Judging the Evidence

Gourock Dunoon Ferry Service – Feasibility Study of a Future Passenger and Vehicle Service with the Vehicle Portion being non-Subsidised

Inception Report to Transport Scotland

In Association with The Maritime Group

December 2012

TMG
THE MARITIME GROUP

mvaconsultancy

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1 Summary

This important study aims to provide a conclusive analysis of the feasibility of running passenger and vehicle ferry services between Gourock and Dunoon town centres, against a legal backdrop where **no subsidy is permitted for the vehicle carrying element**, only the foot-passenger element.

The key attributes and skills therefore required for this study are as follows:

- in depth **knowledge of Scottish ferries sector** and the credibility to authoritatively undertake this study in a wholly objective manner;
- **maritime expertise** to develop robust operational solutions based on appropriate vessels and cost structures – to industry standard unconstrained by recent history on the route;
- ferry-based **demand / revenue forecasting** across a range of vessel / timetable / fares scenarios;
- spreadsheet based **financial modelling** in line with established Guidance; and
- stakeholder and public **consultation** to gauge the issues surrounding a re-introduction and the impact this may have on local communities.

MVA Consultancy has teamed with **The Maritime Group** to offer a project team which combines unrivalled recent Scottish ferry sector experience, technical maritime and marine engineering expertise, and a robust financial / feasibility modelling capability.

We propose to adopt an **incremental approach** to the central task of isolating the costs and revenues (and hence subsidy) associated with running vehicle / passenger ferries by assessing a range of service scenarios (ie timetable) on a like-for-like basis assuming:

- on the one hand a foot-passenger only service using the most appropriate vessels; and
- on the other hand a vehicle / passenger service, again using the most appropriate vessels.

The level of subsidy over the 15-year appraisal period will be estimated for each service, and the incremental impact on subsidy of moving from foot-passenger only to vehicle / passengers will be clearly illustrated for each service scenario.

There is clearly **significant uncertainty** surrounding any financial modelling of this nature. The subsidy required will depend on the cost and availability of suitable vessels, and the normal risks surrounding forecasting revenue are compounded by the presence of Western Ferries, where a **competitive response** is possible, potentially undermining demand and revenue projections on Gourock-Dunoon. This is particularly important in this case, because the figures derived in this Study could provide the legal justification, in terms of the EU position, to running vehicle / passenger services on Gourock-Dunoon. As such it is vital that the costs and revenues are robust and defensible and uncertainty is minimised via an extensive programme of sensitivity tests. Transparency is also the key to ensuring buy in from a wide range of stakeholders and interested parties.

We are confident that our team provides the **skills and credibility** to undertake this analysis and deliver a clear, evidence-based set of outcomes to allow the Scottish Government to develop its approach and make informed decisions on the future planning of this route, in line with local aspirations and the constraints of the legal position.

2 Introduction

2.1 This Report

This document sets out a proposal from MVA Consultancy (in association with The Maritime Group), in response to the Terms of Reference (ToR) 'Gourock Dunoon Ferry Service – Feasibility Study of a Future Passenger and Vehicle Service with the Vehicle Portion being non-Subsidised' issued by Transport Scotland on 15 October 2012.

2.2 MVA Consultancy and the Maritime Group (International) Limited

MVA provides advice on transport and other policy areas to central, regional and local government, agencies, developers, operators and financiers.

We work with our clients to think through complex issues concerning the location and movement of people, goods and services – as well as helping them maximise the potential of their own businesses. We understand the human dimension, and the impact and implications of transport in its broadest sense. We offer a blend of business strategy and planning, qualitative and quantitative research, modelling and evaluation, commercial awareness and operational experience – allowing us to create strategic solutions that work.

We are constantly developing our approach to deliver increasing quality and value to our clients through joined up thinking that draws on the excellence of our expertise across many disciplines. Through an innovative, clearly articulated point of view and through close working partnerships we provide a responsive service and an objective approach.

MVA Consultancy has an unrivalled recent track record of undertaking studies in the Scottish ferries sector. This includes business cases, option appraisals, feasibility studies, financial analysis, stakeholder consultation, demand forecasting and liaison with maritime specialists to ensure deliverable solutions. The work has ranged from appraisals of individual routes and services for operators to national reviews and network strategies for the Scottish Government. Indeed we are very familiar with the background and issues facing services on the Firth of Clyde, and the Gourock – Dunoon service in particular. This has stemmed from recent work supporting the Scottish Government on its fundamental review of ferry services in Scotland, in which we managed a comprehensive consultation exercise which included users of ferry services between Gourock and the Cowal peninsula.

MVA has considerable experience of carrying out similar studies. For example, in 2009, we were commissioned by Caledonian Maritime Assets Limited (CMAL) to carry out an appraisal of future options for the provision of ferry services between Lismore on the west of Scotland and the Scottish mainland. Lismore has two current services (one carrying passengers and vehicles and the other carrying passengers only) but one of the vessels was in need of replacement. The appraisal considered a range of options which would best meet the needs of islanders, while also delivering value for money. The work involved demand and revenue forecasting, a model predicting the choice of users faced with different service options, and detailed consideration of the capital and operating costs of the various vessel specifications. The analysis also included assessing the impact on the island economy under different service options. In the end the work was commended by the client in its innovative approach and methodology and included as a proposed solution in the Draft Ferries Plan.

MVA also has a **specialist Social and Market Research team** with particular expertise in consultation. The team has been involved in carrying out research to support a number of ferry studies in Scotland and are well aware, via the Ferries Review, of the issues on the Gourock – Dunoon route. The team can therefore 'hit the ground running', which will be important in ensuring robust outputs in the tight timetable. Our team will ensure that all consultation and fieldwork is undertaken in line with industry best practice to the highest research ethics.

For this important study, we have teamed with **The Maritime Group (International) Limited**[1] also known as **TMG**. TMG bring the technical maritime and engineering expertise to this study which will enable an independent, objective and robust assessment of the operational, vessel and cost issues associated with 'industry standard' passenger and passenger and vehicle ferry services that could be used between Gourock and Dunoon.

TMG is today a premier global maritime consultancy, actively involved in international ferry operations & management and cruise & ferry terminal management. Among many other projects, the group has provided advice to the Government of Oman on new high speed ferry routes and port infrastructure and carried out a marketing study for the Government of Abu Dhabi. It has worked, and is currently working, with British and American Government agencies in providing technical advice around potential ferry routes and services. It is also currently working with the Government of Gujarat, India in setting up a new RoPax ferry service across the Gulf of Cambay.

TMG has expertise in port development and port management including cruise, conventional and high speed ferry berths, Ro-Ro, container terminals and dry, liquid, and bulk cargo operations. It also has a strong track record advising on port and terminal design and harbour infrastructure requirements for ferry services.

TMG also offers complete Ferry and Cruise business start-up packages including market research, market analysis, detailed business plans, financial brokerage, operation & voyage planning, safety auditing, environmental management, crewing, maintenance solutions and vessel inspections, especially for passenger and vehicle ferry services.

Together MVA and TMG offer a project team covering all areas to carry out a robust piece of analysis which will successfully deliver the requirements to meet your objectives. We will provide expert insights into ferry sector finance, vessels and operation, combined with significant experience in consultation, demand and revenue forecasting, and financial appraisal.

MVA and TMG have recent **experience of working closely together** advising Serco on its successful bid for the Northern Isles ferries contract.

[1] http://the-maritime-group.com/maritime/

3 Research Approach

3.1 Understanding of the Research Requirements

The aim of this chapter is to set out what we anticipate to be the main requirements of the research to ensure robust outputs and deliverables which will meet your objectives and provide analysis and information which can reliably inform future policy decisions on ferry services between Gourock and the Cowal peninsula.

At present the ferry service operating between the Gourock terminal, alongside the rail station, and Dunoon town centre is run as a foot-passenger only service. This contract was awarded under a competitive tendering exercise and began in July 2011. The tendering process allowed for the provision of a vehicle ferry service, provided that this could be seen to be operating free of subsidy, aside from the foot-passenger element where subsidy is permitted. No tenders came forward incorporating this arrangement so a foot-passenger only service was initiated.

The ToR states that '*The policy objective is that there shall be a safe, reliable, frequent, commuter ferry service between Dunoon town centre and the rail terminal at Gourock. The service must be able to operate reliably throughout the year in the weather and sea conditions experienced on the Firth of Clyde and provide an acceptable level of comfort to meet the reasonable expectations of users including commuters, the elderly and disabled and tourists.* ***It is the wish of Scottish Ministers that the ferry service shall carry both vehicles and passengers***.'

An Incremental Approach

The overall research requirement therefore is to provide a clear, robust and transparent assessment of the financial feasibility of running a vehicle / passenger ferry between Gourock and Dunoon town centres with particular respect to the local commercial, legal and political climate. The objective is to assess a ferry service where subsidy is permitted for the passenger carrying element of the service but not permitted for the vehicle carrying element. What does this actually mean in practice and how can this be evidenced?

On a vessel carrying passengers and vehicles, there will be a set of costs associated with running this particular vessel, such as fuel, crew (based on passenger number certification), harbour dues, vessel acquisition and maintenance costs etc. Revenue will be gained from carrying foot-passengers, passengers in vehicles and vehicles.

The costs overwhelmingly relate to the whole vessel itself rather than being built up in terms of separate passenger and vehicle 'cost centres'. As such, it is not possible or meaningful (on a vessel carrying both passengers and cars) to split out the costs associated with each element and align these costs with the revenue brought in by each – ie in order to say that the vehicle element is not requiring subsidy. If hypothetically, a vessel that could carry passengers and vehicles was operated carrying foot-passengers only, then clearly the addition of car and car-passenger based revenue would lower the operating subsidy, as there is virtually no marginal cost associated with this additional revenue.

So the only realistic approach here is to look at the *incremental costs* and *revenues (and therefore subsidy)* associated with running a typical **vehicle / passenger service** (using appropriate vessels) compared to a **foot-passenger only** service (using appropriate vessels) at Gourock Dunoon.

Consultation

It is important in this context to fully understand local aspirations amongst the affected communities. Consultation will also be important to understand the local market and in particular how different market segments would react to the re-introduction of a vehicle ferry here.

Service Scenarios

A new vehicle / passenger ferry at Gourock Dunoon could take a number of different forms, or service scenarios – depending on vessels, timetables and fares. The level of service which can be provided in any scenario is however fundamentally a reflection of the number of vessels deployed. Essentially, given the crossing distance between Gourock and Dunoon and the sailing speed limits on this section of the Firth of Clyde, one, two, three or four vessels can provide a one hour, 30 minutes, 20 minutes or 15 minute service frequency respectively. This study requires the development of a number of service scenarios from both a cost and revenue perspective. In each case, an equivalent set of data needs to be generated for a foot-passenger only equivalent level of service (ie a foot-passenger only service operating to the same timetable with the same fares for foot-passengers), to allow the incremental impact of the move from foot-passenger to vehicle / passenger to be assessed. The potential for a competitive response from Western Ferries also needs to be taken into consideration.

Modelling Scenarios

Spreadsheet based financial and behavioural models are required here to facilitate transparent representation of the costs and revenues associated with each operating scenario. These models must be populated using values derived from industry best practice, but also take account of local circumstances and / or constraints, with particular respect to the employees currently working on the route and the requirements of TUPE (although any costs associated may be treated separately).

To reach firm conclusions, the 15-year financial models need to be clearly itemised to at least the degree of disaggregation in the Deloitte & Touche study. Fundamental to the whole feasibility study is the issue of vessels. The vessels specified and included within the financial and revenue modelling must be aligned to the needs of the route, in terms of sea conditions, harbour infrastructure, and passenger expectations. A realistic assessment of the availability of this type of vessel on (i) the charter market; (ii) the second hand market; and (iii) new build, must be informed by expert industry opinion on the basis of consensus where at all possible.

Outcomes

The key research requirement here therefore is to deliver a clear and objective presentation of the financial feasibility of the principle options for vehicle and passenger services between Gourock and Dunoon. This must be based on industry best practice and developed in such a way that it will be accepted as fair and credible by a wide range of stakeholders and other interested parties.

We will deliver clear conclusions on the key issue of whether a vehicle / passenger ferry service can be provided on the route within the framework of existing EU legislation – ie whether moving from a foot-passenger only service to an equivalent vehicle / passenger ferry increases or reduces route subsidy under a range of service scenarios (on a like-for-like

basis). This will enable the Scottish Government to progress the debate in terms of the future of ferry services on this route based on a firm and transparent evidence base.

3.2 Understanding of Ferry Transport Service Issues

There is a long and often politically controversial history attached to the provision of ferry services between Gourock and Dunoon. However, it is not the purpose of this study to question the current political policy or rationale for the services as such, but instead to lay out the costs and issues associated with a range of operational scenarios on the Gourock – Dunoon route. A good understanding of the history of the route is of key importance to undertaking this feasibility study however and a brief resume of the issues affecting the route is provided below.

Recent History

Until July 2011, **Cowal Ferries** operated a vehicle / passenger ferry service at Gourock Dunoon. The service was latterly provided using a single 'streaker' stern and side-loading vessel, in line with the ferry terminal infrastructure at Gourock and the historic pier at Dunoon. This provided an hourly service each way and was supplemented by a passenger only vessel in the peak hours. In the spring of 2005, to upgrade the deteriorating infrastructure, Dunoon seafront received a new breakwater located just to the south of the main pier. As well as protecting the Victorian pier, a new linkspan was installed alongside the breakwater to allow the berthing and loading of ro-ro ferries. This new linkspan was never used though as the 'streaker' vessels which continued to serve the route required a side-loading facility at Dunoon. However, this new facility is clearly available for any future vehicle service.

Since July 2011, the **Argyll Ferries** service has been foot-passenger only, and this has been provided using two passenger ferries. These ferries, the twin-hulled MV Ali Cat and the mono-hulled MV Argyll Flyer, were built for side access from pontoons. Here, they have to operate with stern access to the linkspans, making for awkward manoeuvring of the ships in berthing. Nevertheless, these two vessels are currently timetabled to provide a half-hourly service, tied broadly to Gourock train services to and from Glasgow, across a much longer operating day than was the case before July 2011.

A commercial vehicle and passenger service has operated between McInroy's Point (east of Gourock) and Hunters Quay (west of Dunoon) since 1973. This service, operated by **Western Ferries** has always employed bow and stern loading vessels allowing roll-on roll-off (RoRo) operation and it is considerably shorter than the Cowal / Argyll route, although it does not offer a town centre to town centre service.

The Gourock Dunoon Market

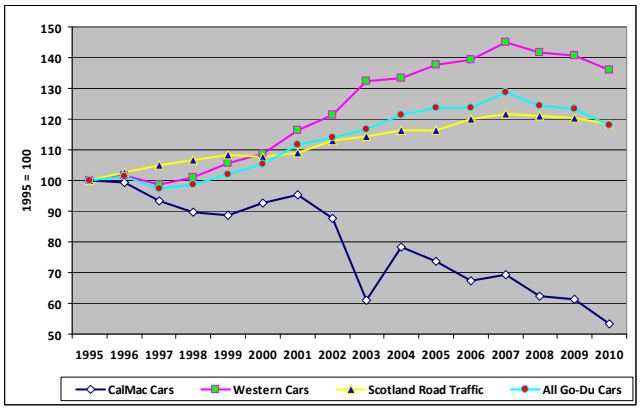
The key patronage figures for the route in 2010 were:

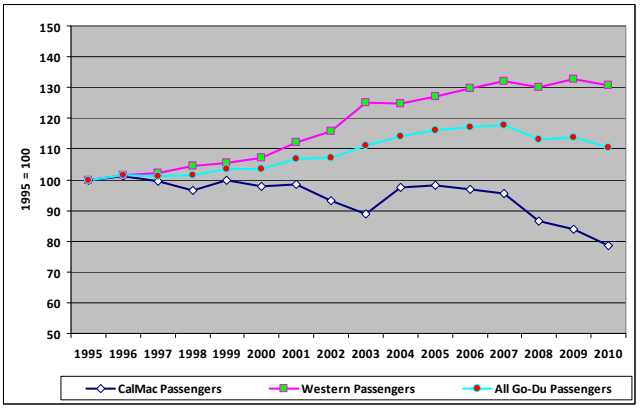
- Passengers: CalMac 499k (28% share), Western 1,314k (72% share);
- Cars: CalMac 61k (10% share), Western 564k (90% share); and
- CVs and Buses: CalMac 3k (9%), Western 33k (91%).

So by 2010, Western had an overwhelming dominance in the Gourock – Cowal peninsula ferry market. The charts below show how the market share of Western has grown sharply

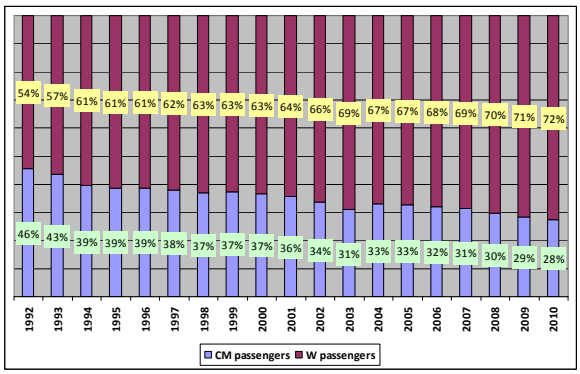
over time. The first chart shows car carryings indexed with 1995=100, with the second showing passenger carryings in the same way. Key messages from the graphs are:

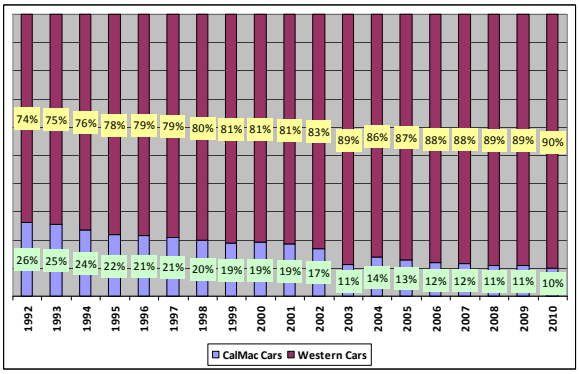
- CalMac / Cowal **car traffic** has declined by nearly 50% since 1995 (note that 2003 figures are affected by service disruption);
- overall total car route volumes have closely mirrored national road traffic levels – growing at an average of 1.2% per annum over this period;
- Western Ferries growth has outstripped national traffic growth by some margin;
- total and Western volumes peaked in 2007, with total route volumes down by 8% since then, declining at a faster rate than national road traffic (which is down by 3%);
- it is reasonable to assume that post June 2011, the vast majority of the 60k or so cars formerly on CalMac will have switched to Western;
- at a total of 625k cars, this makes Gourock-Dunoon the busiest ferry crossing in Scotland by some margin, and significant by European standards;
- the decline in CalMac **passenger** numbers has been less severe than car – however it is still over a 20% drop since 1995;
- growth in total passenger volumes less than car at 0.7% per annum over this period;
- Western Ferries passenger numbers have grown by 30% since 1995;
- as per the car trend, passenger numbers peaked in 2007; and
- by 2010, 75% of passengers on CalMac were foot-passengers.





Since 1992, CalMac / Cowal's market share on the Clyde has dropped from 26% to 10% for cars and from 46% to 28% for passengers as shown below. The picture is one of a steady transfer of volumes from CalMac / Cowal to Western Ferries.





The market for foot-passengers on Gourock-Dunoon (Cowal / Argyll) has also declined in recent years:

- 2009: 390,711;
- 2010: 373,690 (-4% year on year); and
- 2011: 355,893 (-5%), including the first six months of the new passenger-only operation.

Choice on Gourock Dunoon

So the question is who would use a new Gourock Dunoon car ferry? We have seen that by 2010, Western Ferries accounted for roughly 90% of all car crossings. Fares levels and crossing times were broadly similar during the time when both ferries were running, so this suggests that Western's frequency (three or four ferries per hour) versus one per hour with Cowal is the key determining factor. As such Western essentially operates a 'turn up and go' service as opposed to a service where more planning is required. This in itself is enough to secure 90% of the market. A further factor here is ticketing. If a person buys any sort of discounted frequent traveller fare, this will tie them to the operator who sells them this multi-journey ticket.

So by 2010, why did there continue to be demand for the Cowal car ferry, in preference to Western? In transport decisions, not everybody makes what on the face of it is the rational choice all of the time, and even with the Western frequency, there will have been times when the Cowal sailing was more convenient for some. There are also other potential reasons to use Cowal such as:

- people unfamiliar with the area and the choices available may head for the 'established' CalMac brand – road signage may be an issue here;
- CalMac headquarters staff based at Gourock and resident on the Cowal peninsula can travel free;
- other concessions;
- brand loyalty;
- on-board facilities;
- preference for arriving in Gourock town centre;
- use of 'hopper' tickets;
- bulk pre-negotiated contacts; or

- those who travel by car from south of Dunoon (eg Innellan) to the centre or east of Gourock would save around four miles per each leg of the journey.

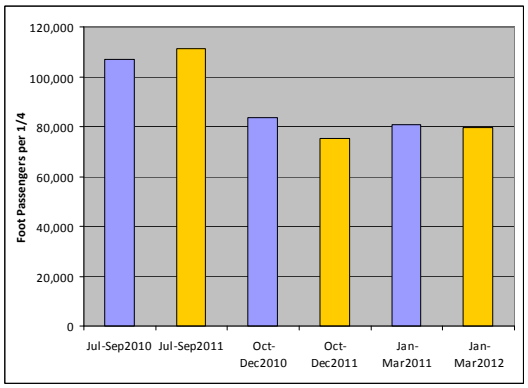
Further choice is provided by the 907 McGill's bus which runs from Dunoon town centre to Glasgow Buchanan Street via Western Ferries (ie the bus goes on the ferry providing a continuous service). This provides competition to the Dunoon-Gourock passenger service with its links to train services from Gourock to Glasgow. This bus also links the two town centres and there are 10 buses per day between Dunoon and Gourock town centres, eight running on to Glasgow, although journey times are around 30 minutes longer than passenger ferry / train. This service is free to holders of National Entitlement Cards which clearly provides competition to the foot-passenger service at Gourock Dunoon.

It is assumed that the large majority of passengers using Western Ferries are car passengers. This is supported by the data – there are 2.3 passengers per car carried. This figure is close to the national average car occupancy (1.6 – though this figure tends to be higher for leisure travel purposes).

Recent Route Finances

The Cowal Ferries vehicle and passenger ferry operation required an annual subsidy of around **£3.2m**. The new Argyll Ferries six year foot-passenger only service has an estimated annual subsidy requirement of **£1.7m** (from the reported contract of £10.6m over six years) – and provides a more frequent service over a longer operating day. It is assumed that the Argyll Ferries business plan is predicated on lower costs (cheaper vessels) and increased foot-passenger revenue (as a result of higher frequency and a longer operating day).

However, in the first nine months of operation, the new service has required a grant of **£2.7m** according to MacBrayne Group published accounts. On a pro-rata basis, Year 1 subsidy would therefore be **£3.6m** which is higher than the preceding car / passenger ferry, and clearly could not be sustained across the contract period[2].



We understand that there were reliability issues particularly with respect to the MV Ali Cat between October-December 2011 and it can be seen from the figure on the right that **passenger numbers dropped** in the second and third quarters of operation, compared to the equivalent period under Cowal Ferries. Indeed, overall passenger numbers were down by 2% over this period despite the step-change in service frequency and the length of the operating day. There has been considerable media coverage concerning the vessels currently used by Argyll and these issues underline the importance of using appropriate vessels if revenues are to be maximised. There have also been reported issues at the harbours (poor access routes to vessel, waiting facilities etc). All this clearly raises a number of issues with the current operation and whether the costs and revenues included in the current contract are attainable.

[2] We understand that there may be one off costs included in this figure due to start up costs and redundancies but nevertheless this figure does seem significant and aligns with reduced foot-passenger carryings compared with the Cowal operation.

3.3 Research Design and Approach

We have broken the study down into a series of discrete tasks and these are now described below.

Task 1	Inception
Objective	To obtain clear agreement on the project work programme and clarify any aspects of our proposal To agree 'Acceptance Criteria' for major project milestones To establish lines of communication and data sources To exchange relevant information eg documents, contact details for Steering Group, contact details of those identified for consultation etc
Task Outputs	Full and detailed agreement on way forward Schedule of Progress Updates / Meetings with Steering Group
Client Deliverables	Inception Note detailing any substantive changes to this Proposal if required Minute of Meeting
Assumptions	None
Inputs	This Proposal
Processes	Inception Meeting
Key Staff	Scott Leitham, Paul McCartney
Completion Date	23 November 2012

It is anticipated the project inception task will involve the proposed management teams from MVA and Transport Scotland. The Project Inception Meeting presents a valuable opportunity to ensure that we fully understand the ToR and that you are satisfied with our proposed approach and methodology. Indeed, the meeting will allow:

- us to meet the key members of the Research Management Team and establish strong lines of communication with your Project Manager;
- us to benefit from your existing knowledge of the key issues, stakeholders, operational matters, background and context;
- both teams to discuss any issues in our proposal and confirm deliverables and timetable, including participation in the final presentations;
- us to discuss and agree with you the scope and timescale of any inputs from others;
- you to discuss / understand / amend and confirm our proposed approach (including dates of key deliverables, the scope of our consideration etc); and
- us to agree the necessary input from the Transport Scotland Management Team eg access to data, contact details for consultation, etc

While the Inception Meeting will be our first contact with the Transport Scotland Management Team, we will maintain close liaison throughout the study. We will provide fortnightly updates of progress, both of the analysis and consultation / stakeholder engagement. We will also discuss and seek a steer from you, if necessary, about key decisions which need to be made during each stage of the study, before moving on to the next phase. While we can provide advice and recommendations on the way forward, given the local sensitivities in this

area we will not make decisions on key or potentially controversial issues without first discussing this with you and obtaining your subsequent approval.

We will produce an Inception Note detailing conclusions of the Meeting and our approach to the study within three working days of the Inception Meeting.

Task 2	Setting the Scene &Data Collection
Objective	To clearly set the context for the study and establish base data sources
Task Outputs	Resume of current and recent market situation and legal position regarding tendering Disaggregated operating cost data relating to existing Argyll and previous Cowal ferry operations
Client Deliverables	Working Paper – will form an initial chapter of Final Report
Assumptions	Existing operators will be cooperative in providing up to date and time series data (including July 2011 onwards) – including profiles of demand across the day / week / year – and also foot-passenger volumes A full understanding of the performance of and issues surrounding Argyll Ferries will be provided
Inputs	Any survey or market research data held by operators or Scottish Government
Processes	Site visit (including The Maritime Group) Discussions with current operators – Argyll and Western Ferries Desk based research Data gathering from potential operators Market analysis Discussions with key providers of aspects of the current service – including CMAL
Key Staff	Scott Leitham, Stephen Canning, Malcolm Parrot
Completion Date	21 December 2012

Site Visit

It is clearly of vital importance that a full understanding of the current ferry operations is gained at an early stage. As soon after appointment as possible, team members from MVA and TMG will visit Gourock and travel on both Argyll and Western Ferries to observe the ferry operations, the harbour infrastructure, the sea conditions and the overall 'customer experience'.

Market Analysis

From published statistics, information in the public domain and previous work we have been involved in we already have a comprehensive understanding of the ferry and carryings situation on Gourock Dunoon. However, this task will increase the depth and detail of this understanding through discussions with those currently involved in running ferry services on the Clyde. We will provide a succinct recent history of key trends in terms of carryings and revenue by passengers, cars, goods vehicles and buses, as well as subsidy. It would also be very useful to obtain highly detailed data, with carryings broken down by sailing where possible for eg one contract year from Western and Cowal.

Costs, Investment and Subsidy

Given that one of the key scenarios to be assessed here is a foot-passenger only operation, it is essential that we maximise the data relating to the current Argyll Ferries service. The ToR describes a key task as '*benchmarking the costs of providing a safe, reliable, frequent, subsidised, public service, passenger only, service in suitable vessels required to cope with the sea conditions on the Firth of Clyde…*'. In a sense, the way to establish this would be through testing the market with a contract specification which offers maximum flexibility on all aspects other than a basic service pattern and all safety considerations. So to some extent, the current service has been 'market tested' and service which is currently running is a result of this. It would clearly be useful to obtain key data with respect to the current operation as a starting point for our own analysis.

Through the Maritime Group, we also have access to a wide network of individuals within other UK ferry operators, and indeed we have already spoken to operators providing ferry services on routes with similar characteristics eg annual passenger and vehicle carryings and vehicle size. We will use this network to establish views and data to provide us with suitable benchmarks on some of the key operational and cost parameters.

The Legal Background

The provision of subsidised ferry services between Gourock and Dunoon has long been the subject of legal and political scrutiny. We will provide a brief, layman's guide to the last 20 years to help readers of the report understand how the situation has evolved and how the current position has been arrived at. This will include a discussion of harbour infrastructure at Dunoon, and the various tenders which have been undertaken during this period. The position regarding the EU ruling will also be explained.

Task 3	Consultation
Objective	To establish the views and aspirations of local stakeholders with respect to Gourock Dunoon passenger and vehicle ferry services
Task Outputs	Clear understanding of local views and concerns, and also the perceived differentiation of the old Cowal and current Western Ferries markets
Client Deliverables	Consultation Report
Assumptions	None
Inputs	Any key contacts known to Scottish Government
Processes	Meetings with Local Authorities and Dunoon Gourock Ferry Action Group, 2 * ½ day Workshop with representatives of tourism industry, shopkeepers, hauliers, students, and the elderly and disabled. One in Dunoon and one in Gourock Public Meeting in Dunoon
Key Staff	Stephen Canning, Shirley McCoard, Scott Leitham, Paul McCartney
Completion Date	18 January 2013

We are very aware that the topic of ferry services between Gourock and Dunoon is a highly contentious issue locally. There are also a number of fears associated with the car-carrying vessel 'monopoly' position currently enjoyed by Western Ferries, and indeed the outcome if this position was to be extended to passenger carryings. It is therefore important that this consultation exercise is focussed on the key issues here, rather than the broader political or policy position, or indeed the recent difficulties with Argyll Ferries' vessels. However we clearly need to understand the potential foot-passenger market so feedback in terms of the current services and how these could be improved to increase patronage will be sought at these meetings.

One of the key issues to explore in this consultation is the potential market for re-introduced passenger and vehicle services. It is often stated that Gourock - Dunoon and McInroy's Point - Hunters Quay 'serve different markets' when both were in operation. We will use these meetings to conduct market research and establish the nature of the potential users of a Gourock Dunoon vehicle / passenger service. One way of addressing this is to identify the perceived or actual negative impacts of the withdrawal of vehicle ferries in 2011.

We propose to hold two half day consultation workshop events, one in Gourock and one in Dunoon aimed at invited local stakeholders. MVA staff will facilitate these events against a structure agreed with TS in advance to ensure a clear focus on the issues of most relevance to this study. We will discuss and agree an appropriate list of invitees with TS using the list provided in the ToR as a starting point. Those who cannot attend will be contacted separately.

As required in the ToR, a public meeting will be held to gather views from the general public. Again this meeting will have to be focussed on the key issues of concern to this study. A public meeting is also required at the end of the study and we would propose holding both in Dunoon.

All consultations will be carried out in accordance with industry best practice.

Task 4	Developing the Scenarios – Costs & Revenues
Objective	To clearly establish the **costs** and **revenues** associated with foot-passenger only and vehicle / passenger ferry services for up to six timetable scenarios
Task Outputs	Clear set of disaggregated cost and revenue figures for each timetable service scenario – for foot-passenger only and vehicles / passengers, based on appropriate vessels which we will specify Clear 'audit trail' of all data sources and assumptions made Scenario operating cost and revenue spreadsheets linked to Task 5 spreadsheets
Client Deliverables	None
Assumptions	Existing operators will supply data where appropriate
Inputs	Task 2 and 3 outputs Economic Forecasts Ferry industry expertise Transport choice modelling parameters
Processes	Vessel specification based on harbour infrastructure, sea conditions and the potential market Development of operating costs scenario Choice modelling based revenue forecasting
Key Staff	Scott Leitham, Malcolm Parrott, Alexander Wilson, Paul McCartney
Completion Date	01 March 2013

Scenarios

As noted previously, the nature of the ferry service which can be provided here is fundamentally dependent upon the number and nature of the vessels deployed. However, the speed limit of 12 knots on this part of the Firth of Clyde clearly places a constraint on crossing time, ie frequency cannot currently be increased by faster crossing times. This means that the number of vessels used in the operation and the speed of loading / unloading determines the frequency of service available. In practice, both Cowal and Western Ferries have operated a 30 minute crossing and loading and unloading time – our understanding is that although the Western crossing distance is shorter, the vessels used were typically running at lower speeds than the Cowal 'streakers' which were running nearer the local speed limit.

At this stage we envisage the scenarios to be developed along the following, illustrative lines:

Table 3.1 Future Scenarios

Foot-passenger Only – 15 year costs, revenue, and subsidy	Vehicle / Passenger – 15 year costs, revenue, and subsidy	Incremental Impact on 15 year Subsidy of Carrying Vehicles
Scenario A1 – **1 vessel** as per Jan-Jul 2011 Cowal service – hourly service	Scenario A2 – **1 vessel** as per Jan-Jul 2011 Cowal service – hourly service	Scenario A Outcome (A2-A1)
Scenario B1 - **1 vessel** longer operating day – hourly service	Scenario B2 – **1 vessel** longer operating day – hourly service	Scenario B Outcome (B2-B1)
Scenario C1 – **2 vessels** longer operating day – 30 minute service	Scenario C2 - **2 vessels** longer operating day – 30 minute service	Scenario C Outcome (C2-C1)
Scenario D1 – **3 vessels** longer operating day – 20 minute service	Scenario D2 – **3 vessels** longer operating day – 20 minute service	Scenario D Outcome (D2-D1)
Scenario E1 – **4 vessels** longer operating day – 15 minute service	Scenario E2 – **4 vessels** longer operating day – 15 minute service	Scenario E Outcome (E2-E1)

Full 15-year cost and revenue profiles will be developed for each scenario, and the incremental impact of moving from foot-passenger to vehicle / passenger ferries in terms of subsidy can therefore be obtained on a like-for-like basis. 'Core' scenarios A-E based on 'central' assumptions will be developed in each case. Sensitivity tests with respect to eg fares, frequency patterns, and economic growth will then be undertaken. All scenarios will initially be developed assuming that there is no change in the Western Ferries service. Sensitivity tests will then be undertaken to assess the impact of any competitive response from Western – this is discussed further below.

Having defined and agreed the scenarios with the client, we will then build up the costs and revenues associated with these operations, based on ferry industry knowledge and expertise, and a revenue modelling exercise.

Vessels Specification

Having established the potential service scenarios, we will undertake an analysis of the detailed requirements of the route and specify the optimal vessels specification for the route – ie for foot-passenger only, and vehicles / passenger. This is a particularly sensitive issue locally in light of the recent weather related reliability and passenger comfort issues associated with the current passenger vessels. The consideration of optimal vessels will include aspects of reliability, sea keeping performance, maintenance, environmental impact and efficiency in service. Future and pending legislation, as applicable, to the operation of vessels of this type within the North Europe Emission Control Area (ECA) will be included.

Passenger facilities at each harbour will also be reviewed, and any modifications or enhancement required, in line with the vessels will be considered.

We will examine and evaluate different types of ferry vessels, both in the second hand market and the new build. We will consider several variations of operating and asset financial management for these vessels including ship management costs. This will include an option for leasing from CMAL. We appreciate that optimising costs must not be at the expense of reliability.

Operating Costs

The vessel specification is clearly a key issue in terms of operating cost and having specified these, the operating cost profile can be built up. The Deloitte and Touche report presented a disaggregation of operating costs for the options considered based on:

- Ship Direct – crew, maintenance, fuel;
- Ship Indirect – insurance, fees, port charges;
- Shore Direct – labour, repairs, berthing dues (linked to passenger forecasts); and
- Shore Indirect – administrative overheads, rent & rates, reserve fleet costs.

Vessel purchase, periodic vessel overhaul and any harbour related infrastructure costs were separately accounted for via an 'Investment Profile'.

We will review the suitability of this disaggregation and amend as necessary in light of present day circumstances. Clearly the key issue here is populating the cost models with credible values based on ferry industry standard values where appropriate for foot-passenger only ferries and vehicle / passenger ferries. We note the requirement in the ToR that costs should be built up independently of the cost base of Argyll Ferries or Cowal Ferries. However account has to be taken of the requirements of TUPE in terms of Argyll Ferries staff – ie in the first instance these staff would transfer to a new passenger and vehicle service regardless of the new operator. We would seek to explore this issue further with Scottish Government.

All cost assumptions and data used would be clearly sourced. This will provide maximum transparency in terms of the financial assessment made.

Revenue

We have seen that total car crossing volumes (adding Cowal and Western) have closely mirrored the national road traffic trend over time. This suggests that growth in vehicle journeys in the area has not been constrained in any way compared to the national picture. In addition, there is still significant surplus capacity on the route. Both of these factors suggest that it is very **unlikely that there is significant latent demand** for travel which would be released by the re-introduction of a Gourock - Dunoon service. If a vehicle service was reintroduced on Gourock - Dunoon, it would essentially be competing directly with Western Ferries and would be unlikely to generate significant new demand to the crossing.

If the service was reintroduced using the same timetable and relative fares used before July 2011, then it is reasonable to assume that a 10% market share would be achieved, as before. If this service was run on a similar cost base to before, then a similar level of subsidy could be expected. On the other hand, if the new service was to be a near mirror image of the current Western Ferries service, then a near 50% market share could be anticipated. Given that both services were similar up to June 2011 in most respects except frequency, any increase in car traffic (and hence revenue) on Gourock - Dunoon would have

to come through increased service frequency. Clearly though, this would risk a competitive response from Western Ferries, potentially leading to a loss of revenue and therefore increased subsidy (thus jeopardise the legal position) at Gourock - Dunoon, ie 'competing' with Western Ferries could only be legally achieved if the level of subsidy was the same or less than that of the foot-passenger service.

Revenue forecasting under a number of service scenarios will require an element of choice modelling ie we will develop a spreadsheet model to forecast how users choose different ferry options faced with different choices and characteristics of the ferry service. The degree of disaggregation of this modelling exercise will depend to a large degree on the level of granularity in the data obtained from the operators.

The foot-passenger market is perhaps fairly 'captive' to Gourock – Dunoon, although there is an infrequent bus link via Western Ferries as noted above. As such it could be expected that the volumes on this route would respond to changes in frequency in line with established (eg rail / Passenger Demand Forecasting Handbook, ferry research-based) elasticities or generalised journey time elasticities. The long-term trend in foot-passenger volumes will be obtained in Task 2 and used to estimate future volumes using the choice model, together with consideration of Cowal to Glasgow 'end to end' travel options for foot-passengers, and any significant change in the level of service associated with this.

However there is clearly a straight choice for vehicular traffic. The split between Western and Gourock - Dunoon would essentially reflect the 'generalised cost' of travel by each alternative route – plus any personal preference, or the presence of other facilities such as on-board catering. This 'generalised cost' comprises fare, crossing time, and waiting time in one composite measure – therefore frequency is a key component of this. The generalised costs model will be broadly calibrated against observed volumes. As generalised costs change, market share will change. This will be modelled using standard 'choice model' formulations to then predict how users will behave when faced with different ferry choices.

We have seen that total traffic volumes on the route are closely correlated to general traffic levels, which themselves are strongly correlated with economic growth. It is assumed that any resumption of vehicle ferries on Gourock Dunoon would be at the start of the next contract period (2017), although we would confirm this with Scottish Government. We will agree with SG an economic trajectory between now and then, together with a core growth assumption for the 15 years from 2017. In addition to the core growth assumptions, high and low growth economic rates will also be tested. Any clear 'tipping points' in terms of key determinants of the outcomes will be identified. These annual volumes will be split between Gourock-Dunoon and Hunters Quay-McInroy's Point based on the generalised costs by disaggregated traveller type, eg commuter, business and leisure, for each route.

The output of this task using the spreadsheet model will be forecasts of passenger and vehicle carryings, and thus revenue, under a range of different scenarios when users are faced with different choices.

Road Equivalent Tariff (RET)

The current Draft Ferries Plan[3] states that the Scottish Government is committed to '*rollout RET to all other West Coast and Clyde islands within the term of this Parliament*'. We will consider the impacts on this route from the roll out of RET. Further detailed analysis will be carried out, but at this stage we see three issues that need to be considered. Firstly, the introduction of RET on the Gourock - Dunoon route could be contested by Western Ferries as being unfair. Secondly, if RET was to result in lower fares, then, depending on the price elasticity of demand, this could lead to a reduction in total revenue. This could then mean the service requiring public support and the 'subsidy rule' not being met. Finally, because of the short crossing, applying the RET formula could mean that the RET fare would actually have to rise ie the core fare plus the rate per mile might equate to a higher value than the current passenger and recent vehicle fare. In this case the fares on the Gourock – Dunoon service would not change – as the RET rule was that no fares would increase after the transition to the new fares system. All of these issues related to RET will be considered as part of the analysis. Our nominated Project Director has considerable experience and knowledge of the issues around RET. He was previously involved in working with the Scottish Government in developing the fares system and is currently involved in the commission investigating the impact of removing RET fares for commercial vehicles on routes to and from the Western Isles, Coll and Tiree. We would therefore be able to 'hit the ground running' in considering and analysing these issues.

Task 5	**Develop and Populate Financial Models**
Objective	To produce financial KPIs for each service scenario considered, including Net Present Value and Subsidy requirements
Task Outputs	15 year financial assessment in line with economic appraisal guidance for each core service scenario and a range of key sensitivity tests Incremental impact of moving from foot-passenger to vehicle / passenger ferries for a range of modelled scenarios
Client Deliverables	Working Paper describing the Financial Model structure
Assumptions	None
Inputs	Task 4 Outputs Standard Economic Appraisal / Treasury Green Book parameters
Processes	Financial Modelling using costs and revenues developed in Task 5 Sensitivity Testing and Stress Testing of key assumptions Testing of competitive response from Western Ferries
Key Staff	Scott Leitham, Stephen Canning, Malcolm Parrot, Paul McCartney
Completion Date	29 March 2013

This Task will be developed in parallel with Task 4 initially to ensure consistency of approach and design. Essentially this task brings together the costs and revenue models together to form a number of potential outturn financial scenarios. For each service scenario considered, the financial model will comprise a foot-passenger only and vehicle / passenger equivalent – this will enable the change in subsidy (ie the difference between operating costs and revenues) from moving to a vehicle / passenger service to be clearly established. The

[3] http://www.transportscotland.gov.uk/files/documents/reports/Draft-ferries-plan-for-consultation.pdf

analysis will present all financial indicators on an annual basis over the 15 year period, and also provide the key output of Net Present Value in line with appraisal guidance and the Treasury Green Book. We will design the spreadsheet models such that all key parameters, variables and assumptions are clearly held on one worksheet facilitating straightforward sensitivity testing. In this way, 'what if?' tests can be quickly undertaken.

A 'central assumptions' model will be developed for each service scenario together with a range of sensitivity tests – based on operating costs, fuel costs, vessel types / costs, fares / revenues etc. Where the results suggest there is a 'bridgeable gap', ie the level of additional subsidy associated with vehicle / passenger services is modest, we will explore within the model assumptions and parameters, what changes in values will be required to eliminate the need for additional subsidy ie what are the 'tipping' points. We will then investigate whether the values identified as the 'tipping' points are realistic and achievable and therefore whether the service is realistically deliverable.

As noted above, a key issue here is the potential **competitive response from Western Ferries**. Any re-introduced vehicle / passenger ferry service at Gourock-Dunoon will take some market share from Western Ferries. Any competitive response from Western Ferries would then reduce revenue on Gourock-Dunoon and could compromise the financial position which justified the re-introduction of services in the first place, leading to a need for subsidy and therefore to the potential withdrawal of the services. We will initially assume no competitive response in these models as a 'best case' for Gourock-Dunoon. Should a positive outcome emerge (ie a reduction in subsidy from foot-passenger levels), we will then test a competitive response from Western Ferries eg increased service frequency, reduced fares to establish at what point the legal position would be compromised on Gourock-Dunoon. This will establish the extent to which the substantive conclusion is sensitive to competitive response.

Task 6	**Assessing the Wider Context**
Objective	To assess the wider impact of the re-introduction of passenger and vehicle services at Gourock Dunoon
Task Outputs	Clear understanding, based in part on stakeholder consultation of what has been lost with the withdrawal of vehicle services at Gourock Dunoon and what benefits could be realised with the reintroduction of a potentially enhanced service
Client Deliverables	Wider Impacts Working Paper – to form chapter of final report
Assumptions	None
Inputs	Task 3 Consultation
Processes	Desk based research
Key Staff	Stephen Canning, Scott Leitham
Completion Date	8 March 2013

The Consultation Workshops, public meetings and desk-based research will have provided a clear picture as to how key stakeholders view the impact of potentially re-introducing passenger and vehicle services at Gourock-Dunoon. In this task we will develop the wider economic, transport and mobility context in Cowal and Dunoon. This is in recognition that transport is not an end in itself, but a means to an end, ie potential users of the service are

benefitting in some way, and we will explore at a high level how these benefits would permeate through the communities. For example one issue could be the impact of reduced town centre activity in Gourock and Dunoon as a result of the withdrawal of vehicle / passenger ferries. Although this affects car based traffic, there may still have been a reduction in town centre footfall and hence economic activity.

Task 7	**Reporting**
Objective	To produce a Final Report of publishable quality in line with client expectations
Task Outputs	Completed study
Client Deliverables	Draft Report(s) and Final Report
Assumptions	None
Inputs	Outputs from all previous tasks
Processes	Report drafting
Key Staff	Scott Leitham, Stephen Canning,
Completion Date	19 April 2013

Our reporting schedule will be confirmed with you at the Inception Meeting. We note an inconsistency in the ToR between the timetable (six months) and the indicative timetable (19 November 2012 to February 2013). We will discuss this at Inception although it should be noted that a programme of just over three months spanning the Christmas and New Year period would be very ambitious. For the purposes of the 'Completion Dates' in the above task boxes, we have assumed a completion date of mid April 2013 (five months) – although as noted, this can be finalised at Inception.

Following receipt of one set of collated and reconciled responses to our draft Report, supplied through your project manager, we will produce a second draft Final Report, after which a Final Report will be completed. This will be followed by a presentation of the study findings firstly to the Steering Group then secondly at a Public Meeting. These presentations will be given by our nominated project management team.

The central aim of our reports will be to present clear and actionable findings. Our reports will be succinctly written and accessible to a wide audience, with the key findings being clearly presented in an Executive Summary. We shall use graphics that can be easily copied and reproduced in subsequent reports and briefing notes. The format of the reports will comply with Scottish Government criteria, which will be agreed with you in advance. We shall provide an electronic copy in PDF format.

Document Control

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