⁸ To the extent that CalMac may be regarded as monopoly provider for most foot passengers, there may be expected to be less of an increase in foot passengers traffic from an increased frequency of operation on the CalMac route than there would be for vehicle-carrying where the CalMac route operator could expect to take market share from Western

Western Ferries rents from a private landlord at McInroy's Point (DT Figure 414) but comments: "Western Ferries' charges at McInroy's Point are based on turnover, but are still cheaper than Dunoon Pier's charges" (DT section 4.1.3). Clearly these are considerations that might increase the breakeven level for an operator on the CalMac route, though to the extent that elements in such dues are variable costs related to the level of activity, it reduces the risks associated with commercial operations - more is paid the more successful the operation, less when the operator is still building up the market. We also note that Western will incur significant and recurring maintenance and upgrading costs on its terminals on both sides of the Clyde.

And of course there is an even more obvious way of reaching profitability on the CalMac Gourock-Dunoon route. The DT costings for Option B are for two new £3.8mill (each) vessels (1997 figures). But Western did not get where it is today by building brand new vessels - nor need any other entrant into this market build brand new vessels. If an operator has or could find suitable second hand vessels then it could considerably reduce investment costs, reduce breakeven levels, and increase and bring forward the chances of commercial viability at an earlier stage.

Option B also sets a cost of £0.5mill against Option B for CalMac to pay for redundancies due to reduced crewing levels on the route. However, a commercial operation deploying Option B type service as a new operation would not have to incur this cost.

A further point is the growth trends in this particular market. Car carryings increased by 25% from 1991 to 2001⁹, despite the constraints on competition in this market. Without such constraints it could be expected that the growth rate would have been even higher. If competition was freed up in this market, we could expect this growth rate to be at least matched if not exceeded over the next decade, increasing demand and creating more room for competitors in the market. Also, the present frequency restriction on the route and the continuing uncertainty and threat to the public service operation is likely to have had the effect of suppressing demand; establishing a genuine alternative service to Western could itself trigger a further significant growth in demand for the service.

In short, what seems to be a major structural cost disadvantage on the CalMac route turns out to be potentially much less of a problem (if indeed it is a problem) when the economics are analysed on a run-by-run basis. Indeed, the fact that the longer route opens up a further revenue stream largely blocked to Western (foot passengers) might even be sufficient to compensate for any residual cost disadvantage an Option B type operator on this route would face relative to Western.

It is also worth mentioning the potential route advantage of the CalMac route in uplifting and disgorging vehicles (as well as passengers) closer to the major Strathclyde conurbations, bypassing a bad stretch of road through residential areas in Gourock, with potential advantages for Gourock residents, Inverclyde council and rate payers, users and the environment. This potential advantage depends on where Western vehicular traffic goes once it arrives at McInroys Point and whether most of it turns left through Gourock (as seems to be the case from casual observation) or

⁹ Scottish Transport Statistics, 2002 edn Scottish Executive:
<http://www.scotland.gov.uk/stats/bulletins/00184.pdf>

whether it turns right down towards Ayrshire. This is something that could be quickly and easily checked by any interested commercial operator or public body such as the councils. Option B type solutions may have the potential to release extra demand from such sources that may have been kept suppressed because of limitations such as frequency and ticketing restrictions. The CalMac route might actually be the preferred route for many car users in the absence of such restrictions, and simple observation of whether disembarking vehicles exit west or east at McInroy's Point, combined with some basic market research would help to give valuable information on this aspect.

Further, the diverse user base and larger vessels used on the CalMac route give the opportunity to differentiate the product from Western's service by offering catering services. Many users take the ferry as part of a much longer journey and the ferry can give the chance to stretch legs and have a break. If vehicle driver decides to use the CalMac service instead of Western because he/she can have a coffee, then the real revenue for that service is not just the price of the coffee, but fares for the vehicle, the driver (and possibly passengers) that the coffee service brings in.

The Gourock Pier / Dunoon Pier route also has the advantage that it will soon have in place much of the necessary shore based infrastructure to run a frequent cross-Clyde ferry service. There are few if any suitable alternatives to these locations on either side of the Clyde that are not owned by Western.

Further, the 2-vessel 40-car option is not the only option open to operators considering a commercial non-PSO operation on this route. Adding a third 40-car 12-knot roro would allow the CalMac route operator to just about match Western in every competitive regard (now including frequency) and add a few other advantages such as shore-based and onboard facilities, possibly better location of terminals for many users - especially at Gourock). This would permit a serious challenge for dominance of the route. At higher levels of capacity (such as the three 80-car roros Red Funnel had before they were sold to Adriatic operators in the Nineties), the CalMac route operator would have the ability to cope with the entire Gourock-Dunoon market, CalMac's plus Western. However, since both routes would retain some route-specific advantages that would likely give them a core base of customers, we feel the market is more likely to settle down at some competitive equilibrium

If a commercial operation is credible on the CalMac route then it changes everything. In terms of final outcome, it would not matter whether vehicle-carrying was permitted on the PSO, whether or not there were frequency or timetabling restrictions (minimum or maximum) on the PSO, the length of the PSO, whether or not the PSO was tendered separately or as part of a separate tender, whether or not Vesco was instructed to build vessels for the CalMac route, whether or not operators could bring in their own vessels for the PSO, or whether and how eligibility for the PSO tender was decided (and whether or not Western was allowed to bid for it). They would not matter because the PSO and the tender would be irrelevant.

Of course, just because a commercial operation is feasible on the route does not mean it would be desirable. This will depend, amongst other things, on the objectives and strategies of potential operators, their financial situation and availability of vessels.

2.3 Would a commercial operation on the CalMac route push up fares?

As DT notes, Western Ferries is generally believed to be cheaper than CalMac, but that is not necessarily the case. In principle, the ferries are close substitutes for many vehicle-based travelers, and this is reflected in the respective fare structures being reasonably close to each other on a year-to-year basis. Both sell heavily discounted tickets through local shops and newsagents or "bucket shops". CalMac also receives income from Strathclyde Passenger Transport (SPT) for concessionary fares (as does Western Ferries).

The question of whether a commercial (unsubsidised) service would increase fares on the CalMac route compared to the present subsidised service is clearly a difficult question to answer, but it is an important one for social as well as economic reasons. There are in fact reasons to suppose that the dangers of fares increases are less than might be supposed and indeed it might be expected to have a beneficial effect on fares for all categories of users.

Firstly, the arguments of the previous section suggest that the main effect of subsidy on the CalMac route has been to pay for the increased costs associated with an inefficient method of operation (frequency-restricted side-loading streakers) rather than in terms of keeping down passenger fares. Replace this source of inefficiency and you remove the feature that has been soaking up subsidy.

Secondly, to the extent there is any effect on fares from an increase in competition (with the entry of an unsubsidised commercial operator), we would expect this to be to the benefit of all other categories of users, both Western and CalMac.

The DT report made a comparison of the fares charged on Gourock-Dunoon compared to other routes on the CalMac network on a fare-per-miles. It should be borne in mind some costs (feeding into fares) such as embarkation/disembarkation will have to be met irrespective of the length of the route. Also the Gourock-Dunoon run has a second tier of discounting from what DT terms "bucket shops" (actually normal retail outlets such as newsagents). Both these issues were acknowledged by DT (who included standard discounts by "bucket shops" in their comparison of tariffs in section 4.8). However, DT still concluded that: "Even taking into account the fact that short routes suffer from sunk costs, Gourock-Dunoon is in fact a relatively expensive route per kilometre. Therefore, the existence of competition on this route does not appear to have reduced fares compared to other routes." (DT 4.8)

Thirdly, it should be noted that where we are talking about the direct effect of subsidy on fares we are talking here only about fares for *passengers on the CalMac route*, because fares for all other users here (CalMac as well as Western) are not subsidised.

With this last point in mind, it could be helpful to make compare the passenger fares on the cross-Clyde ferries with similar routes where non-subsidised commercial operators provide vehicle and passenger services. Unfortunately there are few routes similar to the cross-Clyde ferries in the UK, the cross-Solent ferries (Red Funnel and Wightlink) provide perhaps the best example. Red Funnel offer separate prices for passengers on its conventional car ferries and on its fast catamaran ferries, Wightlink does not distinguish between its fast passenger and conventional ferries as far as its discounted (season) tickets are concerned. Red Funnel also offer a fast cat passenger-only service from Southampton to Cowes which charge premium fares for reasons we go into in a later section. Since we would like to compare standard and discounted fares for passengers on different car ferries, we shall restrict comparison to Calmac and Western Gourock-Dunoon and Red Funnel (car ferry Southampton-Cowes).

The Red Funnel comparison is particularly interesting because they are currently operating on the CalMac Gourock-Dunoon route having leased the Ali Cat passenger only-catamaran to CalMac for the extra peak period sailings. As part of the earlier consultation on the tendering for the main network, Red Funnel made clear their interest in bidding for the main CalMac tender, though it is not known if they would be interested in operating on the Gourock-Dunoon route, whether unsubsidised or under a PSO.

The table below shows the fares for passengers on the three runs as of April 20th 2003. Both the DT and MDS/EKOS reports make fares comparisons on a price per mile or km basis, and on that basis the two cross-Clyde ferries are significantly more expensive than the cross-Solent operator. Of the two cross-Clyde operators, Western is significantly more expensive than CalMac, and indeed its standard passenger fare is almost three times higher on a price/km basis than Red Funnel. As the DT report noted, there are further levels of discounting at various “bucket shops” on the Cowal Peninsula for frequent travellers and CalMac also offers passenger season tickets for various periods (currently £507 for 12 months). However, Red Funnel also offers further significant discounting for frequent travellers, and telephone inquiries indicate that a book of 20 journey tickets for passengers would cost £70, a book of 30 journey tickets cost £90 and a book of 40 journey tickets cost £100 – the latter deal bringing the price of a single 19km journey down to £2.50 - precisely half the standard single passenger fare of £5.¹⁰

	Passenger single (fare per km in brackets)	Passenger 10 Journey (fare per km in brackets)
Western Hunters Quay – McInroys Point (4km)	£3 (75p)	£16.40 (41p)
CalMac Gourock-Dunoon (7km)	£2.95 (42p)	£20.85 (30p)
Red Funnel Southampton – Cowes (19km)	£5 (26p)	£40 (21p)

Sources: operators websites

While we might expect that shorter runs would be more expensive than longer runs (because of need to cover fixed costs per user such as embarkation/disembarkation), it is difficult to justify the price discrepancies above purely in terms of length of run. In any case, when the Monopolies and Mergers Commission performed a fares comparison on the cross-Solent ferries¹¹, they did so on a fare-per-mile basis. The Commission had “received a great many letters suggesting that the cross-Solent ferry services are the most expensive in the world” (para 265). The Commission tested this proposition by doing a price comparison on a price-per-mile with other UK operators (including CalMac), which might not be the best way of making global comparison. We are not concerned here with global comparisons, we are concerned instead primarily with (subsidised) passenger fares on the CalMac cross-Clyde Gourock-Dunoon route compared with (unsubsidised) fares on the Red Funnel cross-Solent

¹⁰ These figures refer to 2002-03

¹¹ “Cross Solent Ferries” Monopolies and Mergers Commission 1992
<http://www.competition-commission.org.uk/reports/315crosssolent.htm>

route. On the basis of available information it is certainly appears to be the case that the passengers get a worse deal on the cross-Clyde routes despite the existence of subsidy for foot passengers on the public service route.

There is a further interesting twist to the question of whether the CalMac route operator could compete profitably without subsidy on the cross-Clyde ferry services and still maintain parity of prices with its competitor when the CalMac route is 70% longer than that of its competitor, Western. Red Funnel does exactly that on the cross-Solent market – its 19km route is about 70% longer than Wightlink’s 11km route, and an examination of both companies websites indicates that Red Funnels posted vehicle and passenger fares are similar to Wightlinks. It is true that there is more physical separation between the two cross-Solent routes than there is between the two cross-Clyde operators, but the important point is that it shows there can be room for a second unsubsidised operator maintaining broad parity of prices with the short-crossing operator, even with the structural cost disadvantage of a 70% longer route.

While there is no guarantee that passenger fares would not rise under a commercial unsubsidised service on the CalMac route, cost and fares comparisons suggest this may not be as serious a danger as might be believed at first sight, and indeed fares generally on both CalMac and Western routes could even fall with the introduction of commercial unsubsidised operations on the CalMac route. The main effect of subsidy on the CalMac route has not been to keep passenger fares down, but instead has been to pay for an inefficient (frequency-limited, over-specified, side-loading) method of operation.

And a final point worth noting here is that if a commercial service did lead to a real increase in fares for foot passengers compared to present levels, this could itself justify the Executive triggering the PSO provisions and tender process. This threat in itself could be sufficient to act as a curb on passenger fares on the route. Holding passenger fares around present levels in real terms would be likely to be regarded as a small price to pay by any operator if it enabled them to continue to compete in the lucrative vehicle-carrying market.

The bottom line is that if an unsubsidised commercial service would not lead to an increase in fares or a diminution in service levels for passengers, there is no justification for a PSO and its associated restrictions.

2.4 New assumptions for updated Option B analysis

The following revisions of the four crucial sets of assumptions underlying calculation of NPV of Option B are firmly based on facts, observation and changing circumstances, some of which have been discussed above.

- 1) *Market growth now projected to be 2.6% a year (this based on revealed growth over previous ten year period on the route and cross-comparisons with comparable modes of transport)*

Justification: Demand on the Gourock-Dunoon route is likely to be affected by economic growth, with car carryings a crucial segment of this market. In general, car

usage is believed to be income elastic, that is, it responds more than proportionately to any given increase in incomes. In the case of the CalMac network, this was supported by a Scottish Office Study (1993)¹² which found that every 1% increase in GDP created roughly a 1.5% rise in CalMac's car carryings.

Scottish GDP growth has been about 1.6% (1974-2002) and rose to 1.8% to 1.9% in the latter part of the period (1995-2002)¹³. If we did not know anything about the specifics of the Gourock-Dunoon route it would be reasonable on the basis of these elasticities and GDP growth to expect an annual growth of car carryings on the route of about 2.4% to 3%.

In the event, car carryings on the ferries rose by 2.6% annually in the ten year period 1992-2002, broadly consistent with these expectations¹⁴

These growth rates are also comparable with the growth rate of 2.8% an annum 1992-2002 in traffic on the Forth Road Bridge, the cross-estuary transport link on the east coast.

In the five years since 1997 (the last year used for the D-T study), total car volumes of the G-D market (Western plus CalMac) increased by 3.3% a year with Western increasing by 4.3% a year (CalMac has actually decreased in volumes for special reasons that many feel do not reflect the real opportunities inherent on the route). The result is that D-T grossly underestimated the growth in traffic on the route in just the five years since their base year for the report, with the car traffic levels in 2002 already significantly greater than D-T thought they would be at this point.

The effects of compounding means that the consequences of this underestimation are likely to be magnified even more over longer periods. Marginal changes in forecasted growth rates can have considerable effects on traffic volumes, implications for congestion, pressure on infrastructure, and operator revenues, just a few years down the line. If traffic grows by 1%, it will be 16% higher after 15 years; it will be 35% higher after 15 years if the growth rate is 2%; and it will be 56% higher after 15 years if the growth rate is 3%.

For example, if we were to forecast the growth in car traffic over the next ten years with 2002 as base year, estimated traffic volumes in 2012 will be about 17% higher if we use the historic growth rate of 2.6% per annum rather than D-T's unrealistically low estimate of 1% per annum growth.

If anything, as noted earlier, we would expect that 2.6% could be an underestimate because we think there may be an element of suppressed demand due to constraints on

¹² *An Appraisal of Caledonian MacBrayne's options for replacing the MV "Suilven" on the Ullapool / Stormoway service*, Economics & Statistics Unit 2, Scottish Office Industry Department, Caledonian MacBrayne Ltd, June 1993

¹³ See Scottish Economic Report: March 2004 Chapter 3: The Scottish Economy
<http://www.scotland.gov.uk/library5/finance/ser04-07.asp>

¹⁴ Scottish Transport Statistics, 2002 edn Scottish Executive:
<http://www.scotland.gov.uk/stats/bulletins/00184.pdf>

the CalMac service (most recently exacerbated by the deployment of the Ali Cat and a halving of frequency of its vehicle-carrying service at peak period down from half-hourly to hourly) and a form of planning or users blight attributable to uncertainty over the future of the service. Introduction of a frequent service on the CalMac route could itself lead to a significant further growth in market demand. In addition, the development of the new National Park with the ferries operating on the southern gateway to the park should also help boost traffic growth.

We cannot see any theoretical, empirical, historic, or route-specific justification for DT using a projected basic growth rate of just 1% per annum for traffic on this route. The recent realized growth rate of 2.6% a year may be taken as a more credible predictor of future growth. This clearly has major public policy and commercial implications

2) *Future revenues and costs for both operators discounted by the current Treasury discount rate of 3.5%*

Justification: DT used the current Treasury discount rate to compute future returns for both operators, we are being consistent and using what is the current (revised) rate¹⁵. The financial analysis in the Deloitte Touche report was carried out in the late-Nineties at a time of higher interest rates when the cost of financing both public and private investment was generally higher than it is today. This is reflected in the interest rate used to find the present (discounted) value of the alternative options, including Option B, which was the Treasury discount rate that applied at the time, of 6% (this measured in real, i.e. inflation-adjusted terms).

Since the costs (especially investment costs) of each option tend to disproportionately front-loaded compared to the revenue or income stream, the higher the interest rate used to discount the flows of costs and benefits associated with the respective options, the less attractive that option will generally appear. But the Treasury has dropped their discount rate from 6% to 3.5% to reflect the lower cost of capital that now tends to prevail¹⁶. Updating the financial analysis using the (now lower) Treasury discount rate would itself increase the financial attractiveness of Option B, since the main effect of a reduced interest rate would be to enhance the present value of future net income streams, helping offset initial investment costs. Clearly there is also the issue of what the cost of capital would be to a commercial operator deploying an Option B type operation, but the general point still holds, that falling interest rates and cost of capital will tend to increase the likelihood that alternatives such as Option B would be commercially viable.

3) *Starting market base taken to be revealed level of demand in 2002.*

Justification: the starting level of market demand for the analysis is that observed in 2002 and is itself substantially higher than that projected for that year in DT.

¹⁵ the Treasury Green book gives the derivation of the current discount rate of 3.5% including discount factors at <http://greenbook.treasury.gov.uk/annex06.htm> The Green book itself is at <http://greenbook.treasury.gov.uk>

¹⁶ The Green Book: HM Treasury http://www.hm-treasury.gov.uk/media/05553/Green_Book_03.pdf

4) *Capital cost of new breakwater and linkspan removed from the estimates*

Justification: from end-2004 this will be a sunk cost and not a marginal cost since funding has now been committed and construction commenced on this infrastructure project. It was only a speculative possibility when the DT report was published. There clearly remains the issue of what charges the operator could expect to use for using the new facilities and this is discussed below.

2.5 Findings of the new study

The results of the new study are summarised in the spreadsheet calculations in the Appendix to this paper. Consistent with DT, “Gourock-Dunoon operator” in the spreadsheets refers to the operator on the CalMac route, while “Hunters Quay-McInroy’s Point” operator refers to Western Ferries. When we talk of “the Gourock-Dunoon market”, we refer to the services offered by both operators.

The original Deloitte Touche study projected a (negative) £1.8mil NPV for the Gourock-Dunoon operator (presently CalMac) over a 15 year period at 1997 prices, while the Hunters Quay-McInroy’s Point operator (Western Ferries) was projected to enjoy a (positive) NPV of £5.8mil also at 1997 prices over the same period.

Our updated analysis results in both operators making a positive NPV under Option B with the Gourock-Dunoon operator achieving a £6.4mill NPV and Western achieving a remarkable £17.4mill NPV over the same period.

The latter is almost certainly an overestimate because it takes no account of the necessary increase in capacity (and associated investment costs) to cope with the demand growth we now project over this period. However, while the actual NPV would probably be below £17.4mill once new investment requirements are taken into account, it would certainly be significantly above the £5.8mill recorded in the DT report for this operator for Option B.

If we take a 20 year planning period (the normal period of use for vessels in the CalMac fleet) then the expected NPV of option B to the Gourock-Dunoon operator rises to £11.4mill, even assuming zero resale value of the vessels (itself unlikely).

Interestingly, if we were to take the original DT analysis of Option B, then any one of our four modified assumptions is sufficient to help generate a positive NPV for the Gourock-Dunoon operator for a 15 year planning period.

This reinforces the initial impression that, taken together, the four modifications to the original DT analysis mean that there is every reason to expect that the CalMac route could sustain a profitable, frequent, vehicle-carrying service.

The strongest and most obvious conclusion from this analysis is that there is room for two profitable commercial operators on the Gourock-Dunoon market, one operating out of Gourock-Dunoon itself on the CalMac route, the other most obviously the present Western service from Hunters Quay to McInroy’s Point.

The joint NPV of the two operators over the 15 year period rises from a relatively modest £4mill in the DT report (£5.8mill - £1.8mill) to £23.8mill (£17.4mill + £6.4mil) in our updated study. While that is probably an overestimate because of the likely new investment requirements for Western, it clearly represents a major transformation in the economics of this market, both from the point of view of the individual operators and the market overall. Only the last modified assumption above (the implications of the new infrastructure at Dunoon) may be regarded as specific to the operator on the CalMac route, the other three modified assumptions work to the benefit of both operators.

It should also be emphasised that we have only modified assumptions for which we have direct, observable, objective evidence that they should be modified. But in this connection, we do not understand why DT assumed only a basic 1% a year demand growth in this market (apart for 3% for the first three years for Western). Even when the report was being undertaken, all the evidence suggested that this would be a gross underestimate of how the market could be expected to perform. Even if the only adjustment that was made to the calculations was to use a projected growth rate of 2.6% instead of a basic 1%, this would have been sufficient to have led to a positive NPV for the Gourock-Dunoon operator in the DT report.

However, there is another demand side assumption in DT which we have not queried because we do not have objective evidence for, but which we have strong reservations about. In DT it was assumed that although the frequency of the Gourock-Dunoon service would almost double under Option B compared to the status quo, this would lead to only a 3% increase market share for the Gourock-Dunoon operator.

Since, as we have noted, frequency is one of the strongest competitive advantages in this market, assuming only a 3% increase in market share when the frequency of the service almost doubles would seem conservative to say the least. We do not adjust this assumption here, but we do believe (and flag up here) that the financial payoffs from operating in this market would be more evenly shared between the two operators than is indicated in the original DT report, and even in our updated analysis.

In short, our update of the DT report suggests that there is room for two profitable commercial vehicle-carrying services on the Gourock-Dunoon market, fully able to protect passengers fares and levels of service without the need for a PSO.

2.6 The robustness of our findings

We think that it reasonable to ask how sensitive our findings are to fluctuations or modifications of the main variables (Deloitte Touche did not do this).

This was first raised as an issue in the Deloitte Touche report where Western Ferries complained that the estimates for Option B were too optimistic, “Western Ferries ... believes that the costs of this option have been understated, for example, in areas such as fuel, insurance and back-up” (DT 8.6).

We do not have figures for insurance and back-up, though these are normal issues to be taken on board by any operator and would not expect major surprises here.

Fuel was £155,000 out of £1,337,000 direct ship costs out of £2,525,000 operating costs for the streakers (Figure 7.2 in 1997 in DT), or only about 6% of operating costs for the status quo, a relatively minor figure. We might also expect that these vessels (designed before the first fuel crises in the mid-early Seventies) may be less fuel efficient than modern vessels. While spikes and troughs in fuel prices may be expected on a year to year basis, even if the estimates for fuel in DT were a gross underestimate, we would be surprised if this significantly affected our results.

Of potential significance might be capital costs of vessels as we discussed above. Bearing in mind that the whole analysis of revenues as well as costs is kept at 1997 prices, these vessels were budgeted at about £3.8mill each in 1997 prices. This is believed to be significantly greater than the cost of the latest Western vessel¹⁷ but less than the cost of the Coruisk (£7.5mil in 2003). The former was built to lower specifications than is needed in the CalMac Gourock-Dunoon route, while the latter is built to higher specifications than is needed on the route because it has to be deployed on other routes with more stringent requirements. Allowing for inflation, the original £3.8mil price tag for Option B vessels does not seem too unreasonable, especially if there are alternatives to newbuild that could reduce the upfront costs and risks, such as second hand vessels and/or leasing arrangements.

One issue not raised by Western in DT but which we believe could be worth noting is possible sensitivity of the analysis to berthing and traffic dues. The estimates in DT for use of facilities at Dunoon do seem low, at the same time we assume that while CalMac does not pay direct dues to itself for berthing at its own facilities in Gourock, the implied costs may be imputed as part of overhead costs in the DT report. Clearly this is an issue that would have to be explored further by interested operators with the owners of these publicly-funded facilities in the respective cases.

Another issue which should be noted is that the status quo identified in DT no longer holds with the frequency of CalMac peak period vehicular carrying sailings having been halved (from hourly to half-hourly) with the deployment of the passenger-only Ali Cat on the extra peak-period sailings. This might mean it could take longer for an Option B type service to win back market share from Western.

However, even allowing for these caveats, we have conducted a number of different exercises using different assumptions regarding potentially crucial variables. In each case, for reasonable variations in the respective variables, the NPV for both operators remained positive. We conclude that our main findings are robust.

3. Implications – commercial, economic and political

3.1 Implications of the new study

The main findings of the new study are:

- The reasons that subsidy is presently needed on the CalMac service is because of: (a) costly, inefficient and obsolete vessels (the streakers) (b) high-cost low-revenue passenger-only service (the Ali Cat) (c) frequency limitations (on

¹⁷ Unconfirmed newspaper report

vehicle service) in a market where a major competitive weapon is frequency of service.

- By contrast, an Option B proposal with a modern, frequent vehicle-carrying ferry service should *not* require subsidy. We agree with the conclusions in Deloitte Touche that “this option is suitable for a stand-alone grant-free operation”.
- An Option B type service could be profitable while at the same time protecting present levels of passenger fares and service.
- An Option B type scenario would permit both operators of ferry services (Western Ferries and the operator on the CalMac route) to operate profitably.

3.2 The current operators and the new linkspan

The new linkspan has implications for both operators.

(1) *CalMac’s attitude to the new linkspan.* Firstly, why does CalMac not deploy an Option B type service, and apparently has no plans to do so? At first sight this would seem to be puzzling given CalMac’s incumbency status, its familiarity with the route and its technical and economic implications. Its headquarters overlooks the Gourrock linkspan and it was the highest trafficked route in the CalMac network until recently.

We cannot speak for CalMac in these matters, we have no mandate to do so, we do not have (nor have we sought) access to internal Calmac documentation or decisions made on this issue.

However we believe that there are special features that apply to CalMac as opposed to commercial operators given its status (a) as a state-owned company (b) a company owned by Scottish Executive ministers.

- 1) *The subsidy to CalMac would increase at the start-up phase* As noted above, an Option B type operation would probably incur a loss in the early stages and this could be reflected in an increase in the deficit grant, (depending on what methods of financing were used)¹⁸. While this would make commercial sense, it could be politically difficult since it might be argued that public money is being used to subsidise competition against a private commercial unsubsidised firm.
- 2) *An Option B type operation would be taking a commercial risk using public money to compete against an unsubsidised commercial operator.* Again this could be politically difficult even if it made commercial sense and was in the public interest.
- 3) *The frequency restriction.* While we are convinced that this will prove to be unsustainable for reasons discussed elsewhere in this report, the current default provision by the Executive is that the Executive will continue to impose restrictions on vehicle-carrying on the route, and CalMac, since it is owned by Scottish ministers, will have to continue to make plans based on this assumption. You cannot imagine a disgruntled CalMac taking the

¹⁸ Though PFI was floated as a possibility in Deloitte Touche

Executive to court on this if it lost the Gourock-Dunoon tender since this would be the Executive suing the Executive. It is also difficult to imagine CalMac deploying an unsubsidised non-PSO Option B type service prior to tender because this would be seen as inconsistent with the Executive's current plans for the frequency-limited PSO.

In short, while start up losses, commercial risks and countering frequency restrictions (e.g through a non-PSO service) might be regarded as part of the game for a normal commercial operator considering a normal non-PSO type service, they could pose insuperable problems for CalMac given its special circumstances in competing against an established commercial operator (Western) which has already demonstrated its preparedness to represent its views and interests vigorously to both Brussels and the Scottish Executive.

If the above analysis is even just partially correct, then CalMac's apparent failure to pursue an unsubsidized Option B type solution for the route is both understandable and virtually inevitable. Indeed any other management faced with the same constraints as those facing CalMac would probably have acted in much the same way. Crucially, as far as our analysis is concerned, it also means that CalMac's apparent failure to move on this opportunity does not diminish in any way our arguments that an unsubsidized Option B type service on this route could be commercially viable, and it does open up opportunities for a commercial operator who would not face the potential problems that CalMac would face.

(2) *Western's attitude to the new linkspan.* As for Western's attitude to the new linkspan, at first sight this also appears puzzling since the operator has indicated recently that it could "consider usage"¹⁹ of the new facility at some point.

It appears puzzling because the operator made it clear in the Deloitte Touche report that it would require its own linkspan and waiting facilities if it was to operate from the vicinity of Dunoon Pier. It is perfectly rational for this privately owned operator to wish control over its own facilities as it has at Hunters Quay where it does not have to compete with slots with any other operator and where it does not have to pay dues for use of the facilities.

So what has happened in the last four years to apparently change Western's mind? Even if Western moved only part of its operations to run from the new linkspan to McInroys point it would duplicate its operations, there would be no advantage in terms of the length of the crossing (about the same length as its present run) and it would have to pay dues to the council for use of the new infrastructure which it does not have to do on its own linkspan. On the face of it this does not make any commercial sense at all.

Western does insist that it is a community-based firm that it is responsive and sensitive to its customers and we do not question that here. But it is a privately-owned firm whose first priority and obligation must be to pursue shareholders interests, it is not a charity, and it would be insulting to the firm and misleading to treat it as such. Western has been attempting to allay public fears by talking about a

¹⁹ Article in Dunoon Observer

“users contract” or “users charter” to protect users interests if it became a monopoly. But since it is difficult to see how such a contract or charter could be legally binding (and Western have not convincingly indicated how it could be), such assurances may be best disregarded as far as the formulation of commercial and public policy is concerned.

What can be said is that if Western took up slots at the linkspan (and a part of the market) that could be utilised by any other ferry company wishing to compete in the cross-Clyde market, it could create technical and economic barriers to market access here. Irrespective of whether Western’s mooted usage of the linkspan was temporary or longer lasting, the fact of the matter is that once Western took up residence at the linkspan it might prove difficult to dislodge - possession being, if not nine-tenths of the law here, at the very least something that could prove to have nuisance value for any operator trying to enter the market.

At the same time, the council presently has the prospect of a great deal of red ink surrounding its finances at Dunoon Pier/breakwater/linkspan and must be receptive to ideas of attracting any paying users of the linkspan, even if on a notionally temporary basis. Under no circumstances should that tenant be Western, because if it were in Western’s private interest to operate out of the new linkspan, then for the reasons we have outlined here, we can be sure it would not be in the public interest. And, in any case, if our analysis of the economics of Option B is correct, the council would find a greater and more reliable source of revenue from a frequent Option B type service run by another operator than it would from any partial redeployment of Western’s activities from Hunters Quay to the new linkspan.

3.3 Is the proposed PSO tender open to legal challenge?

If our arguments are correct there will be no need for the route to go out to PSO tender. But it is worth asking the question, suppose it does go to tender, would the current intention by the Executive to maintain the frequency restriction on vehicle-carrying make the proposed PSO tender open to legal challenge? The answer to this is not known, but there are certainly aspects of the current and proposed arrangements for the PSO on the CalMac route that certainly appear to go against the spirit and possibly the letter of EU competition and state aid legislation and UK competition law, if the route did go to tender .

The fact that the tender process appears (one way or another) to lead to a Western monopoly, if only by default, may increase the chances of complaints to the European Commission, that competition and state aid legislation has been breached in this context. Local users and dependent businesses may feel they have little, if anything left to lose if the tendering process is going to throw up another Campbeltown-Ballycastle (where there were no bidders for the PSO tender), or a Western monopoly. It is important that the Executive be aware of the potential risks that may be run in this regard. But it is argued here that the consultation process on the proposed tender specification is continuing and that any parties considering complaints on competition or state aid grounds should be advised that any such complaints at this stage would be inappropriate, premature, and potentially counterproductive.

However, even if there were no operators interested in the possibility of running a commercial unsubsidised service on the CalMac route and the CalMac service has to go out to tender, we feel it is unlikely that the frequency restriction would be carried through into the final tender specifications. It would only take one disgruntled losing bidder (or one discouraged by the frequency restriction) to complain under EC State Aid rules. A case could be made that the frequency restriction was illegal, both because it was applied to that (non-subsidised) part of the service which was not covered by the PSO, and because the Executive's own DT report indicated that removing the restriction would lead to a considerable reduction in necessary subsidy (EC law requires that the least possible subsidy is paid in order to supply the specified PSO service). The fact that the Executive's own (DT) report suggests that the frequency restriction deliberately restricts and distorts competition in the non-subsidised non-PSO market and unnecessarily adds to millions to public subsidy makes it likely to be unsustainable, whether or not it enters in any tender specification.

3.4 Policy options currently under consideration

As noted above, the Executive is currently proposing that a PSO is awarded for passengers-only on the Gourock-Dunoon route, with possible restrictions on frequency of vehicle-carrying on the route.

On the proposal to tender Gourock-Dunoon separately from the main CalMac tender, we note that there is no evidence of any strong local support for this proposal and we also note that the same arguments made with respect to keeping the CalMac network as a whole apply with equal force to keeping Gourock-Dunoon part of that same network. We do not know of any clear reasons or advantages cited by the Scottish Executive for tendering Gourock-Dunoon separately. However, these points notwithstanding, we have formulated our study and conclusions on the assumption that the main CalMac network will be tendered without Gourock-Dunoon.

The restrictions on unsubsidised vehicle-carrying may be seen as a restriction of trade and contrary to EC legislation. As such, this restriction could be contested by interested parties, including other ferry operators considering entering this potentially lucrative market.

Western Ferries will have a strong incentive to undercut other bids to win the PSO for foot passengers, not for its own sake, but to win priority access at Gourock and Dunoon public linkspans through the PSO (especially the crucial half-hourly peak period slots), create physical and economic barriers to entry, and help impede other operators wishing to enter the Gourock-Dunoon market. These barriers to entry would be created whether or not Western then chose to run a passenger-only or combined passenger/vehicle carrying service on the present CalMac route.

It has been suggested by the Executive that competition policy legislation would be sufficient to protect the public interest should Western become the monopoly provider of vehicle carrying services Gourock-Dunoon. We disagree; the OFT has only resources to investigate very few potential abuses of monopoly, the few that are investigated are typically for much bigger markets, and it is notoriously difficult to prove abuse even if it is suspected. The Executive would not tolerate or enable the

creation of an unregulated private monopoly in bridge traffic across the Forth Estuary, there are similar reasons why they should not tolerate or enable a potentially unregulated private monopoly in ferry traffic across the Clyde Estuary.

For these reasons, we strongly argue that it would be in the public interest that Western should be excluded from any PSO tendering process for the Gourock-Dunoon CalMac route. It is common practice in award of contracts or franchises in other sectors to impose restrictions to ensure that no one operator wins monopoly control of a market. However, it is acknowledged that this would require a major change in thinking on the part of policy-makers, especially those in Brussels who seem not to be fully aware of the threat to the public interest of Western having a monopoly of car ferry services on this strategically important route. Therefore we argue that the main defence against a Western monopoly will to be encourage and ensure effective competition in this market.

3.5 The Essential Facilities Doctrine

In EC law, undertakings (which can include organisations in the public or state sector, including councils) must give non-discriminatory access to “essential facilities”. An essential facility in EC law is a facility without which there would be an insurmountable barrier to entry for competitors, or if without access competitors would be subject to a serious, permanent and inescapable handicap making their activities uneconomic.

In EC law the essential facilities doctrine may be seen to apply “where duplication of the facility is impossible or extremely difficult owing to physical, geographical or legal constraints or is highly undesirable for reasons of public policy”. In certain cases “the cost of duplicating a facility might alone constitute an insuperable barrier to entry ... particularly in cases in which the creation of the facility took place under non-competitive conditions, for example, partly through public funding”²⁰.

Interestingly, early applications of the essential facilities doctrine in the EC occurred in cases of shipping companies seeking access to port facilities, in particular where a competitor owned what was seen as an “essential facility” by another shipping company.

We believe the publicly-funded piers and linkspans at Gourock and Dunoon would be regarded as essential facilities by any operator wishing to enter the unsubsidized vehicle-carrying ferry market but that they would not be regarded as essential facilities for Western who already have their own linkspans at Hunters Quay and McInroys Point. Consequently, we believe that authorities owning the public funded linkspans would have both rights and obligations to give priority of access to any operator (including CalMac) over Western if that other operator wished to compete against Western in the unsubsidized vehicle-carrying market, Gourock-Dunoon.

3.6 Policy Recommendations

²⁰ Case C-9/97 *Brönner* [1998] ECR I-7791, Opinion of AG Jacobs, points 65 - 66

We believe that this study offers real opportunities and few downside risks for the Scottish Executive. The Executive could restate they intend to protect the passenger fares and service levels Gourock-Dunoon, and note that it is presently their intention to achieve this objective through a PSO. However, they could also note that it has been suggested that this objective might be achieved through an unsubsidised vehicle-passenger service on the route. While emphasising they do not necessarily endorse such opinions, they could then market test this possibility by inviting expressions of interest from operators who might be interested in providing such a service.

- If credible expressions of interest to provide an unsubsidised service are received, it could be the first step to pursuing an Option B type solution.
- If no credible expressions of interest are received, we are no worse off than at present, and indeed the process would have helped provide evidence that a PSO is needed.
- The Executive could (and should) reserve the right to introduce a PSO if an Option B type service fails to protect passenger fares and level of service.

We believe there are also advantages to the Scottish Executive from these arguments being made by third parties living locally. If these arguments were first introduced by the Executive it might be misinterpreted and misrepresented locally as back-door privatisation and a lessening of commitment to the route by the Executive.

We also think that this way forward would allow the Scottish Executive to retain control over the policy process. If the Executive still proceeds with its present proposal to continue with a frequency-limiting PSO, it could be argued this severely restricts competition and creates a restraint on trade or barriers to entry for operators wishing to enter this market, and indeed that the PSO itself is unnecessary in the first place. The present study, in conjunction with the Scottish Executive's own Deloitte Touche report, could be cited in evidence by any operator who wished to complain to Brussels that they could run an unrestricted and unsubsidised vehicle-passenger service while still protecting existing passenger fares and levels of service.

We think that it is in the wider public interest that the Scottish Executive keeps control over the policy process; that it is handled in an orderly fashion; and that it does not finish up being ad hoc and haphazard through force of circumstances and outside pressure.

4. Conclusions

Our main conclusions are simple and straightforward. We believe that it is possible to run a commercial, unsubsidized, frequent, bow-and-stern loading ferry service on the Gourock-Dunoon route, while protecting (possibly reducing) existing levels of fares and improving existing levels of service for all categories of users. There is more than enough room for two profitable operators in this market as evidenced by the current volume and likely growth of the market, combined with the substantial current profitability of Western Ferries (with a £1.4mill operating profit on a turnover of £4.2mill in the last reported financial year).

Such an outcome would also be of immense potential benefit to local economic and social development and would eliminate the current burden the route imposes on the taxpayer.

The main dangers to this scenario would come from further distortion of competition in this market, an issue which has acted against the public interest for several years. In many respects, for more than two decades Western has faced the ideal competitive situation with a hogtied, frequency-limited rival (CalMac) who has had to make do with inefficient, obsolete vessels. A disinterested observer might argue that it has been more in Western's commercial interests to have CalMac as a weak and constrained competitor than no competitor at all. Having CalMac in the market at least maintained the appearance if not the reality of genuine competition, while CalMac occupied prime time slots on the Gourock-Dunoon route that took up market room and may have put barriers (economic and technical) in the way of a potentially more aggressive third party entering the market.

The Scottish Executive's current plans to continue to restrict the frequency of the public service on the CalMac route and issue a Public Service Order (PSO) for passenger-carrying on the CalMac route pose a real danger and unintended consequence of facilitating the creation of a Western ferries monopoly

By way of contrast, our update of the original Deloitte Touche finds that an unsubsidised, frequent, vehicle-carrying service on the CalMac route could not only be viable but could also protect current levels of passenger fares and service, meaning that the PSO would be unnecessary – indeed it would not be permitted to issue a PSO under EC rules in such circumstances. This would help promote the interests of the users, the dependent communities, and the taxpayer.

We argue that all parties and bodies (statutory and non-statutory) with an interest in the welfare of the users, dependent communities and the taxpayer, should do everything possible to encourage the development of competition on this route along the lines we have outlined above, while guarding against the prospect of Western securing partial or total (temporary or permanent) control over slots on the publicly funded linkspan at Dunoon Pier and so putting technical and economic barriers in the way of a third party entering this market. For reasons we discuss above, we feel it unlikely that the constraints on CalMac will allow that firm to develop this route to its full commercial and economic potential.

The new breakwater and linkspan at Dunoon opens up genuine prospects for a revolution in transportation possibilities across the Clyde at a strategically critical bottleneck in the west of Scotland network, offering immense social and economic benefits. At the same time there are dangers ahead and it is absolutely critical that the opportunities that are opening up are made full use of and not squandered.