



Cowal and Rosneath Community Needs Assessment

Final Report

On behalf of **Transport Scotland**



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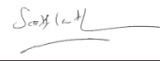





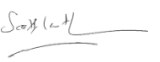




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- Appendix A RSM / CNA Guidance Update for ICP
- Appendix B Gourock – Dunoon rail interchange
- Appendix C Gourock – Kilcreggan Rail Interchange

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1 Introduction

1.1 Overview

- 1.1.1 Transport Scotland is currently developing the *Islands Connectivity Plan (ICP)*, which will replace the *Ferries Plan 2013-2022*. The scope of the ICP will extend to those peninsular communities served by Scottish Government supported ferry services, including Cowal (Dunoon - Gourock) and Rosneath (Kilcreggan - Gourock). Central to the ICP will be a set of 'Community Needs Assessments' (CNA), which will provide a consistent means of identifying the current level of ferry service provision received by an island or peninsular community, any problems associated with this and, where relevant, options for service improvements or reductions
- 1.1.2 In parallel to the development of the ICP, Transport Scotland is preparing a programme level business case for investment in new vessels and supporting infrastructure to serve the Dunoon and Kilcreggan routes. The vessel replacement project is currently at Outline Business Case (OBC) stage and will be supplemented by separate business cases for the upgrade of ferry terminal infrastructure at Gourock (owned by CMAL) and Dunoon and Kilcreggan (both owned by Argyll & Bute Council).
- 1.1.3 Given the ongoing business case work for the Dunoon and Kilcreggan routes, Transport Scotland has commissioned Stantec UK Ltd to progress the 'Community Needs Assessment' for these communities in the short-term. This assessment will form the basis of a high-level appraisal consistent with the Scottish Transport Appraisal Guidance (STAG) intended to inform the level of service required on these two routes. The outcome will be a set of shortlisted options for Transport Scotland to consider further in defining the route specification, although it should be noted that a preferred option will not be selected for either route at this stage.
- 1.1.4 The project outputs will provide sufficient content and supporting material to inform:
- Decision making by Transport Scotland / Ministers on future service design.
 - The ongoing OBC work considering vessel and harbour replacement.

1.2 Community Needs Assessment

- 1.2.1 The Cowal and Rosneath 'Community Needs Assessments' (CNA) are the first of a set of such assessments that will be undertaken to inform the ICP. These will cover all island and peninsular communities across the Clyde and Hebrides Ferry Services (CHFS) network, as well as for Orkney and Shetland with respect to the Northern Isles Ferry Services (NIFS).
- 1.2.2 The CNA process is based on the Transport Scotland Routes and Services Methodology (RSM), which was adopted as part of the original *Ferries Plan 2013-2022*. The RSM is a six-step process that aims to identify whether gaps exist in the current level of ferry service provision and, where gaps are identified, generate, develop and appraise options to address them. The RSM, as applied in the *Ferries Plan 2013-2022* has been extended by Transport Scotland to include consideration of reliability, resilience, capacity, connecting and onward travel and wider socio-economic needs, including alignment with policy. A summary of the updated RSM guidance is provided in **Appendix A**.
- 1.2.3 It should be noted that the **RSM is currently being replaced with a new methodology** for establishing community needs based more closely on business case approaches. This methodology was not however available in time to inform this first CNA.

1.3 Gourock, Dunoon and Kilcreggan Infrastructure Programme

- 1.3.1 Transport Scotland, in partnership with CMAL and Argyll & Bute Council, is currently developing a programme of works intended to address the challenges currently being experienced on the Dunoon and Kilcreggan routes. Within this programme, there are four separate projects:
- Procurement of **new passenger only vessels** to serve the Dunoon and Kilcreggan routes (led by CMAL).
 - Redevelopment of **Gourock (led by CMAL), Dunoon and Kilcreggan (both led by Argyll & Bute Council) ferry terminals** to accommodate the proposed new vessels and address the issue of infrastructure life expiry at Gourock.
- 1.3.2 These projects are currently at OBC stage. The Dunoon and Kilcreggan works are moving towards THE selection of a preferred option, whilst detailed design is underway at Gourock.
- 1.3.3 In developing the case for new infrastructure, the Strategic Business Case (SBC) for the overall programme (i.e., all four sub-projects together) should have demonstrated a clear rationale for investment and a set of transport planning / spending objectives setting out what the programme overall and each component therein is intended to deliver. On the Dunoon – Gourock route, a key strategic question is the continuing need for the CalMac Ferries Ltd (CFL) passenger-only service in light of the commercial vehicle and passenger operation run by Western Ferries between McInroy’s Point in Inverclyde and Hunters Quay in Cowal.
- 1.3.4 **This CNA works on the basis that the need for both the Dunoon and Kilcreggan services has been established through the programme SBC**, in particular reflecting the Scottish Government’s longstanding policy objective that there shall be a “safe, reliable and frequent commuter ferry service between Dunoon town centre and the rail head at Gourock”, which was also reiterated as part of the 2017/18 *Programme for Government*. The focus of the options appraisal will therefore specifically be on addressing any identified gaps between the current and RSM ‘model’ service and indeed gaps identified in the CNA more generally.

1.4 Next Steps

- 1.4.1 This report consists of five further chapters, as follows:
- **Chapter 2** provides the baseline context for both the Gourock – Dunoon and Gourock – Kilcreggan routes.
 - **Chapters 3 and 4** set out the Community Needs Assessments for the Cowal and Rosneath communities respectively.
 - **Chapter 5** generates and develops options which could address the identified community needs.
 - **Chapter 6** appraises the options against the STAG criteria and discusses wider considerations around delivery.

2 Route Baselines

2.1 Overview

2.1.1 This chapter provides baseline information in relation to both the CalMac Ferries Ltd (CFL) Dunoon – Gourock (and the Western Ferries service where appropriate) and Kilcreggan – Gourock routes. It considers the:

- Background and historical **context of the routes**
- **Delivery of the services** from the perspective of the operator, CalMac Ferries Ltd (CFL)
- Route **cost and revenue**

2.1.2 The analysis set out in this chapter is used to support the subsequent CNAs in Chapters 3 and 4.

2.2 Background to the routes

2.2.1 In order to provide context for the CNA, it is beneficial to set out the historical context of the two routes, as both have a complex recent history.

Dunoon - Gourock

2.2.2 The Dunoon – Gourock route was historically a passenger and car carrying service and an integral part of the then Caledonian MacBrayne network. However, when Western Ferries commenced operation on the shorter route between McInroy's Point and Hunters Quay in 1974, it was demonstrated that the crossing could be operated on a wholly commercial basis. Western Ferries gradually expanded their service, introducing new modern tonnage and providing a high frequency, reliable and resilient service across a long operating day.

2.2.3 In the early 1980s, government recognised that the primary benefit of the town centre subsidised service was to foot passengers and that there were difficulties in subsidising a vehicle service when a commercial operator was providing a vehicle service on a broadly equivalent route. A range of solutions were considered and the approach that was adopted involved the continuation of the Caledonian MacBrayne service but with the subsidy to be targeted only at the passenger element of the service. The vehicle element of the service was expected to pay for itself on a commercial basis. In addition, timetable restrictions were put in place (in terms of frequency and length of operating day) to reduce the potential for the subsidised service to harm the commercial interests of the successful commercial operator.

2.2.4 Given the above considerations, and after a lengthy period of engagement with the European Commission and local communities, the Dunoon – Gourock route was split from main CHFS bundle and let as a single route tender in 2005. Although three companies were invited to tender for the route, no bids were received in the end. In the aftermath of this tendering process, Cowal Ferries Ltd (a subsidiary of the David MacBrayne Group Ltd) took over the running of the route, and the service continued as before.

2.2.5 The Cowal Ferries service was latterly provided using a single 'Streaker' (generally MV *Jupiter*), a side-loading Ro-Ro vessel which could access 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.

2.2.6 Following a number of complaints about Scottish ferry subsidies, including those paid to Cowal Ferries Ltd, the European Commission decided to undertake a state aid investigation in April 2008. In November 2009, the European Commission published its decision which accepted the justification for the continuation of subsidy to the Dunoon - Gourock town centre

route (noting the sound economic and social justification for public support for a town centre to town centre passenger service) but required that: (i) the route was tendered by June 2011; and (ii) subsidy was provided for passengers only. The winning bidder would be allowed to provide an unrestricted and commercial vehicle transport service, subject to appropriate accountancy measures and audit monitoring to prevent cross-subsidisation from the passenger service to the vehicle service.

- 2.2.7 Following a further tendering process in 2011 (which allowed for a vehicle service to be provided at nil subsidy, in addition to the passenger service), Argyll Ferries (a David MacBrayne Ltd subsidiary) commenced a town centre foot-passenger only service on 1st July 2011 using two passenger ferries, MV *Ali Cat* and MV *Argyll Flyer*. The previous restrictions on frequency and length of operating day did not apply once the route became fully passenger only and thus the service now operates over a long day and with a half-hourly frequency through much of that day. The route moved into the main CHFS bundle in January 2019

Gourock – Kilcreggan

- 2.2.8 As with the Dunoon – Gourock route, the Kilcreggan route was historically operated by Caledonian MacBrayne, but the last scheduled service ceased in 1974 (although a charter service to Holy Loch continued until 1995). From 1974, services were operated by Roy Ritchie but ceased when Mr Ritchie died in 1979. To plug this gap, Clyde Marine Motoring stepped-in and, from 1982, operated the services on behalf of the then Strathclyde Passenger Transport Executive (SPT), which subsidised the service. As well as maintaining the Kilcreggan - Gourock connection, Clyde Marine extended selected services to Helensburgh.
- 2.2.9 By 2006, the Clyde Marine vessel MV *Kenilworth* was approaching the end of her serviceable life and they ordered a new vessel, MV *Seabus*, which entered service in 2007.
- 2.2.10 Despite the introduction of new tonnage and the operation of a reliable service, Clyde Marine lost the next tender to Clydelink, which took over the service from 1st April 2012. Clydelink immediately discontinued the Helensburgh connection, and thus 2012 was the year in which the route assumed its current form. As part of their winning tender, Clydelink had also promised a new 16m vessel capable of accommodating 60 passengers, but this never materialised. Instead, they purchased MV *Island Princess*, but quickly ran into difficulties with the safety management system. The service was suspended for a period and, despite the short-term introduction of a second vessel, Clydelink continued to be troubled by breakdowns and poor reliability.
- 2.2.11 Following the troubled period between 2012 and 2018, Clyde Marine returned to the route as the contracted operator, bringing MV *Seabus* (now renamed MV *Chieftain*) back to the route. It should be noted that there was a significant increase in fares at this point.
- 2.2.12 Given the long-term issues with the route and the diminished scale of ferry operations in the SPT portfolio more generally, SPT notified Transport Scotland of their desire to pursue a transfer of responsibilities for the Kilcreggan service. After negotiations, the services were transferred into the CHFS bundle on 1st June 2020, with MV *Chieftain* leased from Clyde Marine and the crew making a TUPE transfer. The timetable and fares remained unchanged.

2.3 Dunoon – Gourock, service delivery

Vessels

- 2.3.1 The Dunoon - Gourock town centre to town centre service is operated by two passenger-only vessels, MV *Ali Cat* and MV *Argyll Flyer*. The main particulars of these vessels are set out below:

Table 2.1: Dunoon - Gourock vessels, primary characteristics (Source: Ships of CalMac)

Vessel Characteristic	MV <i>Ali Cat</i>	MV <i>Argyll Flyer</i>
Year of build	2000	2001
Speed (knots)	12	22
Maximum passenger capacity	250	224
Crew	3	3
Length overall (metres)	19	30
Beam (metres)	9	7
Draught (metres)	1.5	1.5
Gross tonnage	78	172

It should be noted that: (i) the maximum passenger capacity accounts for indoor and outdoor seating; and (ii) the passenger certificate can be varied depending on the number of crew operating the service. Please note, there is an option to increase to four crew members during busy periods.

- 2.3.2 Whilst MV *Argyll Flyer* can operate at much higher speeds than MV *Ali Cat*, this is not done in practice due to a 12-knot speed restriction in the service operating area. Both vessels therefore provide the same crossing time. With both vessels also offering a high passenger capacity, they are largely interchangeable in terms of the operation of the timetable, albeit MV *Argyll Flyer* is understood to be the more comfortable and reliable vessel and is thus more popular as a consequence. The service operates with both vessels across much of the day, although reduces to a single vessel for rest periods in the middle of the day and in the late evening. It should be noted that, during the COVID-19 pandemic, the service was reduced to a single vessel service on an hourly timetable, consistent with service reductions across the public transport network.
- 2.3.3 Both vessels have been the subject of longstanding criticisms around passenger comfort and demonstrate poor reliability due to seakeeping on passage and manoeuvring at the berth, as is discussed later in this report.

Landside Infrastructure

- 2.3.4 The following sections set out the landside infrastructure at each of Gourock and Dunoon. It should be noted that as part of the proposed Gourock, Dunoon and Kilcreggan Infrastructure Programme, it is intended that Equality Act 2010 compliant access will be provided at all three ports.

Gourock

- 2.3.5 Both vessels berth overnight at Gourock and are accessed via a gangway deployed over the linkspan, as is shown in the figure below:



Figure 2.1: Boarding MV *Ali Cat* at Gourock (Credit: Mary Adams, Mott MacDonald)

2.3.6 There is a signposted walkway to the railway station, with a walk time of around 1-2 minutes.

2.3.7 Gourock railway station has a 111-space car park with five accessible spaces (Source: National Rail). Bus stances and a taxi rank can be found at the station entrance, whilst National Cycle Route 75 also runs past the front of the station.

Dunoon

2.3.8 The passenger only vessels operate from the linkspan at Dunoon. A short vessel-based gangway is deployed from the stern of the vessel and rests on the linkspan, allowing passengers to embark and disembark. Passengers walk-up the linkspan and there are signposted footways to the bus waiting area at the head of the pier and also the town centre.

Timetable

2.3.9 This section summarises the timetables on the Dunoon and Kilcreggan routes, providing a basis for subsequent option development in this study. The commentary is **based on the timetables as at 1st December 2022**.

Dunoon - Gourock

2.3.10 The Dunoon - Gourock route is typically operated as a two-vessel service, providing an approximately 30-minute frequency throughout the day, with an hourly service during the early afternoon and in the late evening.

2.3.11 A summary of the first departure, last departure and number of connections by day is displayed in the tables below:

Table 2.2: Gourock - Dunoon timetable summary (Source: www.calmac.co.uk)

<i>Day</i>	<i>Mon-Thurs</i>	<i>Fri</i>	<i>Sat</i>	<i>Sun</i>
First departure	06:20	06:20	06:20	08:20
Last arrival	23:35	01:50	01:50	23:15
No. of sailings	29	31	31	15

Table 2.3: Dunoon-Gourock timetable summary (Source: www.calmac.co.uk)

<i>Day</i>	<i>Mon-Thurs</i>	<i>Fri</i>	<i>Sat</i>	<i>Sun</i>
First departure	06:20	06:45	06:45	08:50
Last arrival	23:35	01:25	01:25	22:45
No. of sailings	29	31	31	15

2.3.12 The main points of note from the above tables are as follows:

- The two-vessel operation allows for a half-hourly service across most of the operating day on a weekday and Saturday. The service reduces to a single vessel between 12:20 and 15:20 to accommodate mandatory safety drills, maintenance and bunkering. There is a single vessel operation from 22:40 onwards, with the second vessel standing down for the day upon arrival in Gourock at 22:05.
- The length of the operating day is akin to that of an urban rail service, with additional late evening services on a Friday and Saturday.
- As is common with most public transport operations, the service is less frequent on a Sunday and is operated by a single vessel on an hourly basis. Whilst the service commences later than on a weekday (08:20), the last arrival (23:15) is not materially different to a weekday (23:35).

McInroy's Point – Hunters Quay

2.3.13 Western Ferries provides a commercial passenger and vehicle service between McInroy's Point (Inverclyde) and Hunters Quay (Cowal).

2.3.14 A summary of the first departure, last departure and number of connections by day for this route is displayed in the tables below:

Table 2.4: McInroy's Point – Hunters Quay timetable summary (Source: www.western-ferries.co.uk)

<i>Day</i>	<i>Mon-Thurs</i>	<i>Fri</i>	<i>Sat</i>	<i>Sun</i>
First departure	06:30	06:30	07:30	07:30
Last arrival (based on 20-minute crossing)	22:20	23:50	23:50	23:50
No. of sailings	43	52	46	40

Table 2.5: Hunters Quay-McInroy's Point timetable summary (Source: www.western-ferries.co.uk)

Day	Mon-Thurs	Fri	Sat	Sun
First departure	06:10	06:10	07:00	07:00
Last arrival (based on 20-minute crossing)	22:50	00:20	00:20	00:20
No. of sailings	43	52	46	40

2.3.15 The main points of note from the above tables are as follows:

- Western Ferries' operating day is on the whole similar to that of CFL in terms of its overall length, albeit their service finishes slightly earlier in the evening, except on a Sunday.
- However, they offer a much higher frequency service, operating e.g., 52 sailings in each direction on a Friday compared to 31 on the CFL Dunoon - Gourock route. In several hours across the day, there are three and sometimes four sailings per hour, thus ensuring that capacity is effectively matched to demand.

2.3.16 Overall, when combining both CFL and Western Ferries' operations, there is a very high service frequency and considerable passenger and vehicle capacity for crossings between Inverclyde and Cowal. There is also a road connection from Cowal to the Central Belt, which supports freight, personal and business travel for those with access to a vehicle.

Key Point: Taken together, CFL and Western Ferries provide considerable passenger and vehicle frequency and capacity for crossings between Inverclyde and Cowal. Whilst CFL operates over a marginally longer operating day (except on a Sunday), Western Ferries operates a much higher service frequency and one which is tailored to vehicle demand (and can also respond more flexibly to that demand).

Crewing

2.3.17 The crewing arrangements for the two CFL vessels are set-out below.

MV Ali Cat

2.3.18 MV *Ali Cat* operates with four crews of three, **12** crew in total. There is a crew changeover in the middle of the day. All crew are shore-based.

MV Argyll Flyer

2.3.19 MV *Argyll Flyer* operates with four crews of four, **12** crew in total. There is a crew changeover in the middle of the day. All crew are shore-based.

Shift patterns

2.3.20 Across both vessels, each crew works a four-week rotation of week-on, week-off with alternating early and late shifts. As the CFL Dunoon – Gourock route operates entirely within categorised waters, maximum hours of work are defined by Merchant Shipping Notice 1876. Shift patterns are summarised in the table below:

Table 2.6: MV *Ali Cat* and MV *Argyll Flyer* crew shift patterns

Week	Crew 1	Crew 2	Crew 3	Crew 4
1	Early	Late	Off	Off
2	Off	Off	Early	Late
3	Late	Early	Off	Off
4	Off	Off	Late	Early

2.3.21 Shift lengths are as follows:

- *MV Argyll Flyer*
 - Early shift Monday – Saturday: 05:30-18:15
 - Early shift Sunday: 07:30-19:15
 - Late shift Sunday – Thursday: 11:15-23:30
 - Late shift Friday and Saturday: 15:15-02:45
- *MV Ali Cat*
 - Early shift Monday – Saturday: 06:00-17:45
 - Early shift Sunday: 07:30-20:00
 - Late shift Monday – Sunday: 10:00-22:30
- Working hours are inclusive of lunch

2.4 CFL Dunoon – Gourock, Cost and Revenue

2.4.1 Any change to service patterns, whether an increase or decrease in services, will have implications for cost and revenue. To this end, baseline cost and revenue is set out below, together with the annual operating deficit. This is based on 12-months of data from October 2021:

Table 2.7: CFL Dunoon – Gourock route cost, revenue and operating deficit October 2021 – September 2022 (Source: CFL)

Item	MV <i>Ali Cat</i>	MV <i>Argyll Flyer</i>	Total
Fuel and lubricants	[redacted]	[redacted]	[redacted]
Crew costs	[redacted]	[redacted]	[redacted]
Berthing	[redacted]	[redacted]	[redacted]
Technical	[redacted]	[redacted]	[redacted]
Insurance	[redacted]	[redacted]	[redacted]
Overhauls	[redacted]	[redacted]	[redacted]
Charter fee	[redacted]	[redacted]	[redacted]
Total Costs	[redacted]	[redacted]	[redacted]
LESS ticket sales revenue	No information	No information	[redacted]
Operating deficit	No information	No information	[redacted]

It should be noted that CFL has indicated that this is just revenue for route ticket sales and therefore does not account for e.g., hopscotch and rover tickets, which would be additive to the figure cited in the table.

2.4.2 The Dunoon – Gourock route operates at a **significant annual deficit, circa £3.4m** for the period October 2021 – September 2022, with revenue accounting for only **15%** of route operating costs in that year. It should be noted that these figures will be affected by the impact of COVID-19 on both the demand side (i.e., reduced passengers) and the supply-side (i.e., fewer sailings), and therefore a settled position is still to be reached in terms of the overall operating deficit. The key point however is that subsidy per passenger is, and is likely to remain, significant.

2.4.3 When interpreting the above figures, it should be noted that:

- CFL does not allocate overhead costs to routes, and thus the costs presented in the above table are direct route operating costs only.
- The proposed new vessels to be delivered as part of the Gourock – Dunoon / Kilcreggan Infrastructure Programme would have a different cost profile. This cost profile is not yet known – the vessels may potentially be more fuel efficient and lower cost to maintain but berthing dues could increase at Dunoon and Kilcreggan if gross tonnage is higher and / or dues are increased to partially or fully recover the cost of investment.
- That said, passenger volumes and hence revenue are likely affected by both actual and perceived service reliability concerns, which could reduce if fit-for-purpose vessels and landside infrastructure are introduced.
- CFL does not own any of the three ports and thus pays berthing dues to third party providers, albeit payments to CMAL for use of Gourock are to some degree an internalised transfer within government. For completeness, the arrangements at the two ports are as follows:
 - At **Gourock**, the Statutory Harbour Authority (SHA) is CMAL. CFL prepares an annual projection outlining the number of sailings and total vessel berthings at Gourock. This projection is used to calculate the estimated annual berthing dues. CMAL will then invoice the projected berthing dues in 12 equal instalments in advance. This is done together with all other CMAL ports and sent to CFL for payment.
 - At **Dunoon**, the SHA is Argyll & Bute Council. CFL pays berthing dues monthly in arrears to the Council, which are made based on actual berthings at ports. CFL send the Council a report each month that details actual berthings, with an invoice returned based on this report.

Key Point: Low passenger revenue (due to low utilisation) means that the Dunoon – Gourock route runs at a significant annual deficit, circa £3.4m for the period October 2021 – September 2022. Route revenue accounted for only 15% of route costs (excluding overheads) in 2021/22.

2.5 Kilcreggan – Gourock, Operational Practice

Vessels

2.5.1 The Kilcreggan – Gourock service is operated by a small passenger-only monohull vessel, MV *Chieftain*. The main parameters of this vessel are set out below:

Table 2.8: MV *Chieftain*, primary characteristics (Source: Ships of CalMac)

Vessel Characteristic	MV <i>Chieftain</i>
Year of build	2007
Speed (knots)	8.6
Maximum passenger capacity	100
Crew	2
Length overall (metres)	19.5
Beam (metres)	6.2
Draught (metres)	2.8
Gross tonnage	60

Landside Infrastructure

Gourock

- 2.5.2 Access to MV *Chieftain* at Gourock is via a vessel deployed gangway onto a set of boat steps. The service is tidally constrained, with high tides in particular leading to the gangway being deployed at a steep angle.
- 2.5.3 Gourock railway station has an 111-space car park with five accessible spaces (Source: National Rail). Bus stances and a taxi rank can be found at the station entrance, whilst National Cycle Route 75 also runs past the front of the station.

Kilcreggan

- 2.5.4 MV *Chieftain* berths parallel to the end of the pier at Kilcreggan. A vessel-based gangway is used to embark and disembark passengers.
- 2.5.5 The service is again tidally constrained during high tides. The current vessel belting sits above the top level of the fenders on the berthing face during high tides and can catch, potentially damaging the boat and / or pier. The angle of the gangway sent from the vessel to the pierhead can be extremely steep during high tides, which can make it challenging for the CFL crew to deploy / recover the gangway and can be challenging for passenger access.
- 2.5.6 There is a small free car park and bus stop at the head of the pier.

Timetable

- 2.5.7 The sailing time between Kilcreggan and Gourock is **13-minutes**. A summary of the Kilcreggan – Gourock timetable is shown in the table below (timetables are again correct as of 1st December 2022):

Table 2.9: Gourock-Kilcreggan timetable summary

<i>Day</i>	<i>Mon-Fri</i>	<i>Sat</i>
First departure	06:41	08:04
Last arrival	18:49	18:49
No. of sailings	13	12

Table 2.10: Kilcreggan - Gourock timetable summary

<i>Day</i>	<i>Mon-Fri</i>	<i>Sat</i>
First departure	07:04	08:27
Last arrival	18:26	18:26
No. of sailings	13	12

2.5.8 The main points of note from the above table are as follows:

- The Kilcreggan – Gourock route is one of the few in Scotland that does not operate on a Sunday. A Sunday service was previously operated on a trial basis between 1st April and 14th October 2012, and then extended into the summer 2013 period. However, low passenger numbers (1,061 in 2012 and 742 in 2013) led to SPT withdrawing the service - <https://www.helensburghadvertiser.co.uk/news/13978992.kilcreggan-sunday-ferry-service-axed/>.
- The timetable is structured around a single crew day (see ‘Crewing’ below) and runs from 06:30-18:30 when start-up and close down are factored in. There is one additional sailing on a weekday than on a Saturday, this being an early morning departure (06:41 from Gourock and 07:04 from Kilcreggan) to facilitate commuting.
- There is a circa one hour break in the service after the 11:52 arrival into Gourock (Monday – Saturday) to allow for a crew lunch break. Moreover, the service is not clockface across the day, which may reflect the need for additional gaps in the timetable to facilitate rest periods.

Key Point: The Kilcreggan – Gourock route is structured around a single crew operation, with a circa 12-hour operating day. The timetable is broadly similar Monday to Saturday but there is no service on a Sunday.

Crewing

2.5.9 The crewing model on the Kilcreggan route is relatively straightforward, with three crews (six crew in total) of two operating a single shift (circa 12-hours) on a one week on, one week off roster with four weeks of leave. The third crew provide cover for leave etc.

2.5.10 The crew consists of:

- Two Boat Masters
- Two Assistant Boat Masters
- Two Deckhands

Key Point: The Kilcreggan crewing model is relatively straightforward, with the sailing day operated by a crew of two over a circa 12-hour day Monday – Saturday.

2.6 Dunoon – Kilcreggan, Cost and Revenue

2.6.1 The equivalent cost and revenue data for the Kilcreggan route to that presented for Dunoon is shown below. This is again based on 12-months of data from October 2021:

Table 2.11: Kilcreggan – Gourock route cost, revenue and operating deficit October 2021 – September 2022 (Source: CFL)

Item	MV <i>Chieftain</i>
Fuel and lubricants	[redacted]
Crew costs	[redacted]
Berthing	[redacted]
Technical	[redacted]
Insurance	[redacted]
Overhauls	[redacted]
Charter fee	[redacted]
Total Costs	[redacted]
LESS ticket sales revenue	[redacted]
Operating deficit	[redacted]

2.6.2 The Kilcreggan – Gourock route operated at an **annual deficit of circa £667k** for the period October 2021-September 2022. Revenue accounted for only **16%** of operating costs in the aforementioned year. The qualifications applied to the Dunoon figures are relevant for this route also.

Key Point: Low passenger numbers mean that the Kilcreggan – Gourock route runs at an annual deficit, circa £667k for the period October 2021 – September 2022, with revenue accounting for only 16% of operating costs.

2.7 Next Steps

2.7.1 The next two chapters set out the Community Needs Assessments for Cowal and Rosneath.

3 Cowal Community Needs Assessment

3.1 Overview

- 3.1.1 This chapter sets out the **Cowal Community Needs Assessment**. It is split into four sections, as follows:
- **Public transport integration** – how do ferry services connect with onward bus and rail services and are there any problems or issues related to this?
 - **Carryings and capacity utilisation** – how are the services used and are there any capacity problems which need to be addressed?
 - **Reliability and resilience** – are there any issues with reliability (cancellations and punctuality)?
 - **Application of steps 1-4 of the Transport Scotland RSM for the Dunoon – Gourock route**, which defines community dependencies, establishes the current and model service and identifies any mismatch between the two.
- 3.1.2 The outcomes of this chapter provide the basis for an appraisal of options (if required) which could address any differential between the current and model service.
- 3.1.3 Whilst this is the first of the CNAs to inform the ICP, it should be noted that, in many respects, it is also likely to be one of the most challenging. As detailed in Chapter 2, the Inverclyde – Cowal ferry market is unusual in Scotland in that there are two operators, one a commercially operated vehicle and passenger service and the other a publicly supported and passenger-only service, and thus users have a choice of routes and modes of transport (acknowledging that there is also a road link to the Central Belt, albeit offering much longer journey times).
- 3.1.4 Taken together, these two operators provide the totality of the ferry market, although only Western Ferries serves the vehicle ferry market. Whilst the focus of the CNA is to inform the future needs of the passenger only service between Gourock and Dunoon, it has to do so within the context of the wider ferry and transport markets, considering the needs of the community and how those are fulfilled by the specific routes and modes.

3.2 Public Transport Integration

- 3.2.1 The updated Community Needs Assessment guidance now includes consideration of integration of ferry services with connecting public transport services, recognising that a ferry service may only be one part of a multi-leg journey, particularly on these two routes. This section therefore considers public transport integration, particularly with regards to connecting rail services at Gourock.
- 3.2.2 The position with regards to bus services is correct (based on published timetables) as of 1st December 2022 but it is not implausible that this could change as COVID-19 related support funding is progressively withdrawn.

Rail – Gourock

- 3.2.3 There is a relatively high frequency (three trains per hour but at irregular intervals) service between Gourock and Glasgow Central, with a mix of all-stop and fast (and some semi-fast) services. However, unlike the ferry, the rail service is not operated on a 'clockface' timetable (i.e., a cyclical schedule operated at regular intervals) and thus interchange times between ferry and rail differ by service. **Appendix B** provides a full breakdown of rail connections for ferry arrivals and departures at Gourock (Monday – Friday).

- 3.2.4 It should be noted that the preceding analysis is based on the December 2022 ScotRail timetable. Whilst this represents an increase on the timetable operated during the COVID-19 pandemic, service levels still remain slightly lower than pre-pandemic. However, ScotRail noted during the consultation that the current timetable is a new starting point and, as the operator learns more about travel needs post pandemic, they will amend and add services to ensure rail continues to provide a viable and effective mode of public transport.
- 3.2.5 Key points of note with regards to rail ferry interchange are as follows:

Ferry arrivals at Gourock

- Almost all ferry arrivals at Gourock from Dunoon **have a rail connection within 25 minutes**, although typically less. The two exceptions to this are the 20:45 (39 minutes) and 22:35 (49 minutes). For services that have a connecting train, the average interchange time is **18 minutes** and the median interchange time is **21 minutes**.
- The 23:35 arrival and the Friday and Saturday only arrivals at 00:35 and 01:50 do not connect with a rail service, the last train departing at 23:24.
- Rail services from Gourock are a mix of fast and all-stop services. Fast services call at Fort Matilda, Greenock West, Greenock Central, Port Glasgow, Bishopton and Paisley Gilmour Street only. The journey time to Glasgow Central on the fast services is circa **38 minutes** compared to **51 minutes** on the all-stop services. The ferry timetable is designed to connect with the fast services (six times per day) where possible, with a standard nine-minute interval between ferry arrival and train departure. This provides an **end-to-end journey time of 72 minutes** (this consists of 25 minutes on the ferry, nine minutes of interchange time and then 38 minutes on the train).
- Sunday interchange is a standard eight minutes with the ferry arriving at XX:15 and the train departing at XX:23. The reduced train service frequency on a Sunday does not therefore materially impact on interchange opportunities in the 'to Glasgow' direction.

Ferry departures from Gourock

- The majority of ferry departures from Gourock also benefit from a connecting rail service, the only exception being the 06:20, which departs before the first train of the day arrives.
- As with the reverse direction, the **ferry generally departs within 25 minutes of the train arriving**, although there are a small number of exceptions. The wait times are on average slightly longer, although this may be beneficial given the potential for delays to arriving rail services.
- There is **no demonstrable difference in wait times between fast and all-stop rail services**.
- Again, Sunday interchange operates on a standard interval of 15 minutes between the train arriving (XX:05) and the ferry departing (XX:20).

Key Point: The Dunoon - Gourock ferry service is well integrated with ScotRail services to / from Gourock, with almost all ferry services connecting with a train within 25 minutes in both directions. In the 'to Glasgow Central' direction, the fastest journey time is 72 minutes, where the ferry connects with a limited stop train service within nine minutes of arriving. All Sunday ferries integrate well with the rail services in both directions.

Bus – Dunoon and Hunters Quay

- 3.2.6 Dunoon ferry terminal is served by a dedicated bus pick-up and set-down area and five connecting services (West Coast Motors services 478, 480, 484, 486 and 489) to wider Cowal

and Argyll & Bute more generally. Of these five services, only the following buses serve the ferry terminal with any regularity:

- **Service 480**, an approximately hourly circular service between Hunters Quay and Dunoon, although this only operates circa 09:00-16:00.
- **Service 489**, which operates between Toward and Ardentinny, again on an approximately hourly basis, but over a longer operating day.

3.2.7 There are therefore limited connectional opportunities between the ferry and bus at Dunoon (and, for some Cowal communities, no direct connectional opportunities). The Western Ferries' terminal at Hunters Quay is served by largely the same subset of buses.

Key Point: There are a range of connecting bus services from Dunoon and Hunters Quay ferry terminals to destinations around the Cowal Peninsula and Argyll & Bute more generally. There are however only two services which connect regularly (hourly) with ferries – the 480 (although this service only operates circa 09:00-16:00) and 489 – so public transport connectivity on the Cowal side is more limited than in Inverclyde.

Bus – Gourock and McInroy's Point

3.2.8 The CFL ferry terminal at Gourock and the Western Ferries' terminal at McInroy's Point are served by the same main buses.

3.2.9 It should be noted that a direct bus service from Dunoon to Glasgow via Western Ferries (service 907) previously operated. However, this service was withdrawn in March 2019 and has not been reinstated.

Service 901 – Clyde Flyer

3.2.10 Of particular relevance from a connectivity perspective is the 901 (Clyde Flyer), which operates seven days a week and provides connections from both ferry terminals to Glasgow and Greenock to the east and Largs to the south. Following a call at Gourock Station and at stops in Greenock and Port Glasgow, the service is express to Braehead Shopping Centre and then into Buchanan Bus Station. It therefore provides a public transport connection for Western Ferries' foot passengers. Whilst the train is likely to be the preference of CFL foot passengers, concessionary pass holders, including over-60s and under-22s, may be inclined to use the bus (although the SPT Concessionary Card for over-60s also offers discounted rail travel).

3.2.11 The service operates on a broadly half-hourly frequency across the day Monday to Saturday, although is not entirely clockface. When combined with the 15-20-minute Western Ferries frequency and half hourly CFL frequency, the 901 provides a high-quality connection with both ferry services and provides the added benefit of serving the major retail facilities at Braehead (as well as Greenock and Gallagher Shopping Park in Port Glasgow), which the train does not.

3.2.12 The service also operates over a relatively long operating day, with the first departure Monday - Friday from McInroy's Point at 05:50 (Gourock Station 05:55) and the last arrival at 19:18 (although note that there are three later services to Gourock Station, arriving at 19:40, 20:10 and 21:10). The Saturday timetable is broadly similar. The above said, the operating day is shorter than that offered by the train, particularly for Western Ferries' passengers, with the last connecting bus leaving Glasgow at 17:50.

3.2.13 The Sunday timetable is much less regular, with only eight services in each direction across the day, operating at an approximately two-hourly frequency.

- 3.2.14 The journey time on the 901 is also much slower than on the train, to the extent that it may be worth Western Ferries' passengers disembarking the bus at Gourock Station and catching the train (the extent to which this happens in practice depends on how passengers perceive the journey time saving relative to the interchange penalty and cost of switching mode, noting that Cowal is not included within the SPT Zonocard). Off-peak journey time to Glasgow **by bus is 76 minutes**, which contrasts with **38-51 minutes by train**.

Key Point: Service 901 (the Clyde Flyer) offers a frequent bus connection to Greenock, Braehead and Glasgow from both McInroy's Point and Gourock Station. However, the operating day is shorter than that offered by the train and journey times significantly longer.

Other services

- 3.2.15 There are a range of other bus services which connect with CFL and / or Western Ferries services in Inverclyde:
- **Service 540** connects Gourock Station with Inverclyde Hospital and various locations in Greenock but does not call at McInroy's Point. The service operates at 45-minute intervals across the day from approximately 06:45-18:30. This service does not run on a Sunday.
 - **Service 545** operates from Port Glasgow to Inverclyde Hospital at a 20-minute frequency. However, there are only a handful of evening services Monday – Saturday that extend to Gourock Station and McInroy's Point (four services westbound and three eastbound). There is however an hourly service on a Sunday, with departures from McInroy's Point from 09:25 to 22:25.
 - **Service 803** provides a local shuttle service between McInroy's Point and Larkfield Industrial Estate.

Key Point: There are a range of other connecting bus services at both McInroy's Point and Gourock Station, providing important connections to both Inverclyde Hospital and Greenock. Gourock Station is again better connected than McInroy's Point.

Connectivity analysis

- 3.2.16 There is benefit in considering the implications of different scenarios on public transport journey times between Dunoon (Castle Gardens) and Glasgow (George Square), as a proxy for the impact on public transport integration of a change in ferry service provision. This was done using TRACC public transport connectivity software.
- 3.2.17 TRACC calculates the shortest journey time by public transport, including walk legs, between an origin and destination within a specified time window (Note Q4 2022 public transport timetables were used to reflect the post COVID 19 'new normal' position). For this analysis, we established travel times by public transport to / from Glasgow for two scenarios:
- **Scenario 1:** Western Ferries service only, CFL service withdrawn (the 'without' scenario involved removing the Gourock – Dunoon town centre service from TRACC but not the Western Ferries service)
 - **Scenario 2:** Current CFL and Western Ferries services
- 3.2.18 Runs were undertaken for two time periods, within which it has to be possible to undertake the entirety of the journey by public transport:
- **AM:** 07:00-10:00 (Dunoon to Glasgow)
 - **PM:** 16:00-19:00 (Glasgow to Dunoon)

3.2.19 A 10-minute wait penalty is normally incorporated into the calculation in line with DfT TAG guidance, which effectively eliminates spurious short connecting public transport trips. In this context, however, this penalty was reduced to five minutes to reflect the connection-based nature of the two trips (i.e., people would most likely get a bus to access a ferry service) and avoid artificially extending journey times.

3.2.20 The journey times for each scenario by time period are summarised in the table below:

Table 3.1: TRACC analysis outcomes (minutes)

Time Period	Scenario 1	Scenario 2
AM	142	96
PM	164	89

Note, with regards to the Scenario 1 PM journey time, a review of journey times on Google suggests that this journey could be undertaken slightly quicker than is suggested by TRACC (circa 130-140 minutes). The reason for this is that the connection with the bus at Hunters Quay shown on Google is three minutes, and thus this connection is excluded in TRACC, which applies a five-minute wait penalty. The journey time by public transport nonetheless remains significantly longer in a 'no CFL' scenario.

3.2.21 There is a significant difference between Scenario 1 and Scenario 2 journey times. For those without access to a car, or who choose to travel without one, the overall journey time from Dunoon Town Centre is significantly shorter using the CFL service, circa 46 minutes and 75 minutes quicker in the respective AM and PM periods. This divergence is relevant for the two time slices identified but could differ in other parts of the day, although the end-to-end journey time (i.e., Dunoon to Glasgow) will always be quicker on the CFL route for Dunoon-based foot passengers.

3.2.22 The reason for this divergence is the differences in both 'in-vehicle' (bus, ferry and train) and 'walking and waiting' times within the two journeys, as is illustrated in the figure below:

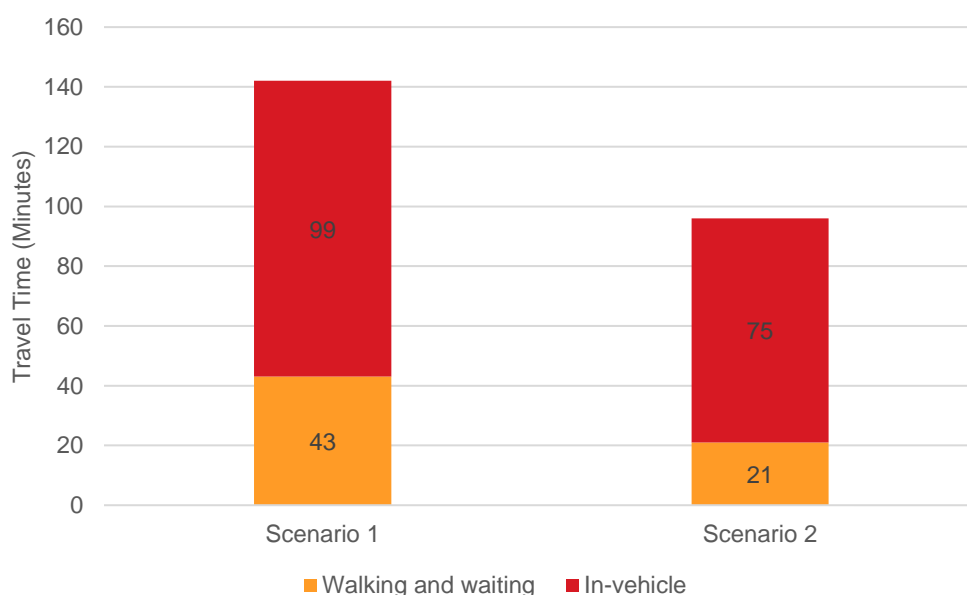


Figure 3.1: Transit and non-transit times for the AM Period (Dunoon to Glasgow)

3.2.23 The key points of note from the above figure are as follows:

- **Scenario 1** has a longer ‘walking and waiting’ time than **Scenario 2**, with time spent between journeys making up 30% of the overall journey time (compared with 22% in **Scenario 2**). The reasons for this are two-fold:
 - The CFL service within **Scenario 2** is much more central to Dunoon, resulting in initial and final connection times being relatively short (as they can be undertaken on foot).
 - Bus connections from Dunoon to Hunters Quay are limited, with the 480 and 489 services (West Coast Motors) operating on a low frequency. This results in those without access to a car having disproportionately long connection times to and from Hunters Quay Ferry Terminal.
- As previously noted, there is little difference in the time spent on the ferry, with the Western Ferries crossing being five minutes shorter. However, overall in-vehicle time is longer in **Scenario 1** due to the requirement to make connecting bus journeys at either end of the crossing. The TRACC run assumes that Western Ferries’ passengers travel on the 901 Clyde Flyer all the way into Glasgow, although in practice some people may perhaps disembark at Gourock to get the train (as previously described).

Key Point: The TRACC-based analysis confirms the foregoing commentary on public transport integration. Whilst the Western Ferries crossing is shorter, end-to-end current public transport journey times from Dunoon to Glasgow are longer due to the requirement for multiple public transport interchanges for Dunoon-based foot passengers.

3.3 Carrying and Capacity Utilisation

Carryings

- 3.3.1 The table below shows the passenger carryings for the CFL Dunoon - Gourock and Western Ferries McInroy’s Point – Hunters Quay routes between 2012-2022.

Table 3.2: Cowal ferry routes - passenger carryings 2012-2022 ('000) (Source: Scottish Transport Statistics Tables 9.15 and 9.16)

Year	Gourock – Dunoon	McInroy’s Point – Hunters Quay	Total
2012	341	1,389	1,730
2013	299	1,343	1,642
2014	310	1,347	1,657
2015	305	1,331	1,636
2016	301	1,341	1,642
2017	287	1,354	1,641
2018	287	1,373	1,660
2019	299	1,320	1,619
2020	104	850	954
2021	132	1,063	1,195
2022	196	1,226	1,422

- 3.3.2 Western Ferries carries vehicles and their occupants as well as foot passengers and is therefore, by a considerable margin, the volume operator between Cowal and Inverclyde. Whilst the majority of Western Ferries’ passengers will be travelling in a car (either as a driver or passenger), these figures nonetheless highlight the dominance of this route.

3.3.3 The figure below shows the trend in **passenger** usage for both routes individually and combined, indexed to 1992, so as to show the longer-term trend in the Cowal ferry travel market. The orange line denotes when the CFL service became passenger only:

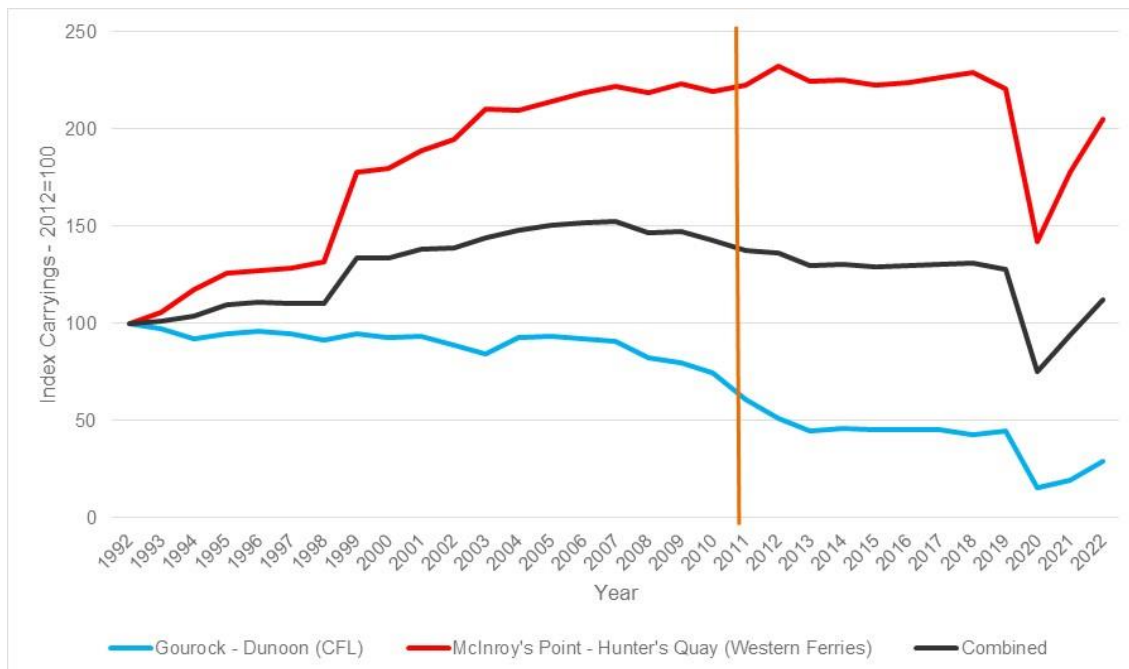


Figure 3.2: Cowal ferry routes – trend in passenger carryings (1992 = 100) (Source: Scottish Transport Statistics, Tables 9.15 and 9.16)

3.3.4 The main points of note in relation to the CFL service from the above figure are as follows:

- There has been a long-term decline in CFL passenger numbers over the period shown, set against overall growth in the Cowal passenger market pre-pandemic. In the last full pre-pandemic year (2019) CFL carried just **45%** of their 1992 passengers (circa **299k** compared to **670k**).
- There was a substantial reduction in carryings on the CFL route between 2007 and 2013, with part of this reduction coming prior to the conversion of the route to passenger only in 2011. This reflected the limited hourly service and longer crossing. There was a further significant reduction between 2010 and 2012, reflecting the conversion of the route to passenger only in mid-2011, at which point ‘car passengers’ were lost to the route. This was compounded by significant reliability and passenger comfort issues, which it is thought led to a reduction in passengers using the CFL service. Carryings have been more consistent since 2013 but in 2022 were only **57%** of their 2012 level (circa **341k** foot passengers). It should be noted that, following the introduction of the passenger-only vessels, the service went from hourly to half-hourly without any obvious uplift in demand.
- As was common across all public transport services, the CFL route witnessed a stark reduction in carryings at the onset of the COVID-19 pandemic. Whilst carryings for 2022 (**196k**) show a significant improvement on 2020 (**104k**) and 2021 (**132k**), they remain some way off 2019 levels (**299k**), which was the last full pre-pandemic year.
- The above said, it is evident that **there is a consistent baseload of passenger traffic which chooses to use the CFL service, indicating that, for these people, this service is their preferred means of travel.** Whilst the effects of the pandemic may have reduced this core traffic, the route still carried almost 200,000 passengers in 2022.

Key Point: Passenger carryings on the CFL route from Dunoon have diminished significantly since 1992 due to a combination of operating restrictions until 2011, the conversion of the route to passenger only in that same year, poor reliability and increased service frequency on the Western Ferries route. From 2013 until the onset of the pandemic, carryings settled and there was a core demand of around 300,000 passengers per annum (equating to around 400 return trips per day).

Whilst too early to make a firm judgement, data from 2022 suggest that the route has recovered to some degree from the COVID-19 pandemic but annual carryings were still around one third less than in 2019.

Carryings by timetable period and day of week

3.3.5 CFL has provided sailing-by-sailing data for the Dunoon – Gourock route for summer 2022. The carryings by sailing data provide insights into the route usage profile, which contextualises the commentary on the use of the service in the next section.

3.3.6 All sailings (both directions) from 2022 have been analysed based on the number of passengers carried per sailing. The figure below shows the number of times the ferry sailed with 0, 1, 2 passengers etc.

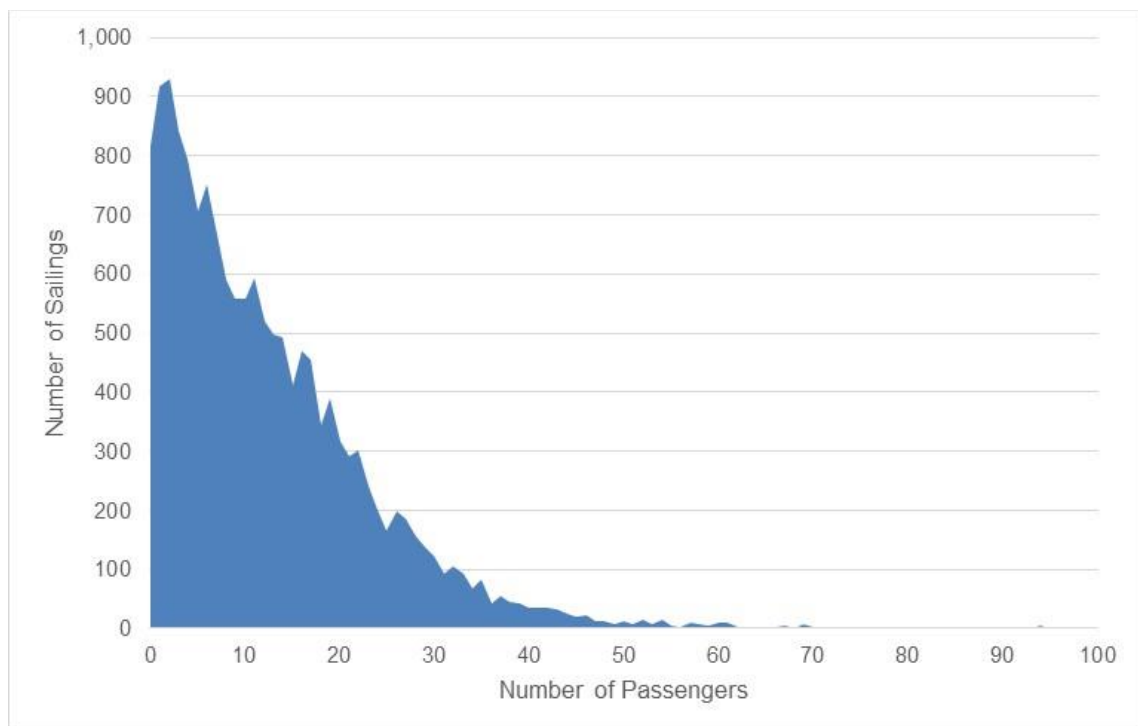


Figure 3.3: Gourock – Dunoon Route – number of sailings by passengers carried – 2022 (Source: CFL)

3.3.7 These data show that the very large majority of sailings carry relatively few passengers. From these data, it can be further implied that:

- **5% of sailings carried no passengers**
- **22% of sailings carried fewer than 3 passengers**
- **41% of sailings carried fewer than 7 passengers**
- **71% of sailings carried fewer than 16 passengers**

- 1% of sailings carried more than 50 passengers

Dunoon - Gourock

3.3.8 The figure below shows the median passengers Monday – Friday and actual Saturday and Sunday passengers on each sailing between Dunoon and Gourock for the summer 2022 timetable period. For context, MV *Ali Cat* can carry a maximum of 250 passengers and MV *Argyll Flyer 224*. It should though be noted that vessel capacity on this route is determined more by the seakeeping requirements of the crossing than passenger demand and variable manning is used to flex the passenger certificate:

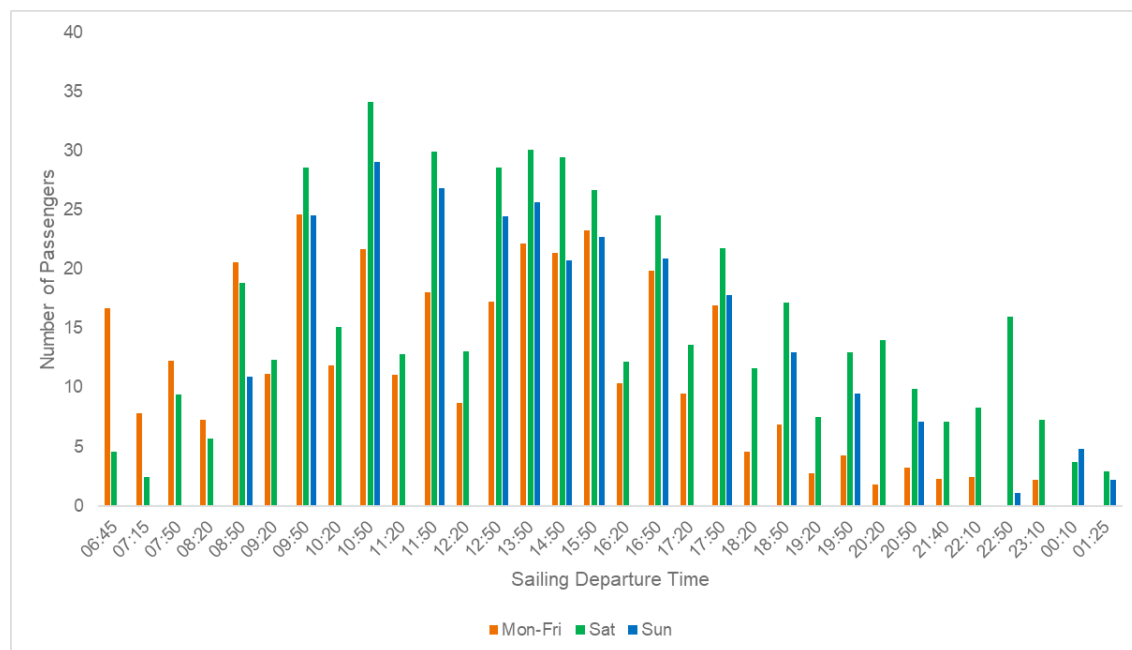


Figure 3.4: Dunoon – Gourock, passengers per sailing summer 2022 (Source: CFL)

3.3.9 The main points of note from the above figure are as follows:

- As would be expected, the majority of eastbound weekday passengers are carried in the morning, travelling either for work, education or employer’s or personal business. Of the **sailings that would facilitate an 09:00 arrival in Glasgow, the 06:45 sailing is the busiest sailing Monday – Friday**. Overall, there are typically between 30-35 passengers per weekday that travel on services that would allow for an 09:00 arrival into Glasgow.
- The **09:50 sailing is the busiest sailing of the day**.
 - It is interesting to note that, in 2019, the **07:50** was by some distance the busiest Dunoon - Gourock sailing of the day. The reduced use of this service highlights the reduced prevalence of commuting post-pandemic seen across many public transport services.
 - For context, the ORR Station Usage Estimates dataset - <https://dataportal.orr.gov.uk/statistics/usage/estimates-of-station-usage> - estimated that there were **247,672** users of Gourock station in the period April 2021-March 2022 (this figure will be affected by a period of full national COVID-19 lockdown until 26th April 2021, followed by the continuation of some restrictions over the remainder of 2021 and into 2022. 2022-23 passenger numbers will therefore likely be higher than this). This was down from **504,310** for the corresponding period in 2019-20 (This was close to the last full pre-COVID-19 year, although March 2020 was impacted by: (i) the voluntary choice of some workers to stay at home from early in that month; (ii) the

'work from home where possible' instruction on 16th March; and (iii) the implementation of the first full COVID-19 national lockdown from 23rd March 2020). This represents a **51%** reduction, although it is likely that the reduction for the period April 2022-March 2023 will show a lesser but nonetheless significant decline, which may well be close to the settled long-term position.

- Weekend demand is much more concentrated in the middle of the day, supporting leisure travel to Inverclyde and Glasgow.
- It is notable from the chart that evening sailings are very lightly used on weekdays. Weekend evening sailings are used more intensively.

Gourock - Dunoon

3.3.10 The equivalent figure for Gourock – Dunoon is shown below:

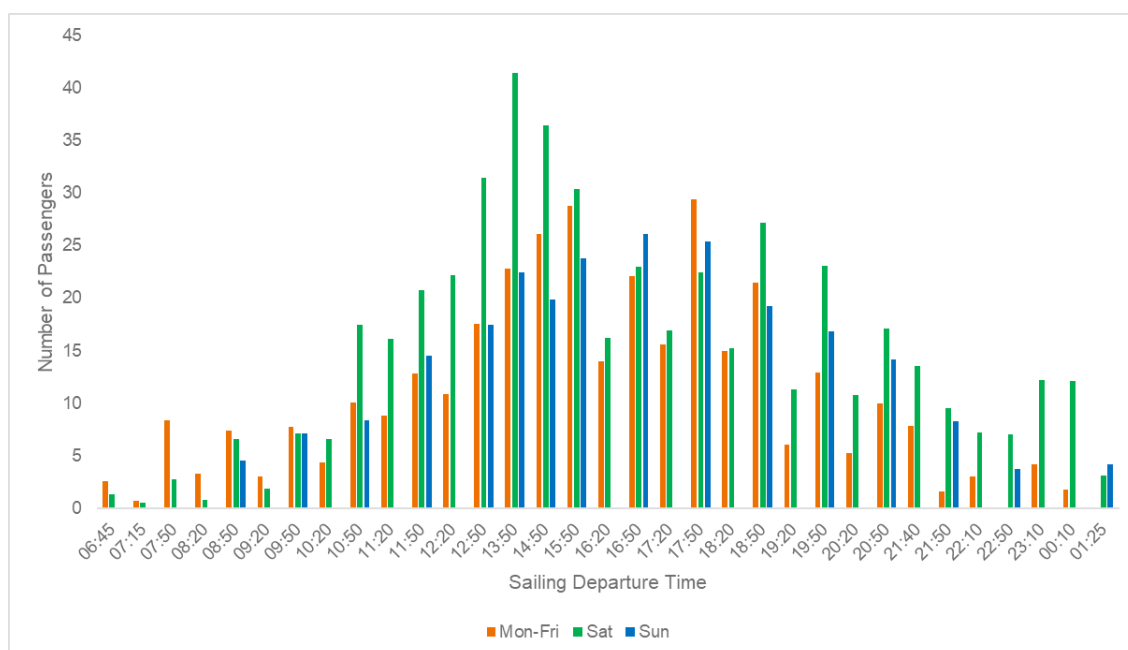


Figure 3.5: Gourock – Dunoon, passengers per sailing summer 2022 (Source: CFL)

3.3.11 The main points of note from the above figure are as follows:

- The Monday – Friday westbound flow is broadly the reverse of the Dunoon – Gourock direction, with the greatest demand being in mid-afternoon and early evening, as commuters and residents travelling for leisure / personal business return to Cowal. The peak weekday sailing in volume terms is the **17:50**.
- The weekend pattern is broadly similar across the two directions, although weighted slightly more towards the later sailings from Gourock, with Cowal residents returning from e.g., leisure trips to Glasgow and Inverclyde.
- The evening sailings are busier in the 'to Cowal' direction, particularly on a Saturday (and a Friday, although this is not shown independently in the figure).

Key Point: The CFL Dunoon – Gourock route demonstrates a pattern of usage that would be broadly expected of a route used for both commuting and personal business, with tidal flows out in the early to mid-morning and returning in the evening. Weekend usage is more evenly distributed highlighting the use of the ferry for personal business, leisure and tourist trips. Evening services are much more lightly used, particularly in the 'from Dunoon' direction and on weekdays.

It should though be noted the scale of commuting on the route has reduced relative to the pre-COVID-19 position.

Capacity utilisation

- 3.3.12 Whilst the preceding analysis presented the median number of passengers per sailing, it is important to understand peak utilisation in each direction. The peak utilisation analysis is summarised through a set of 'box and whisker' diagrams. It should again be noted here that vessel capacity is a product of the required vessel specification to operate the crossing rather than demand *per se*.

Box and whisker diagrams

- 3.3.13 The box and whisker diagrams that follow show the distribution of sailings' individual passenger load factors (passengers / capacity) by season. Taking each component of the diagram in turn:
- Load factor is based on the carrying capacity of the MV *Argyll Flyer* as this is the smaller of the two vessels.
 - Each point represents the load factor of an individual sailing.
 - Each sailing is then allocated to one of four quarters, with an equal number of sailings in each quarter.
 - Those points below the box represent the least busy quarter of sailings, whilst those above the box represent the busiest quarter of sailings.
 - The 'box' therefore covers the 'middle' two quarters, with the horizontal line within the box representing the median load factor - the 'X' in the box is the mean load factor.
 - The short horizontal lines at the top and bottom of the chart (i.e., the 'whiskers'), represent either the maximum or minimum load factor, excluding any outliers.
 - Note that points above or below these lines as classed as 'outliers' in this statistical approach. An outlier is a value that lies outside the overall distribution pattern and thus they are shown as points above and below the 'whiskers'.
 - So, the higher on the chart and the shorter the 'box', the more sailings there are where the ferry is close to capacity.
- 3.3.14 For the purpose of this analysis, the focus is on the peak sailing in each direction in the 2022 summer timetable period.

Dunoon – Gourock, peak sailing load factors

- 3.3.15 The peak sailing from Dunoon to Gourock in terms of load factor is the **09:50**, for which the B&W chart is shown below:

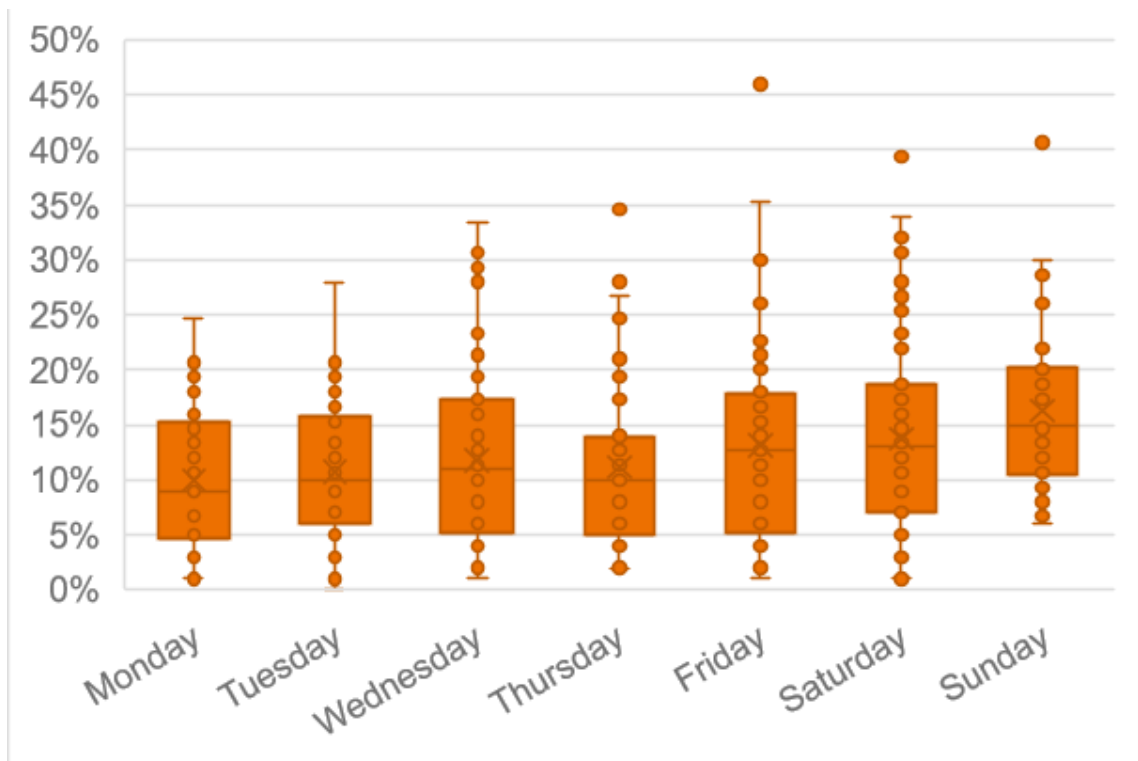


Figure 3.6: 09:50 Dunoon – Gourock, summer 2022 timetable (Source: CFL)

3.3.16 The main point of note from the above figure is that, **even on the peak sailing ex Dunoon, utilisation rarely exceeded 30% of carrying capacity during this period. Median load factors around 10%-15% on weekdays.**

Gourock – Dunoon, peak sailing utilisation

3.3.17 The equivalent figure for the **17:50** ex Gourock (the busiest sailing to Dunoon) is shown below:

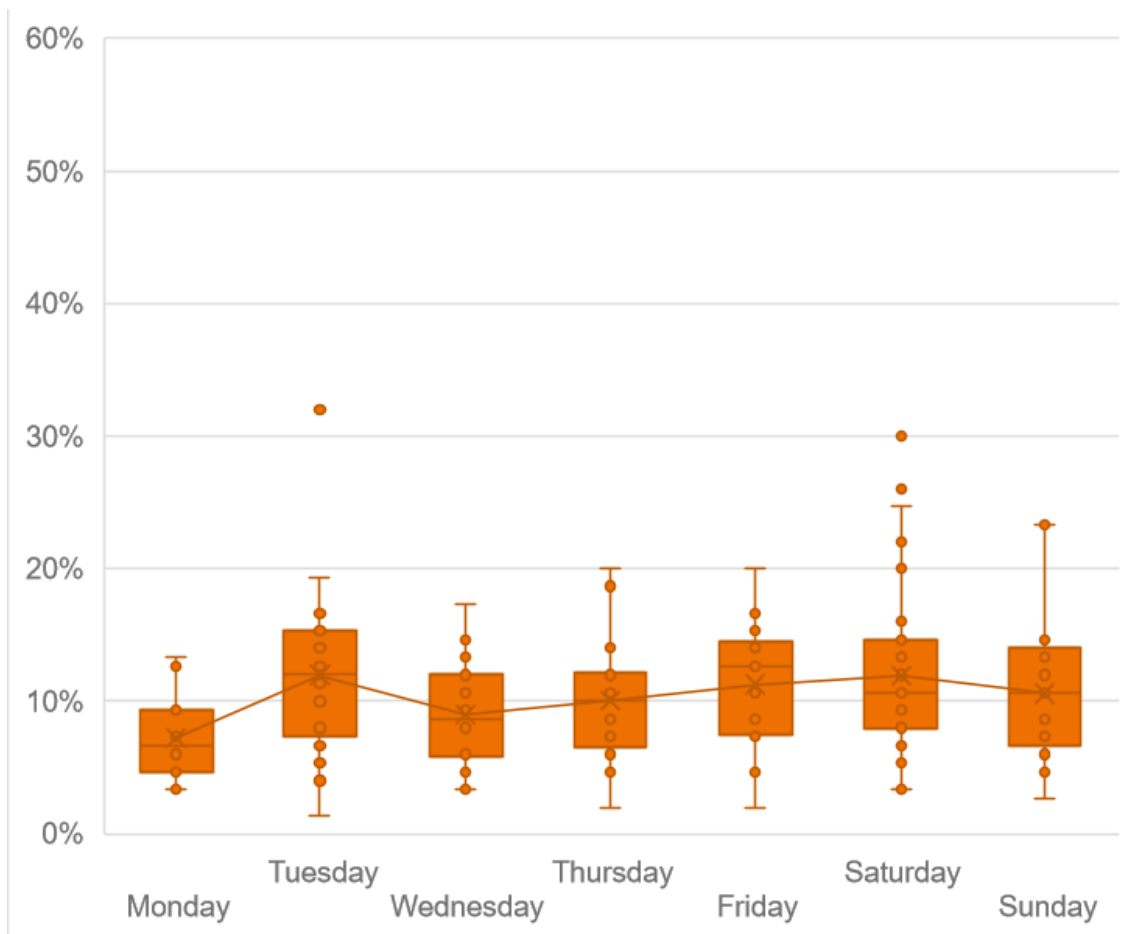


Figure 3.7: B&W, 17:50 Gourock – Dunoon, summer 2022 timetable (Source: CFL)

3.3.18 The picture for the peak Gourock – Dunoon service is broadly similar. The median load factor varies by day but is generally around **10%-15%** mark.

Key Point: With the exception of a handful of sailings taking passengers to and from the Cowal Games, passenger carryings in both directions rarely exceed one tenth of maximum vessel capacity. In short, total capacity across the day is significantly in excess of market demand.

3.4 Reliability

3.4.1 CFL produce punctuality and reliability data on a rolling monthly basis. On routes with a **crossing time of up to 30 minutes**, sailings are either defined as:

- **On-time:** Sailings which arrive within 5 minutes of the published arrival time.
- **Level 1 lateness:** Sailings which arrive between 5 and 10 minutes after the published arrival time.
- **Level 2 lateness:** Sailings which arrive in excess of 10 minutes after the published arrival time.
- **Cancelled sailings** are scheduled sailings which have not been carried out.
- For cancellations and both categories of lateness, there are various '**relief events**' defined within the CHFS contract. These include, for example, sailings cancelled by bad weather, in accordance with safety procedures, delays due to the unavailability of

operational restrictions of harbour facilities or having to wait for public transport connections.

3.4.2 Additional detail on CFL's approach to performance monitoring can be found here - [Information on Performance Monitoring | CalMac Ferries](#)

Cancellations

3.4.3 The figure below summarises cancellations on the Dunoon – Gourock route (both directions) for the period December 2021 – November 2022. Note that the high cancellation rates in October and November are a result of the route being reduced to a single vessel timetable due to harbour works at Gourock):

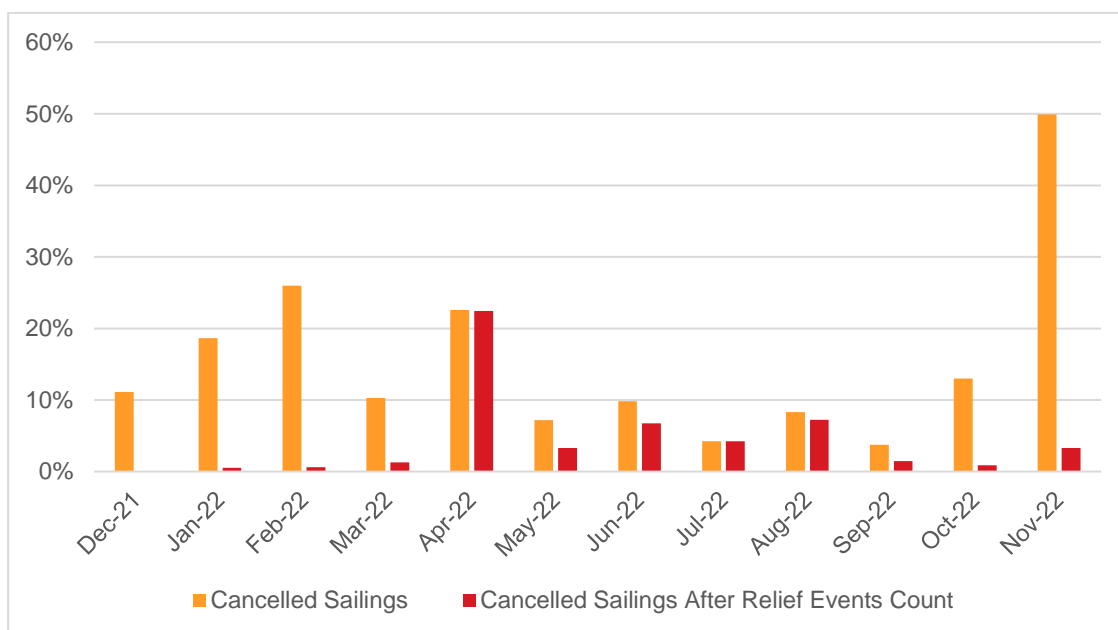


Figure 3.8: Dunoon – Gourock cancellation as a proportion of all scheduled sailings (Source: CFL)

3.4.4 The main points of note from the above figure are as follows:

- The Dunoon – Gourock route is subject to significant levels of disruption, a long-running area of dissatisfaction amongst users. On average, **15%** of all sailings on the route were cancelled in the year December 2021 - November 2022.
- Cancellations are most frequent in the winter months (December 2021 – March 2022 and October – November 2022), accounting for **22%** of all services, although this was inflated by the October / November harbour works at Gourock. However, the summer (April 2022 – September 2022) cancellation rate of **9%** is not insignificant on a commuter route of this length, and one which operates in comparatively sheltered waters (although note that this figure is inflated to some degree by a breakdown of MV *Ali Cat* in April 2022).
- Previous work undertaken for the Dunoon and Kilcreggan Ferry Infrastructure OBC found that **74%** of all cancellations on the route between 2011 and 2020 were a result of 'adverse weather'. Despite being a relatively short crossing, the suitability of the vessels for the route combined with sub-optimal berthing arrangements (particularly at Dunoon) continue to cause poor performance overall.

3.4.5 For context, it should be noted that Western Ferries' services are rarely cancelled, only tending to go off in the most inclement weather. Moreover, with four vessels in their fleet,

Western Ferries' service has significant in-built resilience to cover vessel maintenance and mechanical issues.

Punctuality

- 3.4.6 Whilst reliability is a major problem on the route, punctuality is much less of an issue. When the service operates, it generally does so on time – in the most recent year, fewer than 0.5% of operated sailings were late.

Resilience

- 3.4.7 With two vessels and an alternative ferry and road routes, resilience is not a major issue on this route. When the CFL service is cancelled, the company has a contract with local bus companies to connect with Western Ferries' services.

Key Point: The Dunoon – Gourock route suffers from very poor reliability, with over 15% of sailings between December 2021 and November 2022 cancelled, and a fifth of all winter sailings cancelled. The main reason for this is adverse weather, which may reflect both the suitability of the vessels operating the route and berthing arrangements, particularly at Dunoon. It should though be noted that there were also significant disruptive harbour works at Gourock during this period which also impacted reliability. Poor reliability is almost certainly one of the core contributors to the reduction in passenger numbers in recent years.

3.5 RSM Steps 1-4 – Cowal

- 3.5.1 This section applies the Transport Scotland RSM methodology to the CFL Dunoon – Gourock route.
- 3.5.2 To inform the ongoing Gourock, Dunoon and Kilcreggan Ferry Infrastructure Programme, CMAL commissioned research reported in April 2020 focused on use of the CFL and Western Ferries services. As part of this commission, Transport Scotland provided the raw data cross-tabulations. These have been used to inform this analysis with a specific focus on the CFL route. The following points should be noted with regards to the analysis of the data:
- **The research was undertaken prior to the first national COVID-19 lockdown and therefore will not account for the nationwide trend of reduced commuting emerging from improved remote working practices and indeed other changes in travel behaviour.**
 - The survey received **625** responses on a self-selecting basis, and we do not know how representative this sample is of the Cowal and Inverclyde (and beyond) communities. Indeed, of the **542** respondents to the question on main residence, only **65% (n=352)** had their main residence in Dunoon / Cowal.
 - Connected to the above point, of the **625** respondents to the survey, **205** noted that they use the CFL service most often, whilst **420** noted that they use the Western Ferries service most often (a ratio of 2.05:1 in favour of Western Ferries). However, the carryings data suggests that Western Ferries carries around 4.5 passenger-trips for every passenger-trip carried by CFL, so the sample is biased towards CFL users.
 - Ideally, any ferry usage data (e.g., purpose or mode used to get to the ferry) should be weighted by trip frequency to be representative of all trips rather than the sample. For example, a survey may state that 10% of respondents say that 'commuting to work' is their most frequent trip purpose whilst 8% state 'healthcare' – however since commuting trips tend to be made more often than healthcare trips, weighting the survey responses by the stated trip frequency may reveal that commuting to work accounts for say 20% of all trips whilst healthcare only accounts for 3% of all trips made. However, the cross-

tabulations made available to us meant that the CFL-main user data (for e.g., trip purpose) could not be **weighted by journey frequency**, but the **overall travel from the Cowal sample could be and has been weighted** by this variable. Note also that sample sizes are not presented for weighted data.

Step 1: Identify the dependencies of the community

- 3.5.3 The first step in the RSM process is to identify the dependencies of the Cowal community with respect to:
- Commuting and frequent business use
 - Personal
 - Freight
 - Tourism
- 3.5.4 For each dependency area, a community is allocated to one of four 'pots', pots A-D, which are defined as follows:
- **'Pot A'**: the community has a **strong set of indicators** which all point to a specific need for that particular dependency.
 - **'Pot D'**: the community has a **weak set of indicators** which all point to no specific need to that particular dependency.
 - **'Pot B'**: the community has a mixed set of indicators but has more in common with communities in 'Pot A' than 'Pot D'.
 - **'Pot C'**: the community has a mixed set of indicators but has more in common with communities in 'Pot D' than 'Pot A'.
- 3.5.5 **Only those communities categorised into 'pots' A or B for a particular dependency are regarded as having a priority need in that specific aspect.** It follows that any number of communities might be in any of the 'pots'.
- 3.5.6 The allocation to pots is defined with respect to a set of 11 'indicators', albeit it is important to note that judgement on the extent of the dependency is ultimately subjective.
- 3.5.7 Each dependency area and the respective indicators are now considered in turn.

Commuting and frequent business use

Indicator 1: Island to mainland crossing time (in minutes)

- 3.5.8 The island (peninsula) to mainland crossing times for both the CFL and Western Ferries services are detailed below:
- **CFL: Gourock – Dunoon:** 25 minutes
 - **Western Ferries: Hunters Quay – McInroy's Point:** 20 minutes
- 3.5.9 The two Cowal – Inverclyde ferry services offer a sub-30-minute journey time, with Western Ferries having a shorter journey time as their crossing is shorter.
- 3.5.10 It should be noted that, for the majority of Cowal users of both the CFL and Western Ferries services, their ultimate destination is beyond Gourock - the figure below shows the destination of **trips which originate in Cowal** for:

- Those who note that they use the CFL service most frequently (**n=123**)
- The Cowal to Inverclyde ferry sample overall (**n=384**)

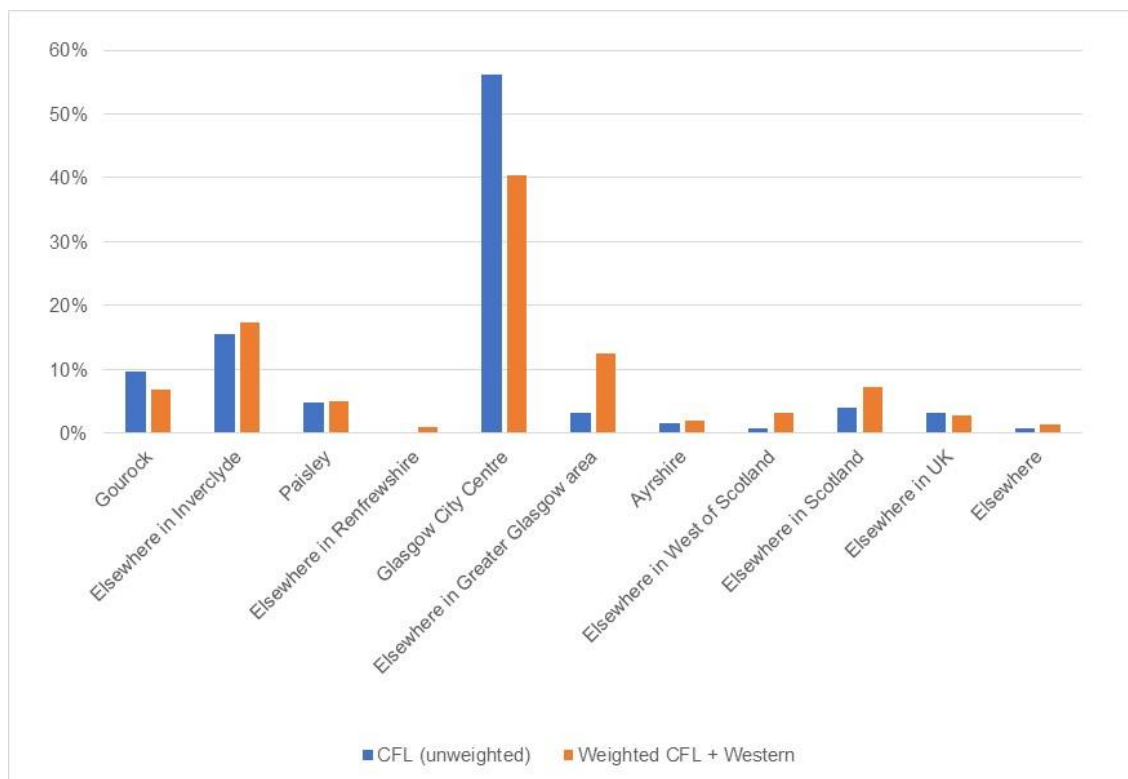


Figure 3.9: Final destination of ferry journey from Cowal

3.5.11 The key points of note from the above figure are as follows:

- Glasgow City Centre is by some distance the dominant destination for those who travel on the CFL ferry most often, equating to **56% (n=69)** of the total CFL sample. Given that 'commuting to / from work' is the single biggest reason for using the CFL service (even when not weighted for journey frequency – see below), it is likely that Glasgow City Centre would be an even more prominent destination if the data were weighted in this way.
- Gourock as a destination accounts for a relatively low share of passenger journeys, both for the CFL sample and for the weighted CFL plus Western Ferries sample.
- The distribution of destinations in the overall sample is also weighted towards Glasgow City Centre, accounting for **40%** of the weighted sample total. However, it is not as dominant as on the CFL route, with other destinations including 'elsewhere in Inverclyde' (**17%**) and 'elsewhere in Greater Glasgow' (**13%**) accounting for a significant proportion of the sample. This more even distribution of destinations likely points to the wider range of destinations that can be accessed easily when taking a car onboard the Western Ferries service.

Key Point: It is evident given the frequency of services between Cowal and Inverclyde and the volume of travel that there is a commuter market, particularly given the presence of a commercial operator delivering a high frequency service over a long operating day.

Eastbound users of the CFL service are most often travelling to Glasgow City Centre, with this destination accounting for almost three fifths of all travel in the unweighted 'CFL main user' sample. For the combined Cowal ferry sample more generally, Glasgow City Centre remains the main destination, but is less prominent than for the CFL main users. This suggests that a central role of the CFL service is providing connectivity to Glasgow City Centre, likely via the train from Gourock.

Indicator 2: Percentage of households who use the ferry service for commuting purposes and are also high frequency users

3.5.12 The short distance and duration of the Cowal - Inverclyde crossings combined with the frequent onward public transport connections has encouraged and facilitated commuting for many years. The CMAL survey asked respondents what their most common reason for using the Cowal ferry services is. Key findings included:

- Even when not weighted for journey frequency, **commuting** is the most common reason for using the CFL service, with **32% (n=63)** citing this as their main journey purpose. However, this reflects the pre-pandemic position and recent carryings data suggest that this figure / proportion may have reduced.
- **Commuting accounts for just under a half (46%)** of all sampled journeys across the combined Western Ferries and CFL routes.

3.5.13 A commuting dependency was recognised in the original RSM assessment undertaken for the *Ferries Review* and this remains unchanged.

Key Point: Commuting is by some distance the dominant journey purpose when using the Cowal ferry services amongst those surveyed (pre-pandemic). Given the final destination of journeys, the main role of the CFL service is connecting foot passenger commuters to Glasgow City Centre via the rail service at Gourock.

Travel-to-Work

3.5.14 'Ferry' was not included as a standalone travel-to-work option in the 2011 Census and will typically be recorded under the 'Other' category. This makes it challenging to split out multi-leg journeys which used a ferry for part of a trip and therefore requires a degree of extrapolation to understand potential flows for this journey purpose.

3.5.15 There are three data areas (at intermediate geography level, i.e., groupings of datazones where origin-destination data are available) in the south-east of the Cowal Peninsula which would realistically generate a significant volume of cross-Clyde travel-to-work movements:

- Dunoon
- Hunters Quay
- Cowal South

3.5.16 For each area, it is assumed that those who have selected 'Train / Metro' or 'Other' for their journey mode across the Clyde are users of the CFL ferry service, although some will travel by Western Ferries, particularly from Hunters Quay. Car drivers and car passengers are assumed to use Western Ferries. There are also only a handful of bus journeys recorded, which again would be assumed to use Western Ferries given through routing and ticketing for

bus passengers which existed at that time (the through bus service commenced in 2008 but was discontinued in March 2019). The table below summarises combined ‘Train / Metro’ and ‘Other’ travel-to-work movements from each area of the Cowal Peninsula:

Table 3.3: Selected Cowal Peninsula areas - travel-to-work by ‘Train / Metro’ or ‘Other’ (Source: Census 2011)

Area	No. of travel-to-work trips from this area by ‘Train / Metro’ or ‘Other’
Dunoon	53
Hunters Quay	7
Cowal South	0
Total	60

Note: Table 3.3 will marginally under-estimate total travel-to-work volumes as, due to the requirement to anonymise responses, flows of fewer than six people are not reported.

- 3.5.17 The table shows that there is a modest market for the CFL ferry service within Dunoon town centre, but this diminishes to very small numbers in areas to the north and south. There are very low levels of in-commuting (not shown), with the travel-to-work flow mainly outbound from the peninsula. This is common across the Firth of Clyde islands and peninsular communities more generally.

Key Point: There was a small Dunoon town centre travel-to-work market for the CFL service to Gourock in 2011. However, the data suggest that usage of this service is limited outwith the town centre and there are very few inbound travel-to-work movements.

Indicator 3: Percentage of households who use the ferry service for business purposes and are also high frequency users

- 3.5.18 This indicator was developed based on a question in the 2008 *Ferries Review* household survey, which asked about travel for business purposes. However, it is not an entirely useful indicator as those who are travelling on business may not be resident in an area. Moreover, in a commuter area like Cowal, commuting will likely outweigh business travel and is thus of greater importance in terms of ferry service design.
- 3.5.19 For the record, the 2020 CMAL survey highlighted that **5% (n=9)** of the CFL unweighted sample identified ‘travel linked to business’ as their main journey purpose. When weighted for journey frequency in the combined CFL plus Western sample, business-related travel is identified as the main journey purpose by **7%** of the overall sample.

Key Point: Business-related travel is much less significant than commuter travel on this route, and the indicator does not capture business travel that will not be made by local residents. That said, it is evident from the CMAL survey that both the CFL and Western Ferries services are used for business travel to some degree.

Dependency rating

- 3.5.20 Overall, it is evident that a combination of historic connections to Inverclyde and Glasgow combined with two frequent ferry services operating over a long day has supported a significant commuter market. Combined passenger carryings on the Gourock - Dunoon and Hunters Quay – McInroy’s Point routes in 2022 were in excess of **1.4 million**. The Cowal – Inverclyde route group is by some distance the busiest in Scotland, and indeed Western Ferries alone carried more passengers than any other route in Scotland in 2022 (Source: Scottish Transport Statistics).

- 3.5.21 The carryings analysis combined with survey and travel-to-work data which identify high commuting volumes would conventionally lead to Cowal being classified as 'Pot A' for this RSM dependency. However, the car-based commuting market is catered for entirely by Western Ferries and the CFL service has a very specific role focused primarily on Dunoon town centre residents and / or those who are non-car available. As this CNA is specifically focused on the CFL Gourock – Dunoon route, this route can only be classified as '**Pot B**'.
- 3.5.22 It should again be noted here that there could be other ways to serve the current CFL users, and this should be considered as part of the Gourock, Dunoon and Kilcreggan Investment Programme SBC.

Personal

- 3.5.23 The 'Personal' dependency covers the need to travel off of / away from the Cowal Peninsula to access essential services such as healthcare. In the context of Scottish island and peninsular communities, Cowal has a comparatively large population and a range of local services including Cowal Community Hospital, a secondary school (Dunoon Grammar) and both a Morrisons and a Co-Op. Viewed from this perspective, the town and peninsula more generally have a wide range of services which reduce the need to travel to Inverclyde and beyond to meet day-to-day needs.
- 3.5.24 However, it is important to note that Cowal has historic ties to the west of Scotland and there remain strong connections between the peninsula and Glasgow in particular. For example, specialist hospital care is provided in Glasgow; students will travel daily for tertiary education to Glasgow, Greenock and Paisley; whilst both Glasgow City Centre and related retail sites like Braehead provide a much larger retail and leisure offering than can be found locally. Whilst there may not therefore be a 'personal dependency' in all circumstances, there is strong demand amongst local residents for journey purposes other than commuting.

Indicator 4: Population

- 3.5.25 11,376 people are estimated to reside in Cowal according to the National Records of Scotland Small Area Population Estimates 2021. This in itself does not indicate a dependency or otherwise, but it is worth noting that Cowal is one of the larger communities served by the subsidised ferry network in Scotland.

Indicator 5: Percentage of households who use the ferry services for health-related purposes

- 3.5.26 As noted above, there are a range of health facilities on the Cowal Peninsula, including a GP, dental practice and community hospital, although more complex health needs are addressed off-peninsula.
- 3.5.27 Of those who travel on the CFL service most often, the CMAL survey found that travel to medical appointments was identified by **6% (n=12)** as their main journey purpose, although it should be borne in mind that this figure is not weighted by trip frequency. For the weighted CFL plus Western Ferries sample, travel to medical appointments accounted for **7%** of all journeys. It should be noted that the sample includes both Cowal and Inverclyde residents – as there is likely to be no / few Inverclyde to Cowal health trips, the proportion of those using the ferry for travel to health from Cowal is likely to be understated.

Key Point: Despite a reasonable scale of health provision in the Cowal Peninsula, travel for health purposes remains common. The survey suggests that Western Ferries is again the dominant operator in this respect.

Indicator 6: Frequency profile for all travel using the ferry service

Trip Purpose

3.5.28 The combined Cowal – Inverclyde ferry services are used for a wide range of personal travel purposes – this is illustrated by the figure below which shows the **most common reason** cited for using the Cowal ferry services. It should be reiterated here that **only the overall sample is weighted for journey frequency**.

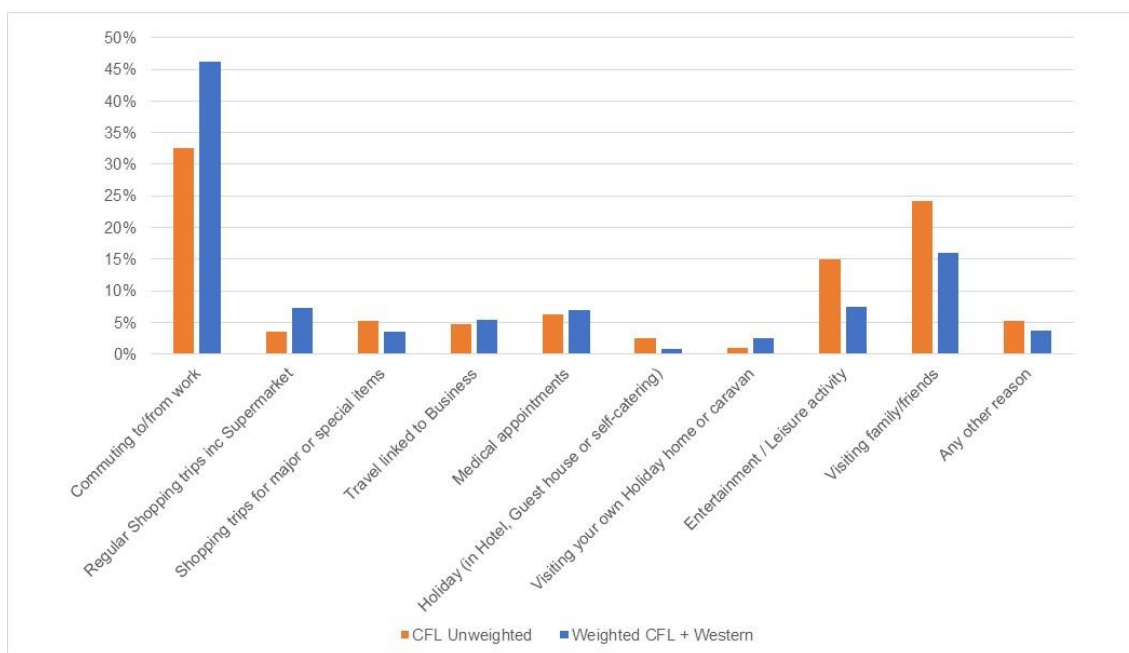


Figure 3.10: Cowal ferry services – main journey purpose

3.5.29 Outwith commuting, the CFL service is predominantly used for leisure purposes, with ‘visiting family / friends’ (24%, n=47) and ‘entertainment / leisure activity’ (15%, n=29) the second and third most common journey purposes respectively. The distribution of travel by purpose does not change significantly when weighted by journey frequency for the Cowal sample overall.

3.5.30 Overall, it is evident that the CFL service is used for personal business purposes, with visiting friends and family and leisure activity in Glasgow likely to be the main reasons for use. That said, Western Ferries is again the dominant operator in volume terms.

Trip Frequency

3.5.31 An early screening question in the survey enquired as to which operator respondents used most often, of which 205 (out of a sample of 625) used CFL most often. Of this subset of the sample, a further 202 answered questions in relation to how often they travel as a foot passenger (via CFL) and by car (via Western Ferries). The results are summarised below - again, the question relates to the autumn and winter months, but the summer proportions are broadly similar. It should be noted that trip frequency responses are grouped, e.g., those who responded 5-7 days per week and 3-4 days per week are grouped together. Responses are also presented in absolute numbers.

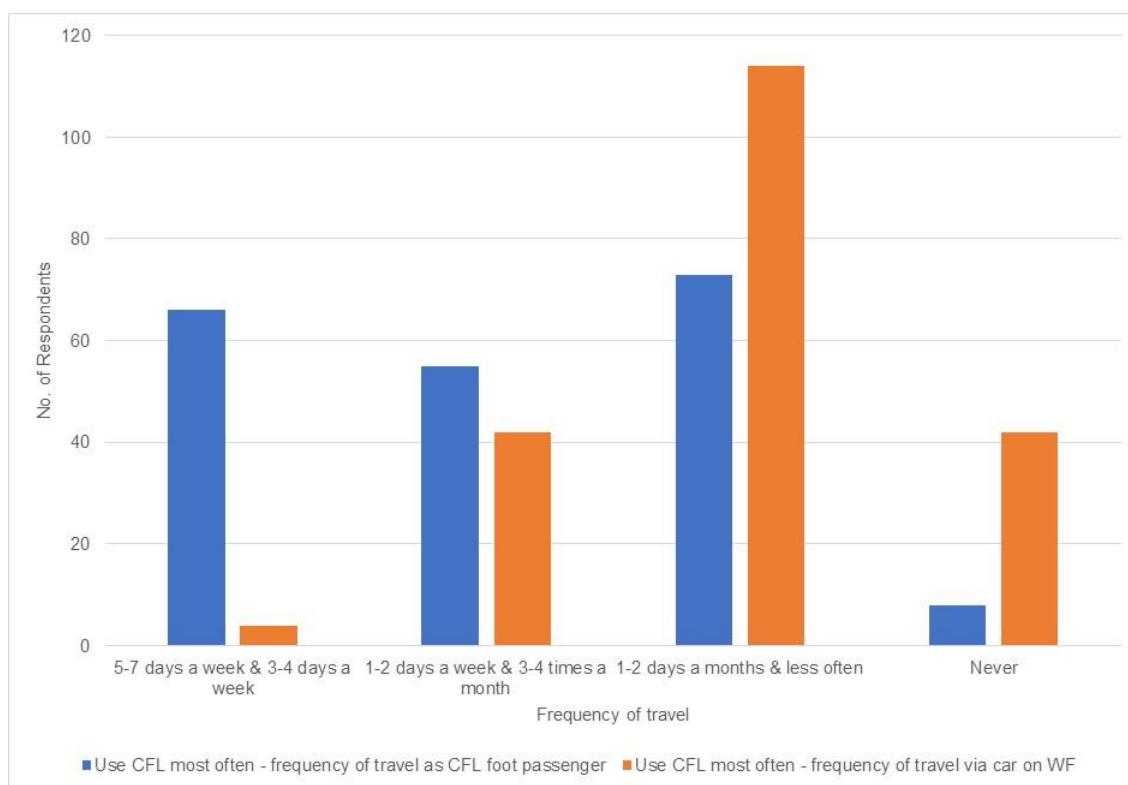


Figure 3.11: How often do those who use CFL most often travel?

3.5.32 The main points of note from the above figure are as follows:

- The key point in the above figure is that, **for those who travel most frequently (i.e., 3-7 days per week), they almost always do so as a CFL foot passenger.**
- The picture is more mixed for less frequent travellers, with a combination of foot passenger journeys and car trips by Western Ferries. A small subset of respondents do not travel at all in the autumn and winter months.

Key Point: Of those who travel on CFL most frequently, it is evident from the data that most still use a combination of the CFL and Western Ferries services. However, of those within the 'CFL main user' sample who travel most frequently (i.e., 3-7 days per week), almost all of their journeys are via CFL route.

Dependency rating

3.5.33 Cowal's historic connections to Glasgow and the west of Scotland more generally means that there is a significant volume of travel by ferry for personal business reasons. Of the subset of the survey sample that use the CFL service most often (**n=178** – note that question 2 of the survey identified 205 respondents as using the CFL service most often, but only 178 respondents from that subset have answered this question on why they choose to use CFL most often), the following reasons for choosing CFL were **selected by more than 10% of respondents** (note this was a multiple response question so the percentages sum to greater than 100%):

- 'Rail link / access to public transport connections' = **65% (n=116)**
- 'Town centre to town centre better' = **16% (n=29)**
- 'Don't drive / Western port too inconvenient / CalMac port more convenient' = **12% (n=22)**

- 'Terminal is closer / more convenient' = **10% (n=17)**

- 3.5.34 The above responses are evidently a variation on a theme, whereby the reasons for using the CFL service are clustered around the desire or necessity to travel as a foot passenger and proximity to both the ferry terminal in Dunoon and the connecting rail service at Gourock.
- 3.5.35 The extent to which the CFL Dunoon – Gourock service is integral to personal travel is open to question, as Western Ferries is by some distance the dominant operator. Further research would be needed to understand the behavioural response of those who use the CFL service should that not be available or be scaled back. For this reason, this dependency is allocated to **'Pot C'**.

Freight

- 3.5.36 It is important to note at the outset that all freight moving to and / or from the Cowal Peninsula is either conveyed by road or by Western Ferries. From the perspective of this CNA, freight is therefore not a relevant dependency as it is not carried on the CFL service. For completeness, information in relation to the three freight indicators is nonetheless presented below.

Indicator 7: Population

- 3.5.37 In the original RSM, population was considered as an indicator of freight dependency, the logic being that, the larger the community, the greater the freight need. This is perhaps a useful indicator in terms of volume (i.e., the more people, the greater the derived freight demand), but perhaps less so in terms of need as it is often the smallest islands with the fewest on-island services that have the greatest and most diverse freight needs.
- 3.5.38 As noted in relation to 'Indicator 4', 11,376 people are estimated to reside within the selected Cowal Peninsula datazones according to the National Records of Scotland Small Area Population Estimates 2021. If viewing Cowal as an 'island' for the purposes of this analysis, it would be one of the larger communities on the west coast.

Key Point: Cowal is one of the larger communities in population terms on the west coast and thus its derived freight demand is also likely to be one of the largest. This demand is however entirely satisfied by a combination of the A815 / A83 road connection and the Western Ferries service.

Indicator 8: Percentage employed in freight-intensive industry

- 3.5.39 The Office for National Statistics (ONS) has defined Travel-to-Work Areas (TTWA) to provide various statistics at sub-local authority level. 'Dunoon and Rothesay' is one such TTWA and, from a freight perspective, it is helpful to consider them together due to what is understood to be the importance of the Colintrave – Rhubodach route in facilitating circular freight movements (e.g., Inverclyde – Cowal – Bute – Inverclyde and vice versa).
- 3.5.40 The table below summarises the proportion of workplace jobs in Cowal that are within a **'freight intensive industry'** and compares this to the HITRANS and Scotland averages for context. HITRANS is the Regional Transport Partnership for the Highlands and Islands and consists of the Highland, Moray, Orkney, Eilean Siar and Argyll & Bute Council areas (except Helensburgh and Lomond) - Cowal falls within the HITRANS RTP area. 'Freight intensive' has been defined as BRES sectors C: *'Manufacturing'*, F: *'Construction'*, G *'Wholesale and retail trade; repair of motor vehicles and motorcycles'*, and: H: *'Transportation and storage'*.

Table 3.4: Proportion of workplace employed in freight intensive industries – ‘Dunoon and Rothesay’, HITRANS and Scotland (Source: BRES, 2021)

Industry	Dunoon and Rothesay	HITRANS	Scotland
Manufacturing	9%	8%	7%
Construction	4%	6%	5%
Wholesale and retail trade etc	13%	15%	14%
Transportation and storage	4%	5%	5%

Key Point: The ‘Dunoon and Rothesay’ TTWA is broadly in alignment with regional and national averages with respect to employment in freight intensive industries.

Indicator 9: Commercial Vehicle Lane metres per capita

3.5.41 All waterborne freight between Cowal and Inverclyde is shipped by Western Ferries, whose route is used for movements between Inverclyde and Cowal specifically and as a through route for wider freight movements to Argyll & Bute. For context, the trend in Western Ferries’ combined total commercial vehicles (CVs) and buses carried between 1992-2021 is shown in the figure below:

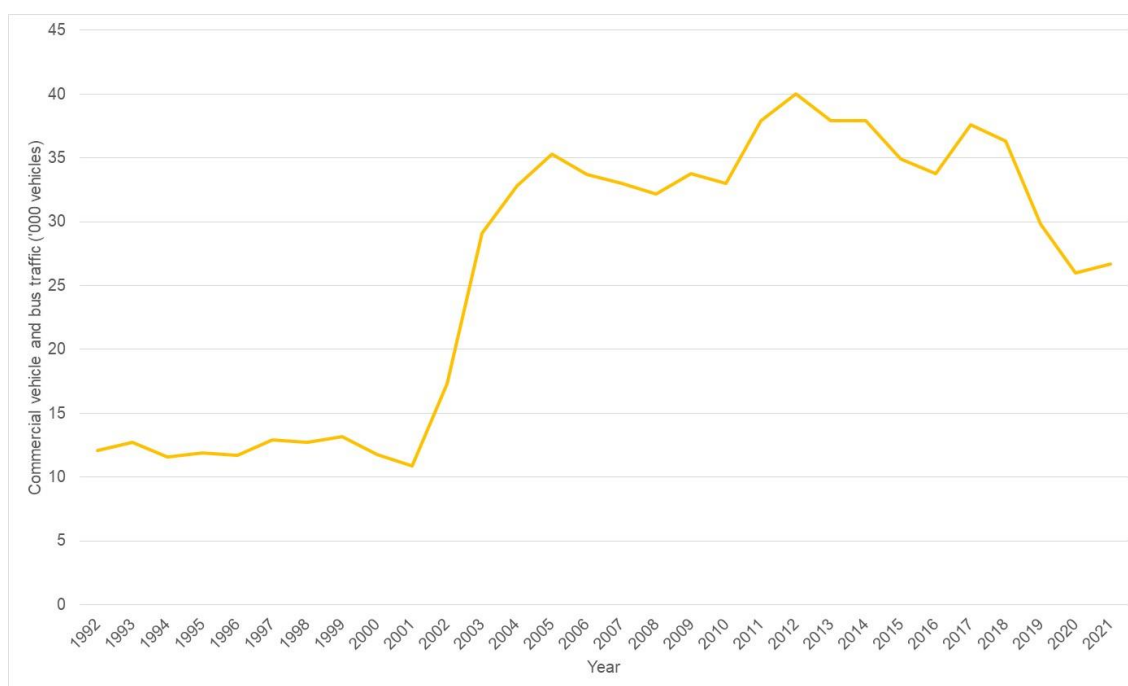


Figure 3.12: Western Ferries’ combined annual CV and buses carryings 1992-2021 (Source: Scottish Transport Statistics 2022, Table 9.16c)

3.5.42 As can be seen from the above figure, Western Ferries’ (predominantly) CV carryings have grown significantly from the turn of the century, in part due to the reduction and ultimate discontinuation of the Gourock – Dunoon vehicle service. Whilst carryings have fluctuated in recent years, the operator has carried circa **30,000-40,000 CVs per annum** since 2004. By way of context, the Hunters Quay to McInroy’s Point route alone carried almost the same number of CVs as all of the CFL ‘Clyde routes’ combined in 2019 (29,800 for Western Ferries against 32,500 for the combined CFL ‘Clyde routes’) (Source: Scottish Transport Statistics). For context, the ‘Clyde routes’ are: Ardrossan – Brodick; Ardrossan – Campbeltown; Colintraive – Rhubodach; Largs – Cumbrae; Claonaig / Tarbert (Loch Fyne – Lochranza);

Tarbert (Loch Fyne) – Portavadie and Wemyss Bay - Rothesay. Only the Aberdeen – Kirkwall / Lerwick route recorded higher CV volumes than Western Ferries in 2019, and this route has major freight flows in agriculture, aquaculture and project-related cargo for major construction works in both Orkney and Shetland.

Key Point: Whilst Western Ferries do not publish CV lane metre (LM) data, it is evident based on the overall volume of CVs carried that LMs per capita for Cowal would be significant and amongst the highest in Scotland.

Dependency rating

3.5.43 All freight travelling between Cowal and Inverclyde is moved either by road or by Western Ferries, although there is understood to be some freight which also moves via Bute in one direction. Whilst Cowal evidently has a freight dependency, the evidence highlights that this is being met by Western Ferries and the road network, so there is no identified need for further government intervention. It is therefore inappropriate to define a dependency rating for it.

Tourism

3.5.44 Dunoon was a traditional day-trip and short-break tourist destination in the years before low-cost air travel. Whilst this role is now much diminished, tourism remains an important industry for the town, whilst Cowal more generally is a popular tourist destination and also hosts the annual Cowal Games. This section considers the RSM tourism indicators.

Indicator 10: Percentage employed in tourism

3.5.45 The figure below displays the proportion of **workplace** jobs BRES sector I: 'Accommodation and Food Service Activities', as proxy for the tourism industry.

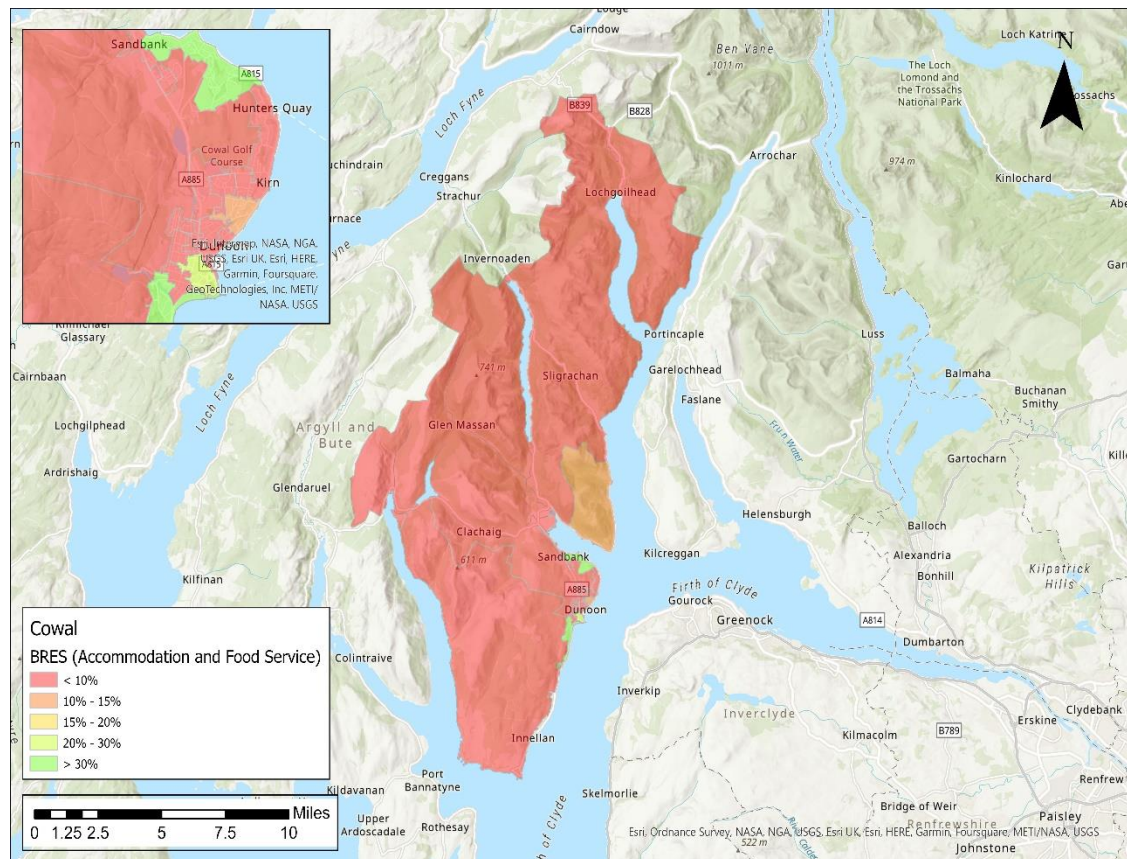


Figure 3.13: Proportion of workplace jobs in 'Accommodation and Food Service Activities' (BRES, 2021)

- 3.5.46 As can be seen from the above figure, there are major employment concentrations in tourism-related businesses in Dunoon town centre and also in Sandbank, where Hunters Quay Holiday Village and Holy Loch Marina are located. Neighbouring Blairmore has 10-15% of workplace jobs in 'Accommodation and Food Service Activities'.
- 3.5.47 The table below summarises the share of **workplace** employment in 'Accommodation and Food Service Activities' in the 'Dunoon and Rothesay' TTWA relative to the HITRANS and Scottish averages:

Table 3.5: Proportion of workplace jobs in 'Accommodation and Food Service Activities' – Dunoon and Rothesay, HITRANS and Scotland (Source: BRES, 2021)

Workplace share	Proportion employed in 'Accommodation and Food Services'
Dunoon and Rothesay	12%
HITRANS	10%
Scotland	7%

- 3.5.48 This analysis highlights that 'Dunoon and Rothesay' has a higher proportion of workplace jobs in tourism or tourism-related / impacted businesses than the HITRANS average. This is significant given that the HITRANS region itself has a strong tourism industry and a proportion of employment in that industry which exceeds the national average. Whilst the figures for the area may be disproportionately influenced by the tourist industry in Bute, it does demonstrate that there is a significant tourism market in Cowal from a workplace employment perspective.

Key Point: The TTWA and BRES data highlight a significant concentration of workplace jobs in tourism-related industries in Dunoon and Sandbank.

Indicator 11: Share of summer patronage versus share of population

- 3.5.49 In the 12 months from October 2021, the CFL Dunoon – Gourock route carried **194,440** passengers. Of these almost two thirds (**64%**) were carried in the summer (April – September inclusive), with the remaining **36%** carried in the winter. This highlights that there is a summer tourism uplift layered on top of the core demand. The seasonal variation on the Gourock – Dunoon route, despite being significant, is though less than on many other routes in the Clyde and Hebrides due to the higher baseload of regular users.
- 3.5.50 It should once again be noted that the majority of tourist traffic is carried by Western Ferries. However, the Dunoon – Gourock route plays an important role for rail-based visitors (particularly daytrippers).

Key Point: Around two thirds of passengers on the Dunoon – Gourock route are carried in the summer months (April – September). The route plays a particularly important role for daytrippers arriving at Gourock by rail.

Dependency rating

- 3.5.51 The review of the evidence highlights that Cowal does have a tourism dependency as defined by the RSM. There is a significant proportion of Cowal residents employed in tourism-related businesses, whilst two thirds of route passengers are carried in the summer months.
- 3.5.52 As with commuters, the CFL Dunoon – Gourock route currently fulfils a specific role for train-based foot passengers. However, once again, Western Ferries accommodates all car-based tourism and thus a '**Pot B**' rather 'Pot A' dependency is allocated (albeit there is no material

difference between these ‘pots’ in terms of implied service). This dependency only applies in the summer and the route can be considered to have a ‘Pot D’ dependency in winter.

Dependency Summary

3.5.53 The table below summarises the dependencies for the Cowal Peninsula, with specific reference to the CFL Dunoon – Gourock route.

Table 3.6: Cowal – CFL Dunoon – Gourock route dependencies

Dependency	Rating
Commuting	B
Personal	C
Freight	Not applicable
Tourism	B (summer) / D (winter)

Step 2 – Development of the model service

Overview

3.5.54 The second step in Transport Scotland’s RSM process is to define the service profile that fits the community’s dependencies based on the dependencies identified as having a ‘priority need’, and the crossing time (in minutes).

3.5.55 Tables 3.7-3.10 (summer) and Tables 3.11-3.14 (winter) below outline the required service profiles for each dependency identified as having a ‘priority’ need, based on the crossing time.

Table 3.7: RSM Service Profiles for “Commuting” dependency – summer – showing crossing time, in minutes.

Commuting	(0-30)	(31-60)	(61-90)	(91-180)	(181-360)	(360+)
Sailing days	7 days	<i>7 days</i>	<i>Not applicable</i>	<i>Not applicable</i>	<i>Not applicable</i>	<i>Not applicable</i>
Sailings per day	Freq. Peak	<i>Freq. Peak</i>	<i>Not applicable</i>	<i>Not applicable</i>	<i>Not applicable</i>	<i>Not applicable</i>
Operating day	Specific	<i>Specific</i>	<i>Not applicable</i>	<i>Not applicable</i>	<i>Not applicable</i>	<i>Not applicable</i>

Table 3.8: RSM Service Profiles for “Personal” dependency – summer – showing crossing time, in minutes.

Personal	(0-30)	(31-60)	(61-90)	(91-180)	(181-360)	(360+)
Sailing days	7 days	<i>7 days</i>	<i>7 days</i>	<i>7 days</i>	<i>7 days</i>	<i>7 days</i>
Sailings per day	Standard	<i>Standard</i>	<i>Std-Ltd</i>	<i>Limited</i>	<i>Limited</i>	<i>Limited*</i>
Operating day	Extended +	<i>Extended +</i>	<i>Extended</i>	<i>Partial</i>	<i>Partial</i>	<i>Partial</i>

Table 3.9: RSM Service Profiles for “Freight” dependency – summer – showing crossing time, in minutes.

Freight	(0-30)	(31-60)	(61-90)	(91-180)	(181-360)	(360+)
Sailing days	7 days	<i>7 days</i>	<i>7 days</i>	<i>7 days</i>	<i>7 days</i>	<i>7 days</i>
Sailings per day	Frequent	<i>Frequent</i>	<i>Limited</i>	<i>Limited</i>	<i>Limited</i>	<i>Limited*</i>
Operating day	Standard	<i>Standard</i>	<i>Specific</i>	<i>Specific</i>	<i>Specific</i>	<i>Specific</i>

Table 3.10: RSM Service Profiles for “Tourism” dependency – summer – showing crossing time, in minutes.

Tourism	(0-30)	(31-60)	(61-90)	(91-180)	(181-360)	(360+)
Sailing Days	7 days	<i>7 days</i>	<i>7 days</i>	<i>7 days</i>	<i>7 days</i>	<i>7 days</i>
Sailings per day	Standard	<i>Standard</i>	<i>Std-Ltd</i>	<i>Limited</i>	<i>Limited</i>	<i>Limited*</i>
Operating day	Extended +	<i>Extended +</i>	<i>Extended</i>	<i>Partial</i>	<i>Partial</i>	<i>Partial</i>

Table 3.11: RSM Service Profiles for “Commuting” dependency – winter – showing crossing time, in minutes.

Commuting	(0-30)	(31-60)	(61-90)	(91-180)	(181-360)	(360+)
Sailing days	7 days	<i>7 days</i>	<i>Not applicable</i>	<i>Not applicable</i>	<i>Not applicable</i>	<i>Not applicable</i>
Sailings per day	Freq. Peak	<i>Freq. Peak</i>	<i>Not applicable</i>	<i>Not applicable</i>	<i>Not applicable</i>	<i>Not applicable</i>
Operating day	Specific	<i>Specific</i>	<i>Not applicable</i>	<i>Not applicable</i>	<i>Not applicable</i>	<i>Not applicable</i>

Table 3.12: RSM Service Profiles for “Personal” dependency – winter – showing crossing time, in minutes.

Personal	(0-30)	(31-60)	(61-90)	(91-180)	(181-360)	(360+)
Sailing days	7 days	<i>7 days</i>	<i>7 days</i>	<i>7 days</i>	<i>7 days</i>	<i>7 days</i>
Sailings per day	Std-Ltd	<i>Std-Ltd</i>	<i>Std-Ltd</i>	<i>Limited</i>	<i>Limited</i>	<i>Limited*</i>
Operating day	Standard	<i>Standard</i>	<i>Standard</i>	<i>Partial</i>	<i>Partial</i>	<i>Partial</i>

Table 3.13: RSM Service Profiles for “Freight” dependency – winter – showing crossing time, in minutes.

Freight	(0-30)	(31-60)	(61-90)	(91-180)	(181-360)	(360+)
Sailing days	7 days	<i>7 days</i>	<i>7 days</i>	<i>7 days</i>	<i>7 days</i>	<i>7 days</i>
Sailings per day	Frequent	<i>Frequent</i>	<i>Limited</i>	<i>Limited</i>	<i>Limited</i>	<i>Limited*</i>
Operating day	Standard	<i>Standard</i>	<i>Specific</i>	<i>Specific</i>	<i>Specific</i>	<i>Specific</i>

Table 3.14: RSM Service Profiles for “Tourism” dependency – winter – showing crossing time, in minutes.

Tourism	(0-30)	(31-60)	(61-90)	(91-180)	(181-360)	(360+)
Sailing Days	7 days	<i>7 days</i>	<i>5 days</i>	<i>5 days</i>	<i>5 days</i>	<i>5 days</i>
Sailings per day	Std-Ltd	<i>Std-Ltd</i>	<i>Std-Ltd</i>	<i>Limited</i>	<i>Limited</i>	<i>Limited*</i>
Operating day	Standard	<i>Standard</i>	<i>Standard</i>	<i>Partial</i>	<i>Partial</i>	<i>Partial</i>

The definitions for the profiles of sailings per day and operating day are provided in Table 3.15 below.

Table 3.15: RSM Service Profile Definitions by sailings per day

Frequent	Constant service throughout the day (20+)
Freq. Peak	Frequent core hours and then regular (>8)
Standard	Regular service throughout the day (6-8)
Std-Ltd	Limited service throughout the day (3-5)
Limited	1-2 sailings per day (*denotes 1)

Table 3.16: RSM Service Profile Definitions by operating day

Extended +	More than 14 hours
Extended	Up to 14 hours, 6 am to 8 pm
Standard	11 hours, 7 am to 6 pm
Specific	At peak times, not prescribed
Partial	No normal operating day

3.5.56 The overall service profile is determined by examining the individual service profiles for the identified dependencies (i.e., those scoring 'A' or 'B', there is no distinction in practice) and using the service profile from whichever one has the greatest requirements. Note that **this is a binary exercise where frequency and the length of the operating day are defined by the pre-determined criteria set within the Transport Scotland RSM process.**

Model Service

3.5.57 The resulting model service for Cowal, **in relation to the CFL Dunoon – Gourock service** is shown in the table below:

Table 3.87: Summary of CFL Dunoon – Gourock model service

Dependency	Rating	Sailing days	Sailings per day	Operating day (Summer)	Operating day (winter)
Commuting	B	7 days	Freq. Peak	Specific	Specific
Personal	C	<i>Not applicable</i>	<i>Not applicable</i>	<i>Not applicable</i>	<i>Not applicable</i>
Freight	<i>Not applicable</i>	<i>Not applicable</i>	<i>Not applicable</i>	<i>Not applicable</i>	<i>Not applicable</i>
Tourism	B (Summer) / D Winter	7 days	Standard	Extended+	<i>Not applicable</i>
Summer	<i>Not applicable</i>	7 days	Freq. Peak	Extended+	<i>Not applicable</i>
Winter	<i>Not applicable</i>	7 days	Freq. Peak	<i>Not applicable</i>	Specific

Step 3 - Define the current ferry service profile

Overview

3.5.58 Step 3 in the RSM process requires the current service to be defined in terms of sailing days, sailings per day and length of operating day.

3.5.59 The RSM guidance suggests that the definition of the current ferry service should take account of both summer and winter timetables. The review of the Dunoon – Gourock timetables presented in Chapter 2 highlighted that the timetable is broadly consistent year-round, albeit the service does reduce to a one vessel operation for a period over the winter during the drydock period.

Current Service

3.5.60 Using the RSM definitions, the current CFL Dunoon – Gourock service is described below:

- Seven days per week, year-round.
- Frequent constant service (20plus) throughout the day.
- Two sailings per hour Monday – Thursday, 06:20-12:20 and 15:20-21:40
- One sailing per hour Monday – Thursday 12:20-15:20 and 21:40-23:35

- Friday and Saturday follows the same pattern as above but has additional departures ex. Gourock at 23:40 and 01:00
- One sailing per hour on Sunday 08:20-22:20
- Operating hours are 17 hours 15 minutes Monday-Thursday, 19 hours 30 minutes Friday and Saturday, and 14 hours 55 minutes on Sunday.

3.5.61 In summary:

- The CFL Dunoon – Gourock route generally operates on a two sailings per hour frequency Monday to Saturday, the exceptions being: (i) between 12:20-15:20; and (ii) after 21:40 in the evening.
- Sunday frequency is hourly across the day, with the service operated by a single vessel.
- The length of the operating day matches that offered across any route in Scotland, with a circa 17-hour day Monday to Thursday and 19h 30m operating day on a Friday and Saturday.
- The Sunday operating day is shorter, but this is common with public transport networks across the United Kingdom.

Step 4 – Comparison with current services

3.5.62 This step requires a comparison between the proposed and current service profiles to identify whether gaps exist in service provision. This is again a largely prescribed process within the RSM guidance.

Gap Analysis

3.5.63 The RSM methodology advises the use of a five-point scale to identify gaps, as follows:

- **Substantial under provision** – where current provision is at least two ‘service definitions’ short of model provision – e.g., current sailings per day is ‘Standard’ and model sailings per day is ‘Frequent’.
- **Marginal under provision** - where current provision is one ‘service definition’ short of model provision – e.g., current sailings per day is ‘Freq. Peak’ and model sailings per day is ‘Frequent’.
- **Sufficient provision** – where current provision equates with model provision.
- **Marginal over provision** - where current provision is one ‘service definition’ greater than model provision – e.g., current sailings per day is ‘Freq. Peak’ and model sailings per day is ‘Standard’.
- **Substantial over provision** - where current provision is at least two ‘service definitions’ greater than model provision – e.g., current sailings per day is ‘Frequent’ and model sailings per day is ‘Standard’.

3.5.64 The table below provides an indication of the gap analysis undertaken.

Table 3.98: CFL Dunoon – Gourock route gap analysis

Dependency	Sailing days	Sailings per day	Operating day (summer)	Operating day (winter)
Model	7 days	Freq. Peak	Extended(plus)	Specific
Current	7 days	Frequent	Extended(plus)	Extended(plus)
Gap analysis	Sufficient provision	Marginal over-provision	Sufficient provision	Substantial over-provision

- 3.5.65 The application of the RSM process identifies over provision in two areas of the current CFL Dunoon – Gourock service:
- The number of **sailings per day** where there is deemed to be *'marginal over provision'*.
 - The **length of the operating day in winter**, where the is deemed to be *'substantial over provision'*.

3.5.66 Each of these areas of over-provision is now discussed in turn.

3.5.67 Ahead of this however, it is important to note that the 'Extended+' sailing day (greater than 14 hours) deemed necessary by the RSM in the summer months does not appear to align with the carryings and capacity utilisation data, particularly given that the sailing day is substantially in excess of 14-hours Monday - Friday. Very low usage of evening sailings to and from Dunoon and low-capacity utilisation overall makes it challenging to argue that such a service is required especially when other means of providing this connectivity in partnership with Western Ferries could be explored.

Sailings per day

3.5.68 The RSM suggests that sailings per day should be **'Freq. Peak – frequent core hours and then regular (>8) sailings per day'**, reflecting the commuting dependency which has been identified.

3.5.69 The RSM guidance does not define 'core hours', nor indeed the criteria by which they should be defined. On the one-hand, this could be thought of as maximising the intensity of the service where demand is greatest, primarily the commuter period of 06:30-09:30 and then again from circa 16:00-18:30. On the other hand however, the total demand across these periods in each direction could be accommodated by a single sailing. This judgement of 'core hours' is therefore one which is entirely subjective and which would also need to reflect the emerging post-COVID-19 changes in the market.

3.5.70 **The material question therefore appears to be whether a two-vessel service can be justified at any point in the day or whether the route should be operated as a single vessel service only.** This will be considered in chapters 5 and 6.

Length of operating day – winter

3.5.71 The RSM suggests that the length of the operating day in winter should be 'Specific – at peak times, not prescribed', reflecting the absence of a 'Personal' or 'Tourism' dependency at that time. Again, the guidance does not clearly define what this means, although it would suggest a sub-11-hour day as the next 'profile' up is 'Standard', which implies an 11-hour day, 07:00-18:00.

3.5.72 The logic of running a ferry service on a short route with a commuting 'dependency' over a sub-11-hour day simply does not hold. **The material question therefore appears to be whether there is a case for limiting the Dunoon – Gourock service to a single crew operation in the winter on both vessels.** A key challenge which would need to be considered is that it could be logistically difficult to scale-up for a circa 17-20 hour operating day in summer and then scale-back to a single crew operating day in winter. This would leave surplus crew and consideration would need to be given as to whether they could then be deployed to different routes or parts of the business in the winter.

3.6 Next Steps

3.6.1 Having defined the current and model service and gaps in provision therein, Chapter 5 sets out options for addressing the over-provision identified through the CNA. The focus for the CFL Dunoon – Gourock route will largely be on:

- The case for a continued two-vessel operation.
- Summer and winter variations in the timetable in terms of the length of the operating day.
- Any opportunities for realising economies of scale with the Kilcreggan – Gourrock route.

4 Rosneath Community Needs Assessment

4.1 Overview

- 4.1.1 As per Cowal, this chapter considers public transport integration, carryings and capacity utilisation and reliability on the Kilcreggan – Gourock route. It thereafter sets out steps 1-4 of the RSM for Rosneath, defining community dependencies, establishing the current and model service and identifying any mismatch between the two. The outcomes of this chapter provide the basis for an appraisal of options (if required) which could address any differential between the current and model service.

4.2 Public Transport Integration

- 4.2.1 As with the Dunoon service, the Kilcreggan ferry connects with rail and bus services to Greenock, Braehead and Glasgow, facilitating access for those living on the Rosneath Peninsula to employment, leisure etc in Inverclyde, Renfrewshire and Glasgow. This section summarises the integration of the ferry service with wider public transport connections on both sides of the crossing.
- 4.2.2 It is important to note that travel from Kilcreggan to Inverclyde as well as Glasgow is likely to be of importance given limited facilities on the Rosneath Peninsula itself. There is also inbound commuting to Rosneath, which acts as a gateway for the Royal Naval Armaments Depot (RNAD) Coulport and His Majesty's Naval Base (HMNB) Clyde at Faslane.

Rail – Gourock

- 4.2.3 There is a relatively high frequency service between Gourock and Glasgow Central, with a mix of all-stop and fast services. Neither the ferry nor the rail service operates on a 'clockface' timetable and thus interchange times between ferry and rail differ by service. **Appendix C** provides a full breakdown of rail connections for ferry arrivals and departures at Gourock (Monday – Saturday), based on the timetable as at 1st December 2022. Key points of note with regards to rail ferry interchange are as follows:

Ferry arrival at Gourock

- Almost all ferries have a connection with a rail service within 25 minutes of arrival, the three exceptions being the 10:06 (32 minutes), 11:06 (32 minutes), and 16:08 (30 minutes).
- Where a sailing connects with a 'fast' train from Gourock (five sailings per day), the end-to-end journey time ranges from **60-74 minutes** depending on the interchange time between ferry and train. The **minimum journey time of 60 minutes** (13 minutes on the ferry, nine minutes interchange time and 38 minutes on the train) is very competitive given the distance covered and the incorporation of a ferry crossing within the trip.

Ferry departures from Gourock

- The pattern in the reverse direction is broadly similar – all bar one ferry service has a rail arrival within 20 minutes of departure, the exception being the 14:28 sailing, where the wait between train arrival and ferry departure is 29 minutes.
- Of the thirteen ferry departures Monday – Friday, seven connect with a fast or semi-fast rail service from Glasgow Central, so rail-based integration is of a high quality.
- The 18:13 ferry from Gourock, the last of the day, will be held for a maximum of 12 minutes to 18:25 in the event of a late arriving train. The relatively short length of time

that the ferry can be held is likely due to the ferry crew approaching their maximum hours for the day.

Key Point: The Kilcreggan – Gourock service connects well with rail services to / from Gourock, despite neither service being operated on a clockface basis. In the ‘to Glasgow’ direction, minimum journey times can be as little as 60 minutes when the ferry connects with a ‘fast’ train.

Bus – Gourock

- 4.2.4 The Kilcreggan ferry connects with largely the same buses at Gourock as does the Dunoon ferry, the main bus service being the 901 Clyde Flyer. Whilst rail will always offer a quicker journey to Greenock and Glasgow, the bus may be attractive to those with a National Entitlement Card or who are travelling to a destination or intermediate stops not served by the train, e.g., Braehead or Largs.
- 4.2.5 The shorter operating day of the Kilcreggan ferry service means that all sailings connect with a 901 Clyde Flyer bus service which, as previously noted, operates on a circa half-hourly frequency throughout the day.

Key Point: All Kilcreggan ferry arrivals and departures connect with a 901 Clyde Flyer bus service at Gourock. However, bus journey times are not competitive with rail and thus the bus market is likely to be largely limited to those with a National Entitlement Card or who are travelling to a destination not served by rail, e.g., Braehead.

Bus – Kilcreggan

- 4.2.6 The overland journey to Glasgow from Rosneath is not as onerous as travelling from Cowal. Kilcreggan is served by a single bus, the 316 operated by Wilsons of Rhu - <http://www.wilsonsofrhu.co.uk/pdfs/316.pdf>. This bus:
- Provides bus-based connectivity to / from the Kilcreggan ferry to settlements in Rosneath and on the east side of Gare Loch (e.g., Helensburgh). This includes HMNB Clyde and RNAD Coulport.
 - Provides bus-based connections for Rosneath residents to Helensburgh Central station, providing access to an alternative rail connection into Glasgow when the ferry is not operating, e.g., in the evening and on Sundays.
- 4.2.7 The 316 operates on a broadly half-hourly frequency Monday – Saturday. It also runs over a circa 16-hour operating day, with the first departure from Kilcreggan at 06:12 and the last arrival at 22:32. There is therefore a connecting bus service for all ferries Monday to Saturday but there is variation in the wait times due to the ferry not operating on a clockface timetable.
- 4.2.8 Sunday frequency is however much poorer, with only six services in each direction calling at Kilcreggan at broadly two hourly intervals between circa 11:30 and 22:30. When combined with the absence of a ferry service from Kilcreggan, Rosneath is very poorly connected on a Sunday.

Key Point: All Kilcreggan ferry services are met by the 316 bus, albeit wait times can on occasions be long in both directions. The bus also provides the alternative connection to Helensburgh (and Helensburgh Central for trains to Glasgow) when the ferry service is not operating, e.g., evenings.

It should be noted that Sunday public transport connectivity to / from Kilcreggan is very poor, with no ferry service and only six return bus services to Helensburgh.

Connectivity analysis

4.2.9 Equivalent connectivity analysis to that carried out for Cowal has also been carried out for Rosneath, again using TRACC. For this analysis, we established travel times by public transport to / from Kilcreggan village centre to Glasgow (George Square) for two scenarios:

- **Scenario 1:** No ferry service between Kilcreggan and Gourock
- **Scenario 2:** Current CFL ferry service between Kilcreggan and Gourock

4.2.10 Runs were undertaken for two time periods, within which **it has to be possible to undertake the entirety of the journey by public transport:**

- **AM:** 07:00-10:00 (Kilcreggan to Glasgow)
- **PM:** 16:00-19:00 (Glasgow to Kilcreggan)

4.2.11 A 5-minute wait penalty has again been applied. The journey times for each scenario by time period are summarised in the table below:

Table 4.1: TRACC analysis outcomes (minutes)

Time Period	Scenario 1	Scenario 2
AM	95	85
PM	100	90

4.2.12 The table demonstrates that the Kilcreggan ferry combined with the rail service from Gourock offers a journey time advantage over the alternative option of taking the bus to Helensburgh Central and catching the train from there. There is a particular advantage for the ferry in terms of in-vehicle times, although combined wait and walk times are slightly longer due to a larger number of interchanges. There would be much more significant journey time advantages for those travelling to e.g., Greenock, Paisley etc and for those commuting to Rosneath from Gourock and the surrounding area.

4.2.13 A review of car-based journey times suggests that the ferry / train combination is competitive with car at peak times given journey time variability on the last few miles into Glasgow. Car is likely to be slightly faster in the off-peak, although this can vary depending on traffic conditions.

Key Point: The connectivity analysis demonstrates that the Kilcreggan ferry combined with the train from Gourock offers a journey time advantage for trips to Glasgow when compared to the alternative bus / train combination.

4.3 Carriings and Capacity Utilisation

Annual carriings

4.3.1 The table below shows the absolute passenger usage for the Kilcreggan - Gourock route.

Table 4.2: Kilcreggan – Gourock – passenger carryings 2012-2022 (Source: Scottish Transport Statistics Table 9.15)

Year	Usage
2012	52,600
2013	57,000
2014	54,400
2015	53,600
2016	55,500
2017	41,200
2018	42,900
2019	41,000
2020	16,056
2021	39,329
2022	47,659

4.3.2 The figure below shows the trend in passenger usage, indexed to 2012:

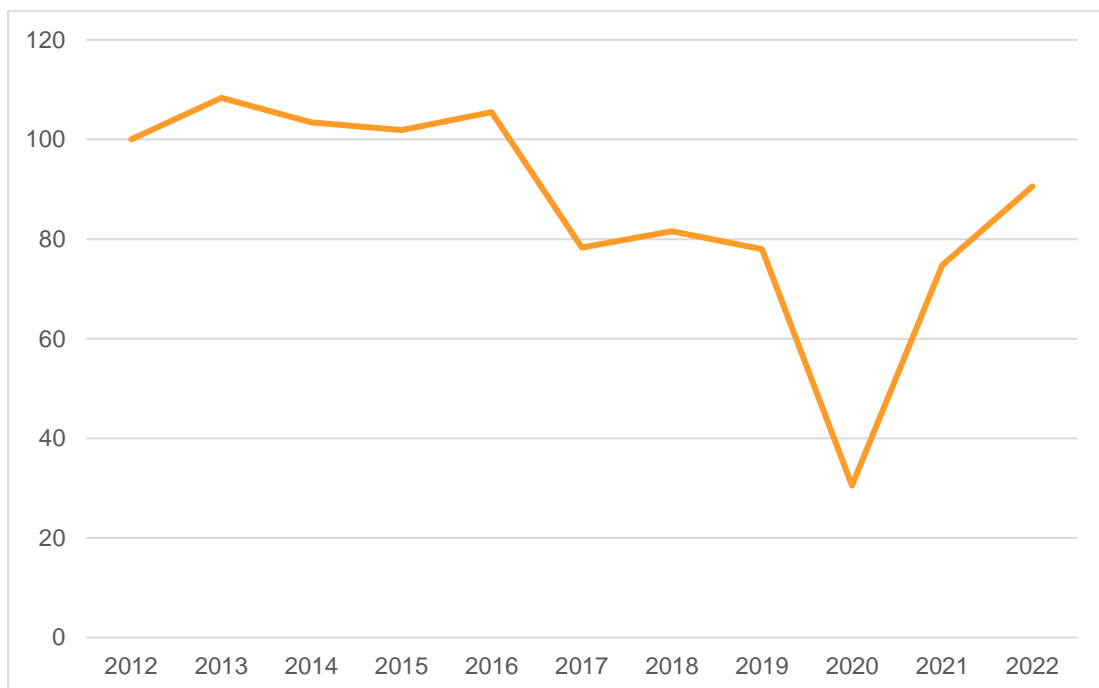


Figure 4.1: Kilcreggan – Gourock – passenger carryings 2012-2022 index (2012=100) (Source: Scottish Transport Statistics 2022, Table 9.15)

4.3.3 The reliability issues associated with the Kilcreggan service led to a marked decline in carryings from 2016 onwards - indeed carryings since 2017 had hovered around 80% of their 2012 level, albeit they reduced substantially during the pandemic, which was common across all routes. The route is now however on a much more sustainable footing since the transfer of responsibility for services to Transport Scotland / CFL in June 2020. This is reflected in passenger carryings for 2022, which recovered to their highest level since 2016, with almost 7,000 more passengers carried than in 2017.

Key Point: Passenger carryings on the Kilcreggan route reduced by just over 20% between 2016 and 2017 due to reliability issues with the service and have not yet recovered their 2016 level (although 2022 recorded the highest carryings since then, despite the impact of COVID-19). Since CFL has assumed control of the service, reliability has improved, which is reflected in the more recent growth in carryings, which are above their immediate pre-pandemic level.

Carryings by month

4.3.4 The figure below breaks down the annual carryings by month for 2022 (note 2022 has been used as it is likely to most closely represent the new settled position on the route):

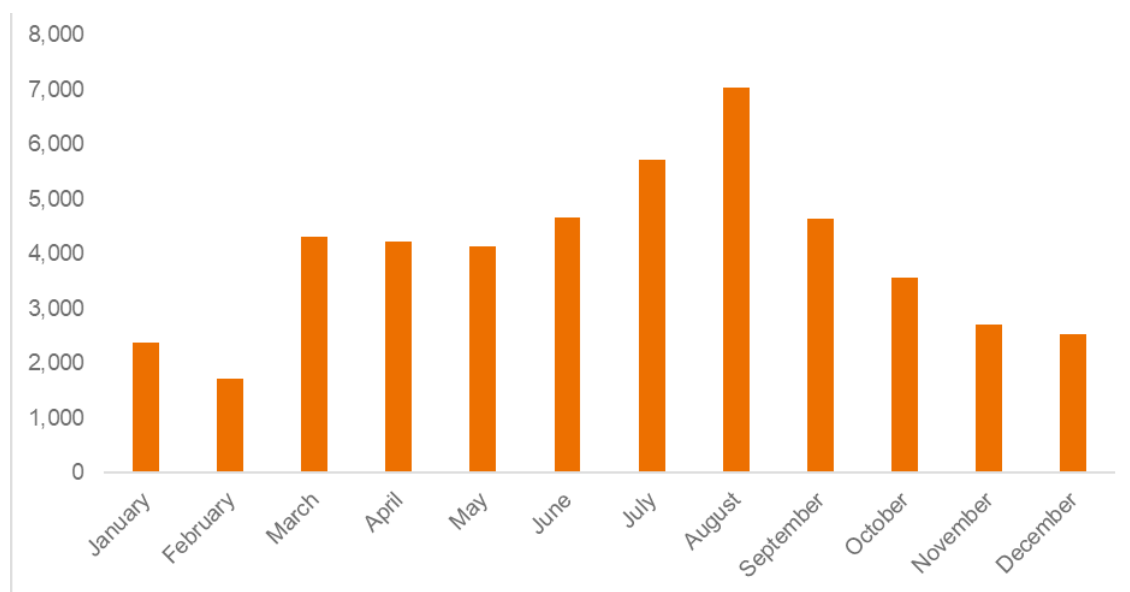


Figure 4.2: Kilcreggan – Gourock, carryings by month, 2022 (Source: CFL)

4.3.5 The main points of note from the above figure are as follows:

- **August** is the peak month for carryings, likely driven by tourist / day-trippers and leisure travel from Rosneath. **July** is the second busiest month, with the two months enveloping the Scottish and English / Welsh school summer holidays and collectively accounting for over a quarter of annual route carryings.
- Whilst summer is the peak period for the route, it is evident that there is a core year-round demand, with circa **1,500-2,500 passengers per month** carried over the period November – February.

Key Point: Whilst there is a pronounced tourism / day-tripper peak in summer, there is broad consistency in monthly carryings across the year (albeit November to February carryings are on average slightly lower), showing evidence of regular, year-round demand.

Carryings by day of the week

4.3.6 The figure below highlights total carryings by day of week in 2022:

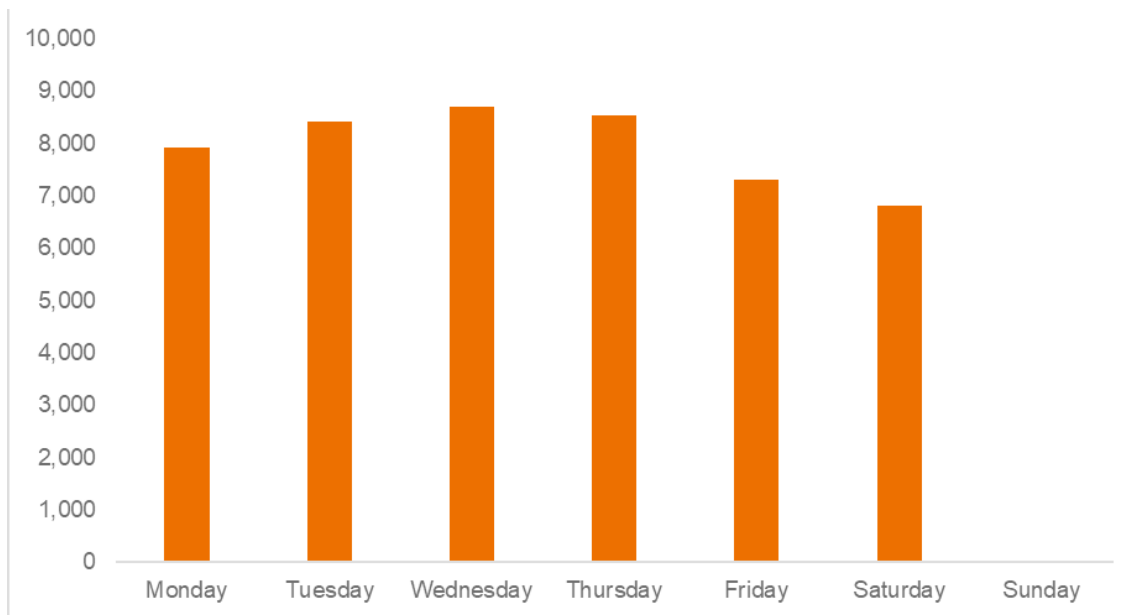


Figure 4.3: Kilcreggan – Gourock, carryings by day of the week - 2022 (Source: CFL)

- 4.3.7 Carryings volumes are broadly similar across weekdays, although slightly reduced on a Friday. Saturday carryings are slightly lower than on a weekday on average. It should though be noted that the Saturday average is likely influenced by much higher carryings in summer and lower carryings in winter.

Key Point: Daily carryings are broadly consistent across the week and highlight the role of the route in supporting commuting.

Carryings by sailing

- 4.3.8 In order to understand the use of the route across the day, CFL provided sailing-by-sailing carryings data for calendar year 2022.
- 4.3.9 All sailings (both directions) from 2022 have been analysed based on their passengers carried per sailing. The figure below shows the number of times the ferry sailed with 0, 1, 2 etc up to the maximum of 100 passengers.

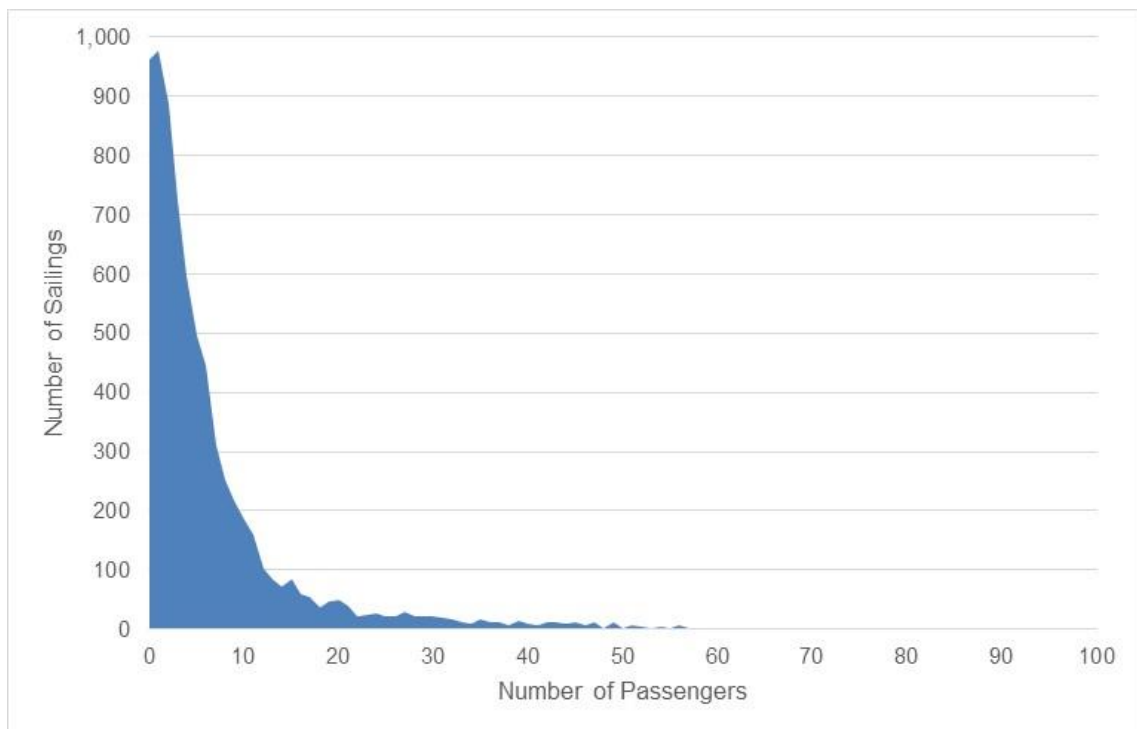


Figure 4.4: Gourock – Kilcreggan Route – number of sailings by passengers carries – 2022 (Source: CFL)

4.3.10 These data show that the very large majority of sailings carry relatively few passengers and the capacity of the vessel is far in excess of what is required, although this may to some degree be due to the seakeeping requirements of the crossing. From these data, it can be further implied that:

- **13% of sailings carried no passengers**
- **49% of sailings carried fewer than 3 passengers**
- **77% of sailings carried fewer than 8 passengers**
- **91% of sailings carried fewer than 16 passengers**
- **Fewer than 1% of sailings carried more than 50 passengers**

Gourock - Kilcreggan

4.3.11 The figure below shows the average carryings by sailing on the Gourock – Kilcreggan route for calendar year 2022:

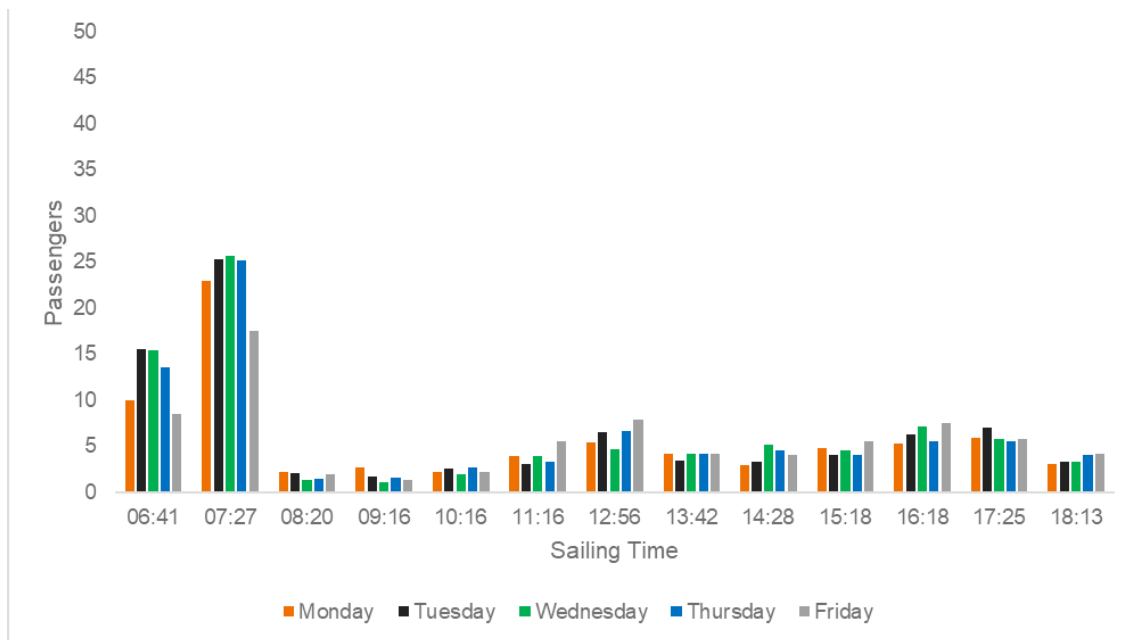


Figure 4.5: Gourock – Kilcreggan, average passengers per sailing by weekday – 2022 (Source: CFL)

4.3.12 The main points of note from the above figure are as follows:

- The first two departures of the day from Gourock, the **06:41** and **07:27** are by some distance the busiest of the day. This likely reflects staff travelling to HMNB Clyde and, to a much lesser extent, RNAD Coulport.
- Outwith these two departures, carryings are typically very low with fewer than 10 passengers on average carried on each sailing, with many sailings operating with fewer than five passengers. There is little variation in the pattern of carryings across the week.
- If the 06:41 and 07:27 northbound commuter sailings are excluded, the average weekday passengers per sailing is **four**.

Kilcreggan – Gourock

4.3.13 The equivalent data are presented for the reverse direction, Kilcreggan to Gourock:

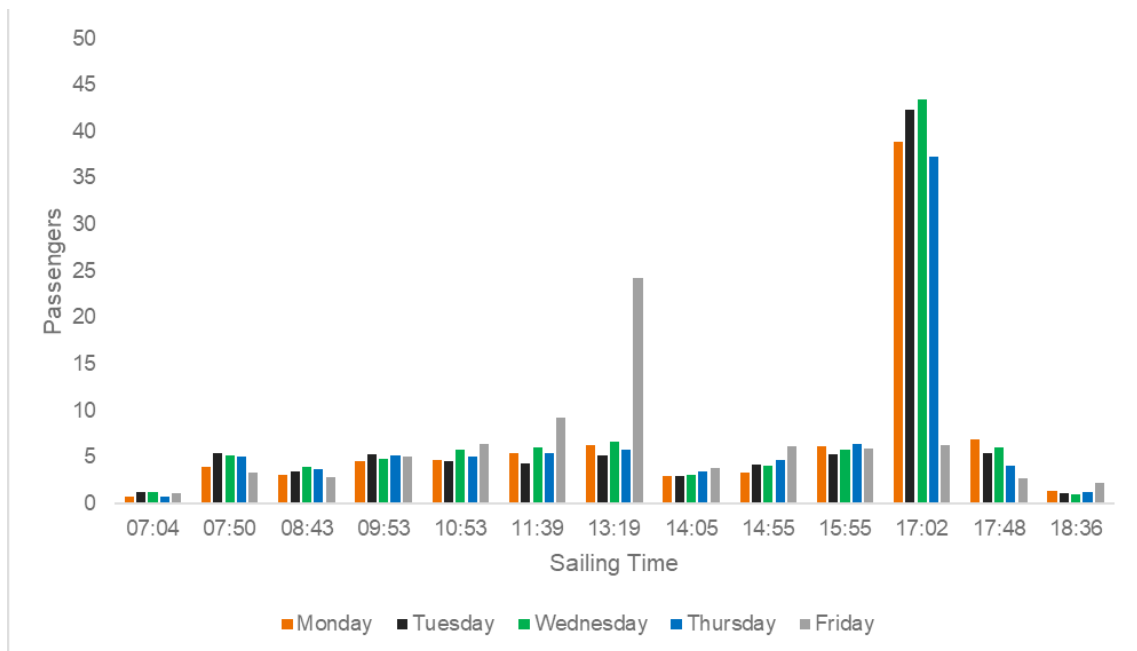


Figure 4.6: Kilcreggan - Gourock, average passengers per sailing by weekday – 2022 (Source: CFL)

- 4.3.14 The Kilcreggan – Gourock direction is broadly the reverse of the ‘to Kilcreggan’ direction, with commuters from HMNB Clyde and RNAD Coulport returning to Inverclyde. Whilst in the morning ‘to Kilcreggan’ direction the demand is split across two sailings, almost all demand in the evening is carried on the 17:02 service.
- 4.3.15 The one outlier in the ‘to Gourock’ direction is a Friday. On this day, the dominant sailing is the 13:19 departure, with only five passengers on average being carried on the 17:02. This is due to an earlier finish time at HMNB Clyde and RNAD Coulport on a Friday.
- 4.3.16 As with the ‘to Kilcreggan’ direction, all other sailings typically carry very few passengers on average. If the 17:02 southbound commuter sailings are excluded, the average weekday passengers per sailing is **five**.

Key Point: The carryings by sailing highlight the inbound flow of commuters to Rosneath in the morning, largely bound for HMNB Clyde and RNAD Coulport. Outwith these peak weekday connections, all other sailings carry relatively few passengers.

4.4 Reliability

- 4.4.1 CFL produce equivalent reliability data for the Kilcreggan route as they do for the Dunoon route (i.e., the same definitions of ‘cancelled’, ‘lateness’ etc apply).

Cancellations

- 4.4.2 The figure below summarises cancellations on the Kilcreggan – Gourock route (both directions) for the previous 12 months (December 2021 – November 2022):

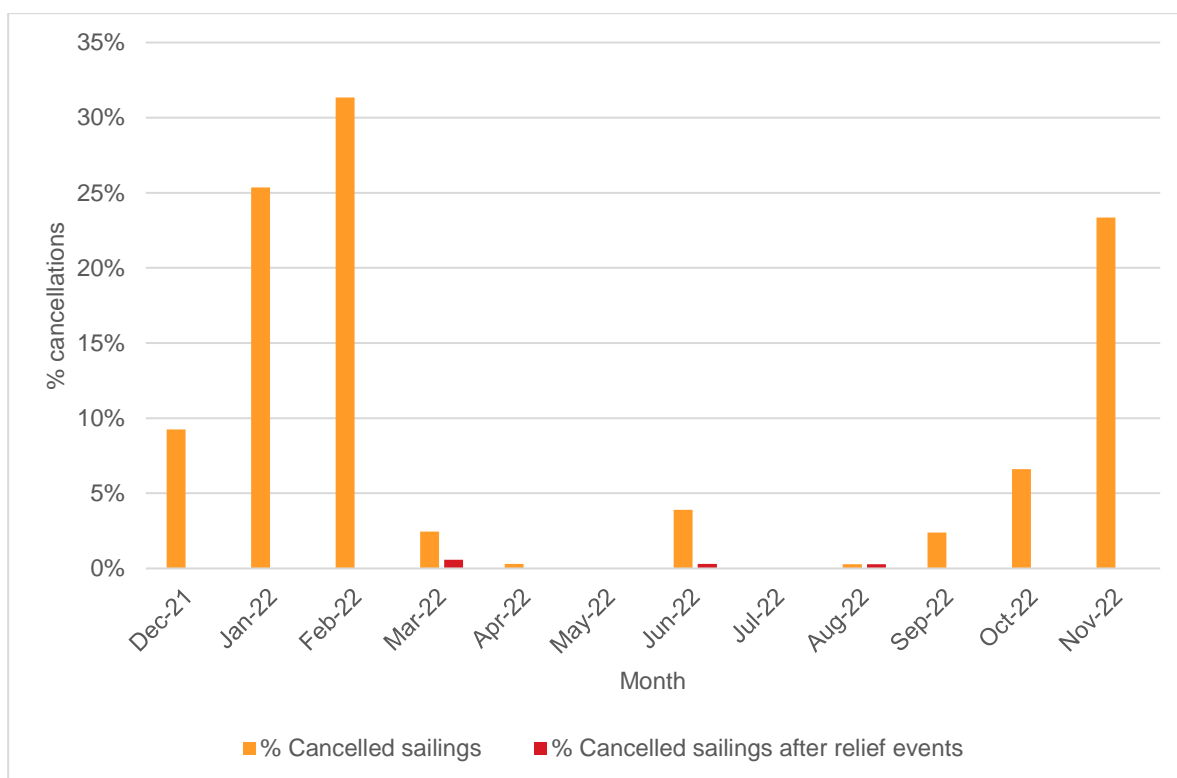


Figure 4.7: Dunoon – Gourock cancellation as a proportion of all scheduled sailings (Source: CFL)

4.4.3 The main points of note from the above figure are as follows:

- There were significant disruptions in January and February 2022, which are in part understood to have been caused by COVID-19 related staff shortages. However, cancellations were also prominent on the Dunoon route in February 2022, highlighting that weather will have been a contributing factor.
- The cancellations in November 2022 were in large part caused by works at Gourock restricting the manoeuvrability of the vessel. This led to the introduction of a temporary timetable and a bus replacement service for certain sailings.
- Despite a series of one-off events which have affected the service in 2022, it is evident that the service is subject to weather-related disruption over the winter months but much less so in the summer months – this is reflected in the orange bars in the above chart, many of which will be weather-related cancellations. Moreover, sailings can also be cancelled due to the aforementioned tidal limitations with the service.

Key Point: The Kilcreggan – Gourock route has been affected by a series of potentially one-off issues over the period December 2021-November 2022 which have impacted its reliability. However, it is nonetheless evident from the data that the service is subject to a higher level of cancellations in the winter, whilst cancellations can also occur due to tidal restrictions.

Punctuality

4.4.4 As with the Dunoon route, analysis of performance data suggests that punctuality on the Kilcreggan – Gourock service is much less of an issue. When the service operates, it generally does so on time (on average, only 0.25% of sailings in the year December 2021 to November 2022 were late).

4.5 RSM Steps 1-4 – Rosneath

- 4.5.1 This section applies the Transport Scotland RSM methodology to the Rosneath Peninsula.
- 4.5.2 Unlike the Cowal routes, there has been no recent primary research on the Kilcreggan route, a particularly important issue given the range of factors that have affected route performance in recent years. The most recent survey work was carried out as part of the *Ferries Review* in 2009 and for a route specific study in 2011. To address this gap, a short online travel behaviour survey was undertaken in May 2023 to refresh the understanding of who is using this route, why and how often.
- 4.5.3 The following points should be noted with regards to the survey data:
- The research was undertaken in May 2023 and so reflects post-COVID-19 conditions, unlike the Cowal survey outlined in the previous chapter.
 - The survey received **358** responses on a **self-selecting basis**, and so we do not know how representative this sample is of the Rosneath and Inverclyde (and beyond) communities.
 - Connected to the above point, **72% (n=257)** of respondents indicated that they live to the north of the Clyde, including **253** within the **G84 postcode** sector which covers the Rosneath Peninsula down to Helensburgh. On the Rosneath Peninsula, there has been much community attention paid to proposed pier upgrades at Kilcreggan in recent months. It is unknown whether the balance of respondents living north and south of the Clyde provides a true profile of users or whether a disproportionate number of Kilcreggan residents have responded to the survey given wider developments there.
 - In analysing survey responses, it was evident that there was some confusion as to the meaning of respondents' 'final destination', with a large number of respondents indicating their home area as their final destination. This impacted the responses received to questions relating to travel to / from arrival and departure ports. A disproportionately large number of people also noted their final destination as the ferry port, and so it is considered that some people have confused the end of the ferry journey as their 'final destination'.
 - Where appropriate, responses have been weighted by trip frequency.

Step 1: Identify the dependencies of the community

- 4.5.4 As the steps in the RSM process are set out in some detail in Chapter 3, they are not repeated in this chapter.

Commuting and frequent business use

Indicator 1: Island to mainland crossing time (in minutes)

- 4.5.5 The route crossing time is **13 minutes**. As noted in Chapter 2, for journeys to Glasgow from Kilcreggan, the combined ferry and rail journey time is in all cases quicker than the overland equivalent via Helensburgh.

Indicator 2: Percentage of households who use the ferry service for commuting purposes and are also high frequency users

- 4.5.6 Commuting was by some distance the dominant travel purpose identified in the Kilcreggan – Gourock survey. In summary, when weighted for trip frequency:
- For those living north of the Clyde, commuting to / from place of work accounted for **43% (n=10,274 trips p.a.)** of all trips on the ferry.

- For those living south of the Clyde, commuting to / from place of work accounted for **71% (n=9,360 trips p.a.)** of all trips on the ferry. However, this accounts for a much larger proportion of overall journeys than those made from the north of the river. This reflects the commuting demand to / from HMNB Clyde and RNAD Coulport.

Key Point: Commuting is by some distance the dominant journey purpose when using the Kilcreggan-Gourock ferry service, amongst those surveyed, particularly for those travelling from Gourock to Kilcreggan.

Travel-to-work

- 4.5.7 In order to validate the potential use of the ferry for commuting purposes, 2011 Census travel-to-work data was analysed. Whilst now very dated, it is still the most recent national snapshot of travel-to-work behaviour.
- 4.5.8 As with Cowal, the data geography with respect to Rosneath is imperfect: the entire peninsula is covered by a single data area – ‘Garelochhead’ – and thus it is not possible to separate out the travel-to-work movements from the south of the peninsula where ferry use is likely to be more common. This is further complicated by inbound flows, most of which are bound for HMNB Faslane and RNAD Coulport, which combine various modes of transport for accessing Gourock, a ferry trip and then onward travel by bus, car driver or car passenger at the Kilcreggan side. The Rosneath data can be summarised as follows:
- There are **63** outbound journeys from ‘Garelochhead’ to Glasgow City Centre made by rail. A small proportion of these may involve using the Kilcreggan ferry and travelling via Gourock. However, the remainder will use Helensburgh Central and potentially other stations on the Argyle and West Highland Lines. The balance of trips by origin station is unknown.
 - There are approaching one hundred public transport (‘bus / coach’) travel-to-work journeys between Inverclyde and ‘Garelochhead’. It is assumed that almost all of these journeys are destined for RNAD Coulport or HMNB Faslane and **make use of the Kilcreggan ferry**, either connecting with a bus service on the Rosneath side or making use of a second vehicle parked at Kilcreggan (or being a passenger in a second vehicle).
- 4.5.9 The monthly and daily carryings profiles do suggest that there is a base commuting demand throughout the year. Moreover, the individual sailings-based carryings also point towards a commuter market to RNAD Coulport and HMNB Faslane, with tidal flows to Kilcreggan in the morning and the reverse flow in the evening.

Key Point: It is difficult to determine the exact scale of overall commuting from the Rosneath Peninsula given the data geography. However, it appears likely based on the primary research that there is a rail commuter market to Glasgow (particularly from Kilcreggan itself), with at least some trips connecting via the ferry and Gourock railway station. Significantly however, there is a larger inbound flow of staff travelling to RNAD Coulport and HMNB Faslane, and therefore a dependency on the ferry to support this travel.

Mode of travel-to-work

- 4.5.10 The above origin-destination analysis is largely supported by mode of travel-to-work analysis, as highlighted in the figure below. Note that the mode of travel-to-work is reported at datazone level, a more spatially disaggregate level than the origin-destination data, which is reported at intermediate geography level.

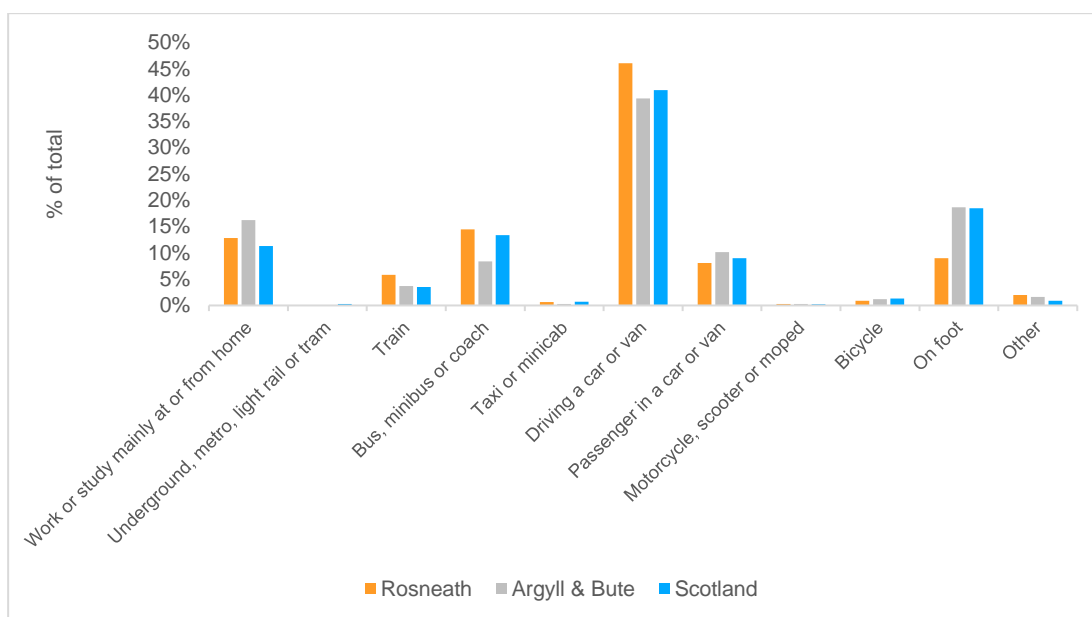


Figure 4.8: Main mode of travel-to-work (Source: Census 2011)

4.5.11 The key points from the above figure are as follows:

- The proportion of residents in the Rosneath Peninsula who use the train as their main mode of travel-to-work is double the national average, which highlights the importance of the ferry connecting at least a proportion of these residents to Gourock (although some, and likely most, will travel via Helensburgh Central).
- ‘Other’ is marginally higher than the national average in Rosneath, which likely reflects those who consider the Kilcreggan ferry to be their main mode of travel-to-work.

Key Point: Whilst difficult to draw direct conclusions from the data, it is clear that the ferry services from Kilcreggan play some role in connecting labour to jobs. The ferry offers the quickest connection from Kilcreggan to Glasgow City Centre, in addition to Greenock and Paisley and from the Rosneath Peninsula more generally.

Indicator 3: Percentage of households who use the ferry service for business purposes and are also high frequency users

- 4.5.12 The survey found that **4% (1,608 trips p.a.)** on the Kilcreggan – Gourock route were for ‘business / self-employed / employer’s business’ purposes. Of these trips, **67% (n=1,070 trips p.a.)** originate on the Rosneath side of the crossing.

Key Point: There is relatively little business travel on the Kilcreggan ferry given the limited industry in the village itself and the accessibility of the Rosneath Peninsula by car.

Dependency rating

- 4.5.13 The pattern of carryings on the ferry and the route user survey does suggest that commuting is a primary purpose of this route. Somewhat unusually for communities of this nature, there is a two-way flow of Kilcreggan residents travelling for work and commuters travelling to the peninsula to access RNAD Coulpport and HMNB Faslane. For this reason, this route is classed as having a ‘**Pot B**’ dependency.

Personal

Indicator 4: Population

- 4.5.14 2,991 people are estimated to reside within the Rosneath Peninsula according to the National Records of Scotland Small Area Population Estimates 2021.

Indicator 5: Percentage of households who use the ferry services for health-related purposes

- 4.5.15 Kilcreggan and Rosneath more generally is part of NHS Highland. There is a General Practice in Kilcreggan but travel off the Rosneath Peninsula is required for all other medical needs. Patient travel from Rosneath, both in terms of destination and mode of travel, is not well-understood.
- 4.5.16 The survey suggests that **5% (n=1,784 trips per annum)** of all trips on the Kilcreggan ferry are for health visits. As would be expected, the Rosneath Peninsula is the origin for almost three quarter of these trips (indeed, it would be expected that this figure would be higher given that there are likely to be few health visits to Rosneath, so this may reflect an inaccuracy in how respondents have answered the question, e.g., visiting an unwell resident or health service providers selecting this option).

Indicator 6: Frequency profile for all travel using the ferry service

- 4.5.17 Respondents were asked for what purpose they mainly use the Kilcreggan ferry, and how frequently they travel for this purpose. Journey purpose data were **weighted by trip frequency** to estimate the purpose split of trips made using the ferry.

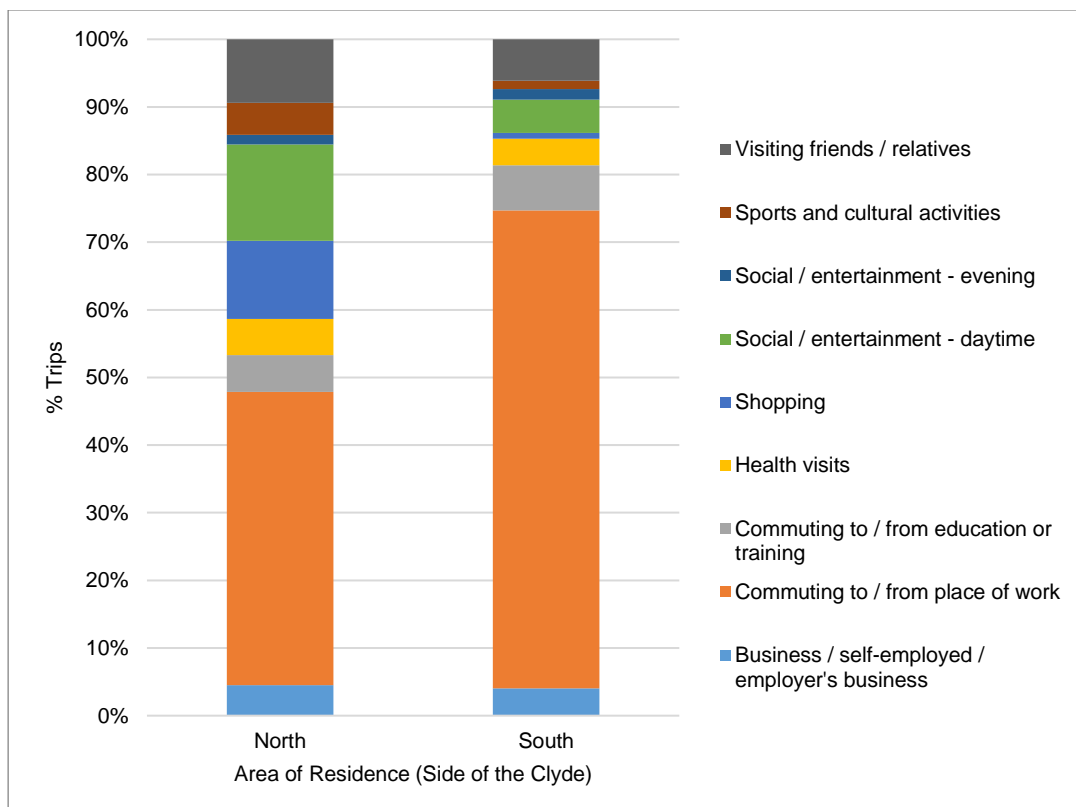


Figure 4.9: Kilcreggan – Gourrock ferry – main journey purpose

- 4.5.18 The main points of note with regards to journey purpose are as follows:

- In terms of the number of trips, the most common trip purposes for those living to the north of the Clyde outwith commuting are daytime social / entertainment (**14%, n=3,370 trips p.a.**) and shopping (**12%, n=2,742 trips p.a.**).
- Only **18%** of journeys made from the south of the river are for a purpose other than travelling to work, education or for business. Of these, visiting friends and relatives (**6%, n=814 trips p.a.**) and social / entertainment – daytime (**5%, n=648 trips p.a.**) are the most common travel purposes, but absolute volumes are low.

Key Point: In the 'to Gourock' direction, the ferry plays an important role in facilitating travel for a wide range of leisure purposes.

Dependency rating

- 4.5.19 Whilst one of the main reasons for passengers using the Kilcreggan – Gourock route is for personal business and leisure purposes, the allocation of a 'Personal' dependency to the route would imply an 'Extended+' operating day (i.e., more than 14 hours), which would represent a major ramp-up in the service in the face of very low demand. For this reason, a '**Pot C**' dependency is allocated.

Freight

- 4.5.20 Unlike Cowal which has a reasonably large freight market served by Western Ferries, there has never been a car ferry service between Rosneath and Inverclyde. Freight arrangements for businesses in Kilcreggan and Rosneath more generally will be served as part of a wider trunk distribution network covering Helensburgh, Lomond and Argyll & Bute. The market is too small to merit moving freight on a car ferry from Inverclyde with the cost that this would entail. This 'dependency' (and thus 'Indicators 7-9') is therefore not relevant in this context.

Tourism

- 4.5.21 Like Dunoon, Kilcreggan and other settlements around the Rosneath Peninsula were historically part of the Firth of Clyde day tripper and short-break market. Again, whilst this market is now much diminished, tourists do continue to travel to Rosneath for a range of purposes including cycling, events etc, although the balance of this travel between car, bus and ferry is not well understood.

Indicator 10: Percentage employed in tourism

- 4.5.22 The figure below displays the percentage of the workplace jobs employed in BRES sector I: '*Accommodation and Food Service Activities*', as a proxy for the tourism industry.

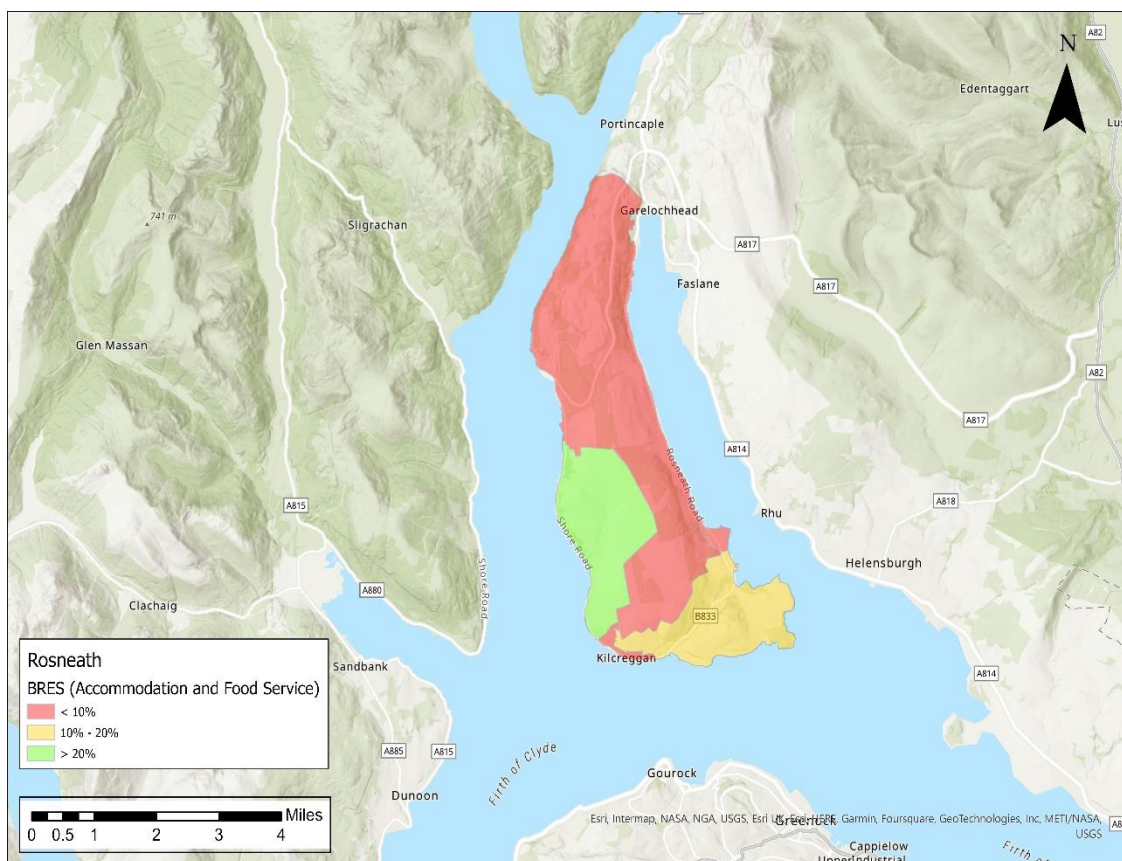


Figure 4.10: Proportion of workplace jobs in 'Accommodation and Food Service Activities' (BRES, 2021)

- 4.5.23 As can be seen from the above figure, there are in relative terms significant workplace employment concentrations in tourism-related businesses in the south and west of the Rosneath Peninsula. This is where the majority of self-catering and serviced accommodation is located, together with associated leisure facilities and pubs / restaurants. Whilst however significant in proportional terms, absolute numbers employed in this sector are extremely small, with RNAD Coulporth being by some distance the dominant employment site. Indeed, only **3%** of total workplace employment in the peninsula is in 'Accommodation and Food Service Activities', which compares to the Scotland average of **7%**.
- 4.5.24 From a TTWA perspective, Rosneath is grouped with 'Dumbarton and Helensburgh' and therefore any local insights will be drowned out by these much larger settlements.

Key Point: The BRES data indicate that tourism accounts for a small proportion of workplace employment overall in the Rosneath Peninsula, although there are several important tourism businesses in the area, e.g., Rosneath Castle (holiday) Park.

Indicator 11: Share of summer patronage versus share of population

- 4.5.25 In the calendar year 2022, the Kilcreegan Gourrock route carried **47,659** passengers. Of these almost two thirds (**64%**) were carried in the summer (April – September inclusive), with the remaining **36%** carried in the winter. That said, major disruptions to services in January and February 2022 depressed winter carryings to some degree. The analysis of carryings data from previous years highlights that the majority of carryings are in the summer, but the proportions are perhaps not quite as stark as for the year just past.
- 4.5.26 July and August are however undoubtedly the peak months. In the 2022, **27%** of total annual carryings were accounted for by these two months. This highlights that there is a summer

tourism uplift layered on top of the core demand. The seasonal variation on the Kilcreggan - Gourock route, despite being significant, is less than on many other routes in the Clyde and Hebrides due to the high baseload of commuters.

Key Point: The majority of annual carryings (64%) on the Kilcreggan – Gourock route are in the summer months (April to September). Whilst the figure for the last year may be distorted by one-off reliability issues in winter, it is evident that there is a significant peak in ferry usage in the school holiday months of July and August, pointing towards high levels of daytripper tourism in both directions.

Dependency rating

- 4.5.27 Whilst there is evidence of tourism demand for the Kilcreggan – Gourock ferry, the nature and directionality of that demand is not fully understood (the 2023 route survey was undertaken in May and will not capture the peak summer daytripper market). It could consist of a mix of: (i) Rosneath residents travelling to Glasgow and surrounding areas during the school holidays; (ii) daytrippers to the Rosneath Peninsula; or (iii) those staying one or more nights on the Rosneath Peninsula. Each of these markets has very different travel needs.
- 4.5.28 The allocation of a ‘tourism dependency’ for this route would imply an ‘Extended+’ operating day (i.e., more than 14 hours) but it is unclear from the evidence as to whether this is actually required. For this reason, a ‘Pot C’ dependency is allocated. A ‘Pot D’ dependency would apply in winter.

Dependency Summary

- 4.5.29 The table below summarises the dependencies for the Rosneath Peninsula:

Table 4.3: Rosneath community dependencies

Dependency	Rating
Commuting	B
Personal	C
Freight	Not applicable
Tourism	C (summer) / D (winter)

Step 2 – Development of the model service

- 4.5.30 The resulting model service for Rosneath is shown in the table below:

Table 4.4: Summary of Kilcreggan – Gourock model service

Dependency	Rating	Sailing days	Sailings per day	Operating day (summer)	Operating day (winter)
Commuting	B	7 days	Freq. Peak	Specific	Specific
Personal	C	Not applicable	Not applicable	Not applicable	Not applicable
Freight	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Tourism	C/D	Not applicable	Not applicable	Not applicable	Not applicable
Summary	Not applicable	7 days	Freq. Peak	Specific	Specific

Step 3 - Define the current ferry service profile

4.5.31 The RSM guidance suggests that the definition of the current ferry service should take account of both summer and winter timetables. The review of the Kilcreggan – Gourock timetables presented in Chapter 2 highlights that the timetable is broadly consistent year-round. We have therefore focused the definition of the current ferry service on the standard summer timetable.

4.5.32 Using the RSM definitions, the current Kilcreggan – Gourock service is described below:

- Six days per week, year-round.
- Thirteen sailings per day, Monday-Friday, operated broadly at one per hour.
- Twelve sailings per day, Saturday, operated broadly at one per hour.
- Operating hours are 12 hours 8 minutes Monday-Friday and 10 hours 45 minutes on Saturdays.

4.5.33 In summary:

- There are no sailings on the Kilcreggan – Gourock route on a Sunday.
- The service operates on a broadly hourly frequency Monday – Saturday, although there is one sailing fewer on a Saturday because the service commences slightly later.
- The operating day is broadly that which can be delivered by a single crew and facilitates a working day in Rosneath, Inverclyde, Glasgow etc.

Step 4 – Comparison with current services

4.5.34 This step requires a comparison between the proposed and current service profiles to identify whether gaps exist in service provision. This is again a largely prescribed process within the RSM guidance.

Gap Analysis

4.5.35 The table below provides an indication of the gap analysis undertaken.

Table 4.5: Kilcreggan – Gourock route gap analysis

Dependency	Sailing days	Sailings per day	Operating day (summer)	Operating day (winter)
Model	7 days	Freq. Peak	Specific	Specific
Current	6 days	Freq. Peak	Standard	Standard
Gap analysis	Marginal under-provision	Sufficient provision	Marginal over-provision	Marginal over-provision

4.5.36 The application of the RSM process identifies the following with regards to the Kilcreggan – Gourock route:

- ‘Marginal under-provision’ in terms of the **number of sailing days**, given the absence of a seven-day service.
- ‘Marginal over-provision’ in terms of the **length of the operating day**.

4.5.37 Each of these areas of over-provision is now discussed in turn.

Sailing days

- 4.5.38 The RSM implies that communities should have sailings seven days per week where this is wanted, and in this respect the Kilcreggan route is under-provided. From our initial review of shift patterns, it appears possible to deliver a Sunday service within the hours of work regulations, but these are legal maximum hours and may differ from employees' contracted hours.
- 4.5.39 Irrespective, as all sailings would require a subsidy to operate, **the material question is the case for running Sunday services in terms of the outcomes which would be delivered.** Moreover, there would be a question over the extent of any Sunday service – i.e., would it be a near full timetable service as happens on several routes in Shetland or a minimal timetable as happens on several of the short routes in Orkney. It is worth noting in this respect that Rosneath residents can travel by bus and train to Glasgow although, as previously explained, bus service provision to / from Helensburgh on a Sunday is limited.

Length of operating day

- 4.5.40 The RSM suggests that the length of the operating day should be 'Specific – at peak times, not prescribed'. Again, the guidance does not clearly define what this means, although it would suggest a sub-11-hour day as the next 'profile' up is 'Standard', which implies an 11-hour day, 07:00-18:00.
- 4.5.41 As with Cowal, the logic of running a ferry service on a short route with a commuting 'dependency' over a sub-11-hour day simply does not hold. **On this basis, there appears no case for reducing the length of the operating day on the Kilcreggan route. Indeed, potential synergies with the Dunoon route could be considered in terms of providing additional evening sailings at little marginal cost.**

4.6 Next Steps

- 4.6.1 Having defined the current and model service and gaps in provision therein, Chapter 5 sets out options for addressing these gaps in provision. The focus for the Kilcreggan – Gourrock route will largely be on:
- Whether there is a case for delivering a Sunday service and the mechanics of doing so.
 - Any opportunities for realising economies of scale with the CFL Dunoon – Gourrock route, including during the evening.

5 Option Generation and Development

5.1 Overview

5.1.1 Having identified the indicative variations between the RSM current and model service profiles for the Cowal (CFL Dunoon - Gourock route) and Rosneath (Kilcreggan – Dunoon route), this chapter generates and develops options which could address these gaps in provision, with the appraisal of options following in Chapter 6.

5.1.2 The options are split into two themes:

- CFL Dunoon – Gourock route
- Kilcreggan – Gourock, within which is considered potential triangular Dunoon / Kilcreggan – Gourock services

5.2 Option Generation Methodology

5.2.1 In order to provide a degree of structure to the option generation process, we have developed a service typology within which the Cowal and Rosneath routes have been allocated to a 'level'. A variant of this approach was successfully adopted on our previous Outer Hebrides STAG Appraisal study and forms the basis of the emerging new CNA guidance.

5.2.2 The table below sets out the incremental service 'levels' which have been developed for this study.

5.2.3 *Note that the operating day of a single crewed vessel is limited to the maximum hours that can be delivered by a single crew within the hours of work regulations and crew contractual arrangements.*

Table 5.1: Service 'Level' definitions – Dunoon-Gourock (CFL) and Kilcreggan-Gourock

Level	Description	Example
A	Shared single vessel, single crewed	Several routes in Orkney including: Rousay, Egilsay and Wyre; Stromness - Graemsay / Hoy; and Houton – Lyness / Flotta
B	Shared single vessel, with more than a single crew	Uig – Tarbert / Lochmaddy (summer, currently)
C	Dedicated single vessel, single crewed	Various 'small vessel' routes in the CHFS network, e.g., Sound of Barra, Sconser - Raasay, Tayinloan - Gigha etc
D	Dedicated single vessel with more than a single crew	Colintraive – Rhubodach, which uses a shift system to offer an extended operating day
E	Two dedicated vessels, each with a single crew	Wemyss Bay - Rothesay
F	Two dedicated vessels, with one operating with more than a single crew	Several routes on the Shetland inter-island network, e.g., Symbister – Laxo / Vidlin
G	Two dedicated vessels, with both operating with more than a single crew	CalMac Ferries Ltd (CFL) Gourock – Dunoon route

5.2.4 The table below allocates the Dunoon and Kilcreggan routes to their respective 'levels':

Table 5.2: Allocation of Dunoon-Gourock (CFL) and Kilcreggan-Gourock routes to 'Levels'

Service	Level A	Level B	Level C	Level D	Level E	Level F	Level G
Dunoon – Gourock (CFL)	<i>Not applicable</i>	<i>Not applicable</i>	<i>Not applicable</i>	<i>Not applicable</i>	<i>Not applicable</i>	<i>Not applicable</i>	yes
Kilcreggan - Gourock	<i>Not applicable</i>	<i>Not applicable</i>	yes	<i>Not applicable</i>	<i>Not applicable</i>	<i>Not applicable</i>	<i>Not applicable</i>

- 5.2.5 As can be seen from the above table, the **CFL Dunoon – Gourock** route is towards the maximum end of the service level typology, with two dedicated vessels both double crewed across the operating day. It is worth noting for context here that **the CFL Dunoon – Gourock route is the only 'Level G' route in the CHFS bundle.**
- 5.2.6 The **Kilcreggan – Gourock** route is towards the other end of the scale, operating as a single crewed, single vessel service. This is similar to several other shorter and low demand CFL routes.
- 5.2.7 Having allocated the routes to the appropriate level, the options considered in the subsequent section will consider whether there is an evidence-based case to progress through one or more additional 'levels' (up or down). It will also consider potential variations within the levels.
- 5.2.8 It should again be noted here that the focus of the option generation and development process under the RSM methodology is on options which reduce the disparity between the current and model service provision.

5.3 Option Generation - Cowal

- 5.3.1 To recap, the CNA process found that Cowal, with respect to the CFL Dunoon – Gourock route, is 'over-provided' in terms of both frequency and length of operating day in the winter. The options set out below are presented by 'service level' and define different approaches which could be adopted in reducing or eliminating the disparity between the current and model service specifications.

'Level G' Options

- 5.3.2 'Level G' options are those based largely around the current model of service provision, namely a two-vessel service with both vessels double crewed.

Option C1: Continue the service on the current basis

- 5.3.3 This option entails the continuation of the service as per the present day. As well as being an option in its own right, it provides a baseline against which all other options can be compared.

Advantages

- This option would not require any change to operational practices, is well-understood and would be easy to implement.

Disadvantages

- This option would represent over-provision in frequency and the length of the winter operating day in accordance with the RSM.
- The evidence presented in Chapter 2 highlights that utilisation of the CFL Dunoon – Gourock service is very low, and with much of the demand clustered on a subset of services. This leads to significant levels of subsidy - to recap, for the period October 2021 – September 2022, the annual deficit on the route was circa **£3.4m.**

- The implication of the above point is that there is a higher subsidy cost than would be required to provide a service based on the RSM model service. This may indicate that these additional services may represent poor value for money (VfM) and that the public money used could be spent in a different way.

Option C2: Continue to operate the current length of operating day but reduce service frequency

5.3.4 This option is a variation of Option C1, whereby the current two vessel service and length of operating day are maintained, but the frequency of service across the day is reduced.

5.3.5 On paper, there are several sub-options in this respect which include:

- Reducing the sailing frequency to hourly from circa 19:30 onwards, Monday – Friday. This could be done year-round or winter only.
- Redesigning the evening ferry timetable to only provide services which connect with trains at Gourock within a defined wait time, e.g., 10 minutes.
- Designating low utilisation sailings as ‘request only’.

5.3.6 Whilst there are options for reducing service frequency without reducing the operating day or the number of vessels in operation, the scope for doing so is likely to be very limited in practice. The following points should be noted:

- Whilst there is a clear tidal flow on the CFL Dunoon – Gourock route, there is nonetheless a baseload of two-way traffic for most of the day. For this reason, it may be difficult to design a timetable which will meet the needs of both ends of the route in that a lightly used sailing in one direction may be more heavily used in the return direction.
- As the Gourock – Glasgow Central rail timetable is not clockface, it is operationally challenging to plan a regular ferry service around it in terms of minimising interchange times in both directions.
- Request sailings tend to work well for smaller islands, where there is a potentially small one-way flow in the early morning or late evening, meaning the ferry will only typically be booked one way, Whalsay in Shetland for example. This is less likely to be the case on the Dunoon – Gourock route due to the two-way flow and higher base volumes. Moreover, a booking system would have to be introduced on the route.

Advantages

- The primary benefit of this option is that it would allow tailored reductions in service levels where demand is low, whilst maintaining the flexibility to scale-up the service where there is a case for doing so, during the Cowal Games for example. In particular, this would reduce some of the challenges associated with operating materially different summer and winter timetables.
- It would also increase available maintenance time and thus reduce the risk of mechanical failure.

Disadvantages

- Under this option, the double crewing of both vessels would be continued. The cost savings from not running a service are therefore limited to the marginal fuel and pier and berthing dues.

Level 'F' Option

Option C3: Two vessel operation at peak times only

- 5.3.7 This option would involve reducing the second vessel to a single crew operation, although the primary vessel would continue to deliver the current operating day. There are two ways in which this option could be delivered:
- At its most extreme, the second vessel could operate in defined peak hours only (e.g., 06:30-10:00 and 16:00-18:30). The vessel would be tied-up in between these periods unless required to cover lunch, drills and maintenance on the primary vessel. The crew would operate a split shift (either permanently or as part of the shift rotation pattern).
 - The alternative approach would be to operate the second vessel over a standard single crew operating day of circa 12 hours, e.g., 06:30-18:30. This would provide a broadly half-hourly frequency throughout the day, reducing to hourly in the evening.
- 5.3.8 The latter of these two models is by in large that which is used successfully on three of the short routes in Shetland (Bluemull Sound, Whalsay and Yell Sound), where the Council operates a 'day boat' / 'shift boat' system. This provides a near turn-up-and-go service during the day, reducing to a single vessel to meet essential travel needs in the evening.
- 5.3.9 Whilst the option of split shifts may seem attractive from an operational perspective, it would be administratively difficult to operate and could be unattractive to crew, with two short shifts boxing in a long period of inactivity during the day. The cost saving here again is likely to be limited to marginal fuel and harbour dues plus a reduction in headcount to reflect the scaled back second vessel service.

Advantages

- This approach would maximise frequency during the day, providing a near turn-up-and-go service whilst also maintaining peak connectivity. As with other ferry and indeed public transport services across the UK, evening frequency would be reduced.
- This model of service provision has been demonstrated to work effectively on similar short routes in Shetland, providing frequency during the day and essential connectivity in the evening.
- Reducing the second vessel to a single crew means that there would be a cost saving of two crews, together with the fuel and dues associated with current evening sailings.
- This option would also increase available maintenance time and thus reduce the risk of mechanical failure.

Disadvantages

- This level of service provision would continue to offer significant over-capacity during the day and would not address the identified over-provision in the length of operating day in the winter (unless the service offered by the 'shift boat' was scaled back during this period).

'Level E' Option

- 5.3.10 The 'Level E' option would retain a two-vessel service, each with a single crew operation.

Option C4: Two vessel operation at peak times only, single crew day

- 5.3.11 In this option, **both vessels would be reduced to a single crew day**. Again, there are several options in this regard:

- The two vessels could operate a standard 12-hour day commencing at broadly the same time, e.g., vessel 1 could operate from 06:00-18:00 and vessel 2 from 06:30-18:30. This is by and large the model operated on the neighbouring Wemyss Bay – Rothesay route. CFL passengers travelling after 18:30 would use Western Ferries, which would require complimentary connecting shuttle buses or a through bus service if foot passenger connectivity is not to be diminished. It would also be beneficial to incorporate cross-operator ticket acceptance if this could be negotiated. Any such services would also improve local bus connectivity between Dunoon and Hunters Quay, which could cater for a wider range of local journeys.
- The two vessels could operate offset days to provide a slightly longer operating day, e.g., vessel 1 could operate 06:00-18:00 and vessel 2 from 08:00-20:00.
- The first vessel could operate a standard 12-hour day, e.g., 06:00-18:00. The second vessel could operate on a split shift basis to maximise frequency in the peak, whilst providing a slightly longer operating day, e.g., 06:30-12:30 and 15:30-21:30. The practicalities of implementing split shift arrangements should again be noted here.

Advantages

- This approach would maximise frequency, within given parameters, during the day, providing a near turn-up-and-go service whilst also maintaining peak connectivity. As with other ferry (and indeed public transport services across the UK), evening frequency would be reduced. This would assist in addressing the identified over provision within the RSM.
- There would be a cost saving of four crews (associated with both vessels operating with a single crew on any given day), together with the fuel and berthing charges associated with current evening sailings. However, there would be additional costs associated with operating connecting buses in the evening as it is very unlikely these could be provided on a commercial basis. If the bus service travelled through on Western Ferries, this would require a commercial agreement with Western Ferries.

Disadvantages

- This level of service provision would continue to offer significant over-capacity during the day.
- There would be a reduction in evening connectivity for non-car available Dunoon residents, although this could be mitigated through the provision of complimentary connecting shuttle buses to Hunters Quay or Gourock railway station using Western Ferries.

'Level D' Option

C5: Single vessel operation all day

- 5.3.12 This is the first of the options where the service would be reduced to a single vessel operation. Under 'Level D', the current operating day would be maintained, so a broadly hourly frequency service would be offered over that day.

Advantages

- The primary advantage of this option is that it would offer significant revenue and future capital savings, whilst maintaining an hourly service to connect with the train. On the capital side, only one vessel rather than two would be required whilst, on the revenue side, there would be a saving of four crews and the associated operating costs of a second vessel (e.g., fuel, dues, maintenance, insurance etc).

- The single vessel would also continue to deliver a long operating day, thus maintaining connectivity even if reducing frequency.

Disadvantages

- From a passenger perspective, this option would represent a near halving of the service, with the current largely half-hourly service reducing to hourly. Whilst this would align with the RSM and utilisation on the route, it would be perceived negatively by current users and potentially the Cowal community more generally.
- There could be a requirement to secure a secondary vessel in the event of a breakdown and for scheduled refit. Whilst this is common practice on the CFL network, the Dunoon – Gourock vessels are bespoke, at least within the CMAL fleet. This need would therefore either have to be addressed through the deployment of a less suitable vessel (if available, and there are none in the fleet at present) or through sharing with Kilcreggan for the period of refit if the vessels are interchangeable between the routes or through the retention of one of the current passenger vessels as a 'resilience vessel' for this purpose.
 - It should be noted that one option would be to suspend the route during periods of breakdown and refit. Complimentary shuttle buses could be provided to Hunters Quay and McInroy's Point. Indeed, CFL currently has a contract with local bus operators to provide a connection to Western Ferries' services when they have cancellations.
- In order to maintain e.g., evening connectivity, there may be an additional cost associated with providing complimentary shuttle buses to connect with Gourock railway station via Western Ferries' services.

'Level C' Option

Option C6: Single vessel operation, single crew day

- 5.3.13 This final option would represent the most significant reduction in the current service, reducing both frequency and the length of the operating day year-round. Under this option, the CFL Gourock – Dunoon service would be limited to a maximum annualised average of 84 hours per week, providing a circa 12-hour operating day (including start-up and shutdown), say 06:30-18:30. This approach would make this route equivalent to most other short CHFS routes, including neighbouring Kilcreggan.

Advantages

- The primary advantage of this option is that it would offer significant revenue and future capital savings. On the capital side, only one vessel rather than two would be required whilst, on the revenue side, there would be a saving of six crews; the associated operating costs of a second vessel (e.g., fuel, dues, maintenance, insurance etc); and the cost of operating the primary vessel in the evening.

Disadvantages

- From a passenger perspective, this option would represent a very significant diminution of the service, with the current largely half-hourly service reducing to hourly and the truncation of the operating day. This would align with the low utilisation on the route, but it would be perceived negatively by current users and potentially the Cowal community more generally.
- The issues with a vessel to cover breakdowns and refit would also apply here.

Summary

5.3.14 The table below summarises the 'long-list' of CFL Gourock – Dunoon options, including the 'service level' and the impact on frequency and the length of the operating day:

Table 5.3: CFL Dunoon – Gourock service level route options summary

Option	A	B	C	D	E	F	G	Frequency	Operating day
C1: Continue service on current basis	no	no	no	no	no	no	Yes	Unchanged	Unchanged
C2: Continue to operate current length of day but reduce service frequency	no	no	no	no	no	no	Yes	Reduced	Unchanged
C3: Two vessel operation at peak times only	no	no	no	no	no	Yes	no	Reduced	Potentially reduced
C4: Two vessel operation at peak times only, single crew day	no	no	no	no	Yes	no	no	Reduced	Reduced
C5: Single vessel operation all day	no	no	no	Yes	no	no	no	Reduced	Unchanged
C6: Single vessel operation, single crew day	no	no	Yes	no	no	no	no	Reduced	Reduced

5.4 Rosneath

5.4.1 To recap, the RSM-based analysis for Rosneath identified marginal under-provision in relation to the number of sailing days (i.e., no Sunday sailings) but marginal over-provision in relation to the length of the operating day. However, the analysis concluded that the primary question for the options appraisal is whether there is a case for operating a Sunday service. As previously noted in relation to the length of the operating day, there is little logic in truncating the current single-vessel, single crew operating day, and thus this is not considered further here.

Cowal and Rosneath two-vessel service

5.4.2 The CNA also identified the potential for operating the combined CFL Dunoon – Gourock and Kilcreggan – Gourock routes with two vessels rather than three. In effect, this would involve the Kilcreggan vessel operating as the second Dunoon vessel at some or all parts of the day, and thus aligns with the **Cowal single-vessel options C5 and C6**. We have therefore covered these shared vessel options in this section as it is the Kilcreggan vessel which would be 'shared' to strengthen the Dunoon service.

'Level C' Options

5.4.3 'Level C' options are those based largely around the current model of service provision, namely a single service operated by a single crew.

Option R1: Continue the service on the current basis

5.4.4 As per the Cowal options, this option is the current day service, which can be used as the basis for comparison.

Advantages

- This option would not require any change to operational practices, is well-understood and would be easy to implement.

Disadvantages

- None – whilst subsidy is relatively high, the current level of service is arguably the minimum which should be provided for a route of this nature if there is a commitment to operate it. To recap, the subsidy on this route for the period October 2021 - September 2022 was circa £667k, with route revenues accounting 16% of route operating costs.

Option R2: Operate a Sunday Kilcreggan – Gourock service

5.4.5 Rosneath is one of the very few communities served by the ferry network left in Scotland that does not have a Sunday ferry service. This option would seek to deliver that service should the community desire seven-day provision.

5.4.6 The key question with respect to this option is whether a Sunday service can be operated within the available hours of a single crew. As the Kilcreggan service operates exclusively within categorised waters, it is subject to **Merchant Shipping Notice (MSN) 1876 Working Time: Inland Waterways Regulations 2003 as Amended** – the key provisions of this legislation are as follows:

- ‘Working time’ relates to:
 - Any period, including overtime, during which an employee is working
 - Any period during which an employee is receiving training
 - Any additional period which is to be treated as working time for the purpose of these Regulations under a relevant agreement
- Maximum working time is defined as follows – working hours should not exceed:
 - 14 hours in any 24-hour period
 - 84 hours in any seven-day period
 - Working time over a full year (i.e., any 52-week period) should not exceed 2,304 hours
- The employer must ensure that any employee does not work more than 48 hours for any seven-day period, averaged over 52 weeks (i.e., annualised hours)
- In terms of rest periods, workers must have at least:
 - 10 hours in each 24-hour period, of which at least six hours are uninterrupted
 - 84 hours in any seven-day period
- Workers are entitled to 4 weeks of paid leave in each leave year, and also up to 1.6 weeks of additional leave in respect of public holidays (subject to an overall maximum of 28 days).
- Section 17 of MSN 1876 does however make provision for seasonal work, thus facilitating differential summer and winter timetables, as is common with ferry operations across Scotland:
 - A season is defined as no more than 9 consecutive months in any 12-month period in which activities are tied to certain times of the year as a result of external circumstances such as weather conditions or tourist demand

- 5.4.7 The Kilcreggan – Gourock service has a ‘sailing week’ of **71 hours and 44 minutes**, excluding start-up and shut-down. Assuming a daily start-up period of 30-minutes and close down period of 15-minutes, the total operating week is **76 hours and 24 minutes**. This would facilitate a circa **seven-hour day on a Sunday**, although a longer summer Sunday could be operated as long as this was offset with reduced operating hours in winter. It is important to note that these are regulatory maximum hours rather than targets, and crew contracts are likely to be different – the practicalities any such option would therefore have to be worked through in detail with CFL.
- 5.4.8 The assumed timetable with this option is **10:00-17:00 every Sunday throughout the year**.

Advantages

- This option would provide Kilcreggan residents with more frequent public transport access to Glasgow and Inverclyde on a Sunday. This is important for those without access to a car as Sunday bus provision to and from the Rosneath Peninsula is very limited.
- In the summer months, this service would also improve access to the Rosneath Peninsula for day-trippers, cyclists etc.

Disadvantages

- The operation of a Sunday service would evidently increase the cost of operating the route.
- Crew contracts would have to be renegotiated to account for the additional day of operation.
- Argyll & Bute Council would have to provide additional pier staff at Kilcreggan on a Sunday, which would require additional staff or overtime costs.

‘Levels A and B’ Options

- 5.4.9 **Options R3-R5** are defined as ‘Level A’ or ‘Level B’ options as they would involve sharing the single Kilcreggan vessel with another route (Dunoon). The ‘Level A’ or ‘Level B’ definition would depend on whether each option is aligned with Cowal option:
- **Option C5:** Single vessel operation, double crew day (**Level B**)
 - **Option C6:** Single vessel operation, single crew day (**Level A**)
- 5.4.10 This study is not concerned with vessel or infrastructure design, but it is assumed for the purpose of the appraisal of these options that any future vessels as a minimum could work interchangeably between Gourock, Dunoon and Kilcreggan.
- 5.4.11 For context, CFL indicate that the Dunoon – Kilcreggan run would take circa 25-minutes to operate, which suggests a significant proportion of sailing time will be ‘dead-legging’ given the likely limited regular demand for travel between the two settlements.

Option R3: Operate Kilcreggan service via Dunoon in ‘peak’ hours

- 5.4.12 This option would involve operating the current Kilcreggan – Gourock service as a triangular service via Dunoon in ‘peak’ hours, strengthening frequency on the busier Cowal route. Peak hours would need to be defined but are likely to be circa 06:30-09:30 and 16:00-18:30, although any COVID-19 related changes to market demand would need to be accounted for here.
- 5.4.13 There are four main ways that this service could operate (although other variations are possible), as follows:

- Gourock -> Kilcreggan -> Gourock -> Dunoon -> Gourock (effectively a ‘V’ shaped route rather than a triangular route)
- Gourock -> Kilcreggan -> Dunoon -> Gourock
- Gourock -> Kilcreggan -> Dunoon -> Kilcreggan -> Gourock
- Gourock -> Dunoon -> Kilcreggan -> Gourock

5.4.14 Example **morning timetables** are provided for each option in the tables which follow based on crossing and turnaround times in the current route timetables and the CFL stated **25-minute** journey time between Kilcreggan and Dunoon and a **five-minute** turnaround at each port.

Table 5.4: Option 1 – Gourock -> Kilcreggan -> Gourock -> Dunoon -> Gourock

Depart Gourock	Arrive Kilcreggan	Depart Kilcreggan	Arrive Gourock	Depart Gourock	Arrive Dunoon	Depart Dunoon	Arrive Gourock
06:30	06:43	06:48	07:01	07:06	07:31	07:36	08:01
08:06	08:19	08:24	08:37	08:42	09:07	09:12	09:37

Table 5.5: Option 2 – Gourock -> Kilcreggan -> Dunoon -> Gourock

Depart Gourock	Arrive Kilcreggan	Depart Kilcreggan	Arrive Dunoon	Depart Dunoon	Arrive Gourock
06:30	06:43	06:48	07:13	07:18	07:43
07:48	08:01	08:06	08:31	08:36	09:01

Table 5.6: Option 3 – Gourock -> Kilcreggan -> Dunoon -> Kilcreggan -> Gourock

Depart Gourock	Arrive Kilcreggan	Depart Kilcreggan	Arrive Dunoon	Depart Dunoon	Arrive Kilcreggan	Depart Kilcreggan	Arrive Gourock
06:30	06:43	06:48	07:13	07:18	07:43	07:48	08:01
08:06	08:19	08:24	08:49	08:54	09:19	09:24	09:49

Table 5.7: Option 4 – Gourock -> Dunoon -> Kilcreggan -> Gourock

Depart Gourock	Arrive Dunoon	Depart Dunoon	Arrive Kilcreggan	Depart Kilcreggan	Arrive Gourock
06:30	06:55	07:00	07:25	07:30	07:43
07:48	08:13	08:18	08:43	08:48	09:01

5.4.15 This option would provide two additional sailings for Dunoon in the AM peak (relative to a single vessel service). However:

- **Options 1 and 3** would reduce the number of Kilcreggan – Gourock crossings by **two** as the 06:41, 07:27, 08:20 and 09:16 services would not operate.
- **Options 2 and 4** would reduce the number of Kilcreggan – Gourock crossings by **one**, as the 06:41, 07:27 and 08:20 services could not operate.
- With the exception of **Option 1**, all of the permutations presented would lead to an increase in the journey time either to or from Kilcreggan, as well as a virtual ‘dead-leg’ between Dunoon and Kilcreggan.

5.4.16 The pattern in the evening would be broadly similar. The reduction in frequency on an already hourly service from Kilcreggan is likely to be publicly unacceptable, although extending the operating day through ‘Level B’ provision may be considered an acceptable *quid pro quo*, providing a longer operating day in return for reduced frequency. The timetable for the Kilcreggan services would need to facilitate travel to and from HMNB Faslane and RNAD Coulport.

Advantages

- The creation of a triangular route at peak times would supplement a single vessel Dunoon service, providing for example two additional sailings in the AM peak period. However, these sailings would not be at regular intervals and thus may depart close to a preceding or following sailing at Dunoon, thus diminishing the benefit. However, this would only be for 1-2 sailings in each peak.
- If operated in the evening, Kilcreggan would benefit from sailings which it does not currently have, whilst there would be marginal strengthening of the single vessel Dunoon service.
- There would be a new sea-based connection between Kilcreggan and Dunoon, although its value would be very limited as the preferred destinations for both communities are Glasgow (overwhelmingly) and Inverclyde.

Disadvantages

- Kilcreggan would experience a reduction in frequency at peak times. Journey times would also be extended in all but one option, whilst integration with rail services would potentially worsen.
- There would be a lengthy virtual ‘dead-leg’ between Dunoon and Kilcreggan (or vice versa) with most options. In effect, the operator would be accruing cost but generating little or no revenue.

- Residents of both Cowal and Rosneath are likely to find indirect sailings unattractive. Therefore, whilst these connections could be provided, it is debatable whether they would be used, particularly given already very low utilisation on direct sailings.

Option R4: Operate Kilcreggan service via Dunoon in all hours

5.4.17 This option would be an extension of **Option R3**, in that one of the four timetable permutations (or indeed a mixture of these timetables) set out would operate across the full day.

Advantages

- The creation of a triangular route would supplement a single vessel Dunoon service, providing a number of additional sailings across the day. However, based on the current turnaround times, these sailings would not be at regular intervals and thus may depart close to a preceding or following sailing at Dunoon, thus diminishing the benefit. Indeed, potential berth conflicts and their impact on reliability would need to be assessed and addressed.
- If operated in the evening, Kilcreggan would benefit from sailings which it does not currently have, whilst there would be marginal strengthening of the single vessel Dunoon service.
- There would be a new sea-based connection between Kilcreggan and Dunoon.

Disadvantages

- Kilcreggan would experience a reduction in frequency across the day. The timetables set out in **Option R3** highlight that a complete rotation would take between **73 and 91** minutes. The Kilcreggan – Gourock route operates on a broadly hourly timetable (although it is not clockface), which would clearly be impossible to maintain based on the above rotation times.
- Journey times would also be extended in all but one option, whilst integration with rail services would potentially worsen.
- There would be a lengthy ‘dead-leg’ between Dunoon and Kilcreggan (or vice versa) with most options. In effect, the operator would be accruing cost but generating little or no revenue.
- Residents of both Cowal and Rosneath are likely to find indirect sailings unattractive. Therefore, whilst these connections could be provided, it is debatable whether they would be used.

Option R5: Triangular service between Gourock, Dunoon and Kilcreggan (clockwise and anti-clockwise)

5.4.18 This is a somewhat more radical option which would convert the individual Dunoon and Kilcreggan routes into a single triangular route, with one vessel operating clockwise and the other vessel anti-clockwise. Whilst there are other triangular routes in Scotland (e.g., Bluemull Sound, Orkney Outer North Isles), they are operated very differently to what is proposed here. For context, a sample timetable showing five rotations of each vessel is shown below:

Table 5.8.1: Gourock – Dunoon – Kilcreggan two-vessel triangular service – sample timetable for Vessel 1

<i>Depart Gourock</i>	<i>Arrive Dunoon</i>	<i>Depart Dunoon</i>	<i>Arrive Kilcreggan</i>	<i>Depart Kilcreggan</i>	<i>Arrive Gourock</i>
06:30	06:55	07:00	07:25	07:30	07:43
07:48	08:13	08:18	08:43	08:48	09:01
09:06	09:31	09:36	10:01	10:06	10:19
10:24	10:49	10:54	11:19	11:24	11:37
11:42	12:07	12:12	12:37	12:42	12:55

Table 5.9.2: Gourock – Dunoon – Kilcreggan two-vessel triangular service – sample timetable for Vessel 2

<i>Depart Gourock</i>	<i>Arrive Kilcreggan</i>	<i>Depart Kilcreggan</i>	<i>Arrive Dunoon</i>	<i>Depart Dunoon</i>	<i>Arrive Gourock</i>
07:00	07:13	07:18	07:43	07:48	08:13
08:18	08:31	08:36	09:01	09:06	09:31
09:36	09:49	09:54	10:19	10:24	10:49
10:54	11:07	11:12	11:37	11:42	12:07
12:12	12:25	12:30	12:55	13:00	13:22

5.4.19 By way of comparison, the departure times from Dunoon and Kilcreggan to Gourock for the current and above sample timetable are shown in the table below (covering the period 06:30-13:30). Indirect sailings are shaded pink.

Table 5.10: Comparison of current and sample triangular timetables

Dunoon (Current)	Dunoon (Triangular)	Kilcreggan (Current)	Kilcreggan (Triangular)
06:50	07:00	07:04	07:18
07:15	<i>Not applicable</i>	07:50	07:30
07:50	07:48	08:43	08:36
08:20	08:18	<i>Not applicable</i>	08:48
08:50	<i>Not applicable</i>	09:53	09:54
09:20	09:06	10:53	10:06
09:50	09:36	11:39	11:12
10:20	10:24	<i>Not applicable</i>	11:24
10:50	10:54	13:19	12:30
11:20	<i>Not applicable</i>	<i>Not applicable</i>	12:42
11:50	11:42	<i>Not applicable</i>	<i>Not applicable</i>
12:20	12:12	<i>Not applicable</i>	<i>Not applicable</i>
12:50	13:00	<i>Not applicable</i>	<i>Not applicable</i>

Dunoon (Current)	Dunoon (Triangular)	Kilcreggan (Current)	Kilcreggan (Triangular)
13:50	<i>Not applicable</i>	<i>Not applicable</i>	<i>Not applicable</i>

5.4.20 The main points of note from the above timetable and comparison are:

- For the sample period shown (06:30-13:30), Dunoon would see a reduction in its number of connections, circa **14** reducing to **10**, of which five would be indirect.
- Kilcreggan would see an increase its connections from **7** to **10**. However, the five indirect connections would take around 55 minutes to get from Kilcreggan to Gourock, so it could be argued that connectivity has reduced rather than increased.
- The timetable as presented would allow for a relatively regular interval service from Dunoon, but at Kilcreggan there would be clusters of two services close together with long gaps in between, in some cases more than an hour.

5.4.21 Overall, despite some of the attractions of a triangular timetable, there are also significant disbenefits and logistical challenges in delivering a service that would be attractive to passengers.

Advantages

- Kilcreggan would benefit from additional connections, albeit the journey time on indirect services would be unattractive.
- If operated in the evening, Kilcreggan would benefit from sailings which it does not currently have.
- There would be a new sea-based connection between Kilcreggan and Dunoon.

Disadvantages

- Dunoon would see a reduction in service frequency across the day, whilst Kilcreggan would have fewer direct services to Gourock.
- Journey times would be long on indirect services, whilst integration with rail services would potentially worsen. The ferry timetable at both Dunoon and Kilcreggan would also be irregular.
- There would be a lengthy 'dead-leg' between Dunoon and Kilcreggan (or vice versa). In effect, the operator would be accruing cost but generating little or no revenue.

Summary

5.4.22 The table below summarises the 'long-list' of Kilcreggan – Gourock and triangular options, including the 'service level' and the impact on frequency:

Table 5.11: Kilcreggan – Gourock service level options summary

Option	A	B	C	D	E	F	Frequency	Operating day
R1: Continue service on current basis	no	no	Yes	no	no	no	Unchanged	Unchanged
R2: Operate a Sunday Kilcreggan – Gourock service	no	no	Yes	no	no	no	Unchanged	Unchanged
R3: Operate Kilcreggan service via Dunoon in 'peak' hours	Yes	Yes	no	no	no	no	Reduced	Unchanged or increased

Option	A	B	C	D	E	F	Frequency	Operating day
R4: Operate Kilcreggan service via Dunoon in all hours	Yes	Yes	no	no	no	no	Reduced	Unchanged or increased
R5: Triangular service between Gourock, Dunoon and Kilcreggan (clockwise and anti-clockwise)	Yes	Yes	no	no	no	no	Rosneath increased, Cowl reduced	Rosneath increased, Cowl unchanged

5.5 Initial Options Sift

5.5.1 In STAG appraisal, it is common practice to undertake an early sift of options where it is evident that the option is unlikely to support the Transport Planning Objectives (TPOs). Within the RSM framework, there is not a requirement to set TPOs. However, there is still benefit in undertaking an initial option sift where it is evident that one or more options provide a sub-optimal outcome for the deployment of the same resources.

5.5.2 On this basis, **Options R3-R5 – the triangular Gourock – Dunoon – Kilcreggan – options are discounted from further consideration**. Whilst the advantages and disadvantages differ slightly between different triangular route permutations, the broad rationale for sifting this concept is as follows:

- The triangular options are based on the principle of sharing the Kilcreggan vessel across the two routes. However, **Options R3 and R4** would lead to a reduction in the hourly frequency of the Kilcreggan service. Whilst **Option R5** would lead to an increase in the frequency of the Kilcreggan service, the timings would be irregular and journey times on indirect sailings very long.
- For Dunoon, the triangular service is predicated on a single dedicated vessel on the CFL Dunoon – Gourock service, and thus all options represent a reduction in frequency from the present-day operation, albeit the RSM suggests that there is over-provision on the route.
- There would be a lengthy ‘dead-leg’ between Dunoon and Kilcreggan (or vice versa), with little demand to travel between the two settlements, unless a ‘V’ shaped route was established (see below). The operator would be accruing cost but generating little or no revenue.
- The indirect services would result in significantly increased journey times and users would therefore experience journey time disbenefits.
- The timetable would be irregular (non-clockface) and may also impact on integration with connecting public transport services at both sides of the crossing.

5.5.3 However, the **sub-option of R3, running a ‘V’ service (Gourock – Kilcreggan – Gourock – Dunoon – Gourock)** in peak hours, is retained for further consideration. Whilst this option would diminish the Kilcreggan service, it would strengthen a single vessel Dunoon service in peak hours. Given that carryings on the Dunoon route are greater by a factor of four, this option should therefore be subject to appraisal so as to more fully understand its benefits and disbenefits.

5.5.4 The next chapter appraises the remaining options against the STAG criteria.

6 Appraisal of Options

6.1 Overview

- 6.1.1 This final chapter sets out the high-level appraisal of the remaining options for Cowal and Rosneath. The appraisal is largely qualitative and is focused on the five STAG criteria, namely: **environment; climate change; health, safety and wellbeing; economy; equality and accessibility**. It is undertaken to a level broadly equivalent to that produced in a 'Preliminary Appraisal' (i.e., it does not consider the relevant sub-criteria or include a significant degree of quantification as would occur in a 'Detailed Appraisal').
- 6.1.2 The appraisal also considers the performance of each option in terms of: **cost to government; feasibility, affordability and public acceptability; the National Transport Strategy 2 (NTS2) hierarchies; the National Islands Plan; and risk and uncertainty**.
- 6.1.3 In the interests of brevity, the appraisal is focused on the main differentiators between options. **For both Cowal and Rosneath, the 'Do Minimum' used for comparative purposes is the current service provided on each route (Options C1 and R1) (i.e., the appraisal of all options is relative to the present-day service).**

6.2 Cowal

- 6.2.1 This section appraises the shortlisted Cowal options – to recap, these are:
- **Option C1:** Continue the service on the current basis (the effective 'Do Minimum')
 - **Option C2:** Continue to operate the current length of operating day but reduce service frequency
 - **Option C3:** Two vessel operation at peak times only
 - **Option C4:** Two vessel operation at peak times only, single crew day
 - **Option C5:** Single vessel operation all day
 - **Option C6:** Single vessel operation, single crew day

STAG Criteria

- 6.2.2 The table below summarises each option against the five STAG criteria, using the following seven-point scale:
- major positive impact
 - moderate positive impact
 - minor positive impact
 - neutral
 - minor negative impact
 - moderate negative impact
 - major negative impact

Table 6.1: Appraisal of Cowal options against STAG criteria based on the impact scale noted previously

Criterion	C1: Current service	C2: 2-vessels, current operating day, reduced frequency	C3: 2-vessel operation at peak times only	C4: 2-vessel operation at peak times only, single crew day	C5: Single vessel operation all day	C6: Single vessel operation, single crew day
Environment	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral
Climate change	Neutral	Minor positive	Minor positive	Moderate positive	Moderate positive	Major positive
Health, safety and wellbeing	Neutral	Neutral	Neutral	Minor negative	Neutral	Minor negative
Economy	Neutral	Neutral	Neutral	Minor negative	Moderate negative	Major negative
Equality and accessibility	Neutral	Minor negative	Minor negative	Minor negative	Moderate negative	Major negative

6.2.3 As defined by the service levels framework, the options presented for the CFL Dunoon – Gourock route are incremental, in this case reducing from a two-vessel double-crewed service to a single vessel, single crewed service. This is reflected in the qualitative appraisal against the STAG criteria where the impacts of each option, positive and negative, gradually increase in scale the further away from the current service the option moves. Key points of note from the above table are as follows:

- As the options do not involve physical infrastructure works, there would be no notable physical **environmental** impact. There could though be local congestion and noise impacts in the Hunters Quay area if current CFL passengers switched to getting dropped off at Hunters Quay or taking a car on the ferry.
- From a **climate change** perspective, the current service is emission intensive on a per passenger basis, with two vessels operating over an extended operating day, often with very few passengers onboard. Iterative reductions in the frequency of the service would therefore have a corresponding impact on emissions, with the major step changes coming in reducing the service to a single crew day (**Options C4 and C6**) and / or a single vessel service (**Option C5 and C6**), which would also reduce the embodied carbon associated with the future build of a second vessel. It should be noted that there could be a minor offsetting disbenefit if a proportion of the foot passenger market switched to travelling by car instead, but further research would be required to determine the likelihood and scale of any such effect. Any options which involve compensating bus services would also offset these benefits unless operated by zero-emission buses.
- Reducing the length of the operating day to a single crew day (**Options C4 and C6**) would record (very) minor disbenefits in terms of **health, safety and wellbeing** by reducing the amount of time that can be spent in Inverclyde, Glasgow etc. on any given day. This could be a particular issue for any Cowal resident returning home from a late afternoon hospital appointment. The above said, there is an alternative route to Cowal offered by Western Ferries.
- As the ferry services support commuting, personal business and visitor travel, progressive reductions in frequency and the length of the operating day would have a negative impact on **economy**. The scale of this disbenefit would need to be considered relative to the ongoing cost of operating the route at its current level.

- There would also be an **equality and accessibility** impact, particularly for Dunoon residents who are non-car available or who would prefer not to use their car. The scale of this impact would be dependent on the behavioural response to reducing the service in terms of either: (i) **continuing to travel as a foot passenger**, either via CFL or Western Ferries and experiencing an overall longer journey time; (ii) **switching to travelling by car**, which would have cost and societal impacts; or (iii) choosing **not to make the journey**, which would again have negative societal impacts.

Key Point: Evidently, any service reduction on the CFL Dunoon – Gourock route would have a negative impact on choice and connectivity and could have economic and equalities implications depending on the behavioural response of current CFL passengers. The realisation and magnitude of these impacts would depend on the behavioural response of passengers to the reduction in service and any mitigating measures implemented, such as connecting shuttle or through buses to Gourock railway station via Western Ferries.

Cost to Government

6.2.4 Whilst reducing the frequency and / or length of operating day on the CFL Dunoon – Gourock route would have negative impacts in relation to certain STAG criteria, the counterweight would be a reduction in the cost to government of funding the service. The table below summarises the cost to government impact by major cost component for each option – the main costs on the CFL Dunoon – Gourock route are crew, fuel and berthing, in that order. It should be noted that the table is presented in largely qualitative terms and considers full crews only, although it is acknowledged that the practical position will be more nuanced.

Table 6.2: Cost to government impacts based on options noted previously

Criterion	C1: Current service	C2: 2-vessels, current operating day, reduced frequency	C3: 2-vessel operation at peak times only	C4: 2-vessel operation at peak times only, single crew day	C5: Single vessel operation all day	C6: Single vessel operation, single crew day
No. of vessels	2	2	2	2	1	1
No. of crews	8	8	6	4	4	2
Reduction in fuel	None	Minor	Moderate	Moderate	High	Very high
Reduction in dues	None	Minor	Moderate	Moderate	High	Very high

6.2.5 The main points of note from the above table are as follows:

- As almost all (if not all) sailings on the route are loss making, any reduction in the number of sailings will reduce the operating subsidy. This is common across most of the CHFS network and indeed is the reason that such services are in receipt of a subsidy in the first place.
- The major saving to be gained is through reducing the route to a single vessel service (**Options C5 and C6**). In the short-term, this would allow one of the current vessels to be sold and the realisation of its residual value. The more prominent impact though is in the medium-term in that only one rather than two vessels would be required for the Dunoon route as part of the Gourock, Dunoon and Kilcreggan Infrastructure Programme.

- By extension, a single vessel service would reduce the required crew complement on the route from the current eight to: (i) four if operating an extended day; or (ii) two if operating a single-crew day. The reduction in sailings would of course also offer significant reductions in fuel and berthing costs.
- With the retention of a two-vessel service, major cost reductions could only be achieved by running one or both vessels over a shorter day (**Option C3 and C4**), thus reducing the crew complement, as well as the fuel and berthing costs associated with e.g., evening sailings.
- Continuing to operate a two-vessel service over the current length of operating day but at reduced frequency (**Option C2**) would only offer a very minor reduction in costs associated with reduced fuel burn and berthing dues for sailings no longer operated.

Key Point: Whilst reducing the scale of the CFL Dunoon – Gourock operation would generate disbenefits for current users, the flip side is that it could offer substantial cost savings. Significant savings can though only be realised by reducing the service to a single vessel operation (the major saving) and / or reducing the length of operating day for one or both vessels, thereby reducing the crew complement.

Public Acceptability, Feasibility and Affordability

- 6.2.6 The STAG guidance requires the **public acceptability, feasibility** (can the option be implemented?) and **affordability** (can the option be afforded even if it represents good value for money?) of the options to be tested.

Public Acceptability

- 6.2.7 The outcomes of this study have not yet been presented to the public or stakeholders. Public acceptability associated with the different options therefore remains to be tested.

Feasibility

- 6.2.8 There are no feasibility issues associated with the options presented, although operational changes would be required if the service was scaled back.

Affordability

- 6.2.9 There are no affordability issues associated with the options presented as each represents a reduction in costs relative to the present day. However, it is important to note that the current service arguably faces affordability challenges, with revenue only covering 15% of operating costs and utilisation being very low. Moreover, the Gourock, Dunoon and Kilcreggan Infrastructure Programme would represent a significant capital outlay on the route which does not currently have funding.

NTS2 Hierarchies

- 6.2.10 In February 2020, Transport Scotland published its *National Transport Strategy 2* (NTS2) which outlines a vision for Scotland's transport system over the next 20-years to 2040, including a contribution to achieving net zero by 2045.
- 6.2.11 The NTS2 establishes two hierarchies which define how future transport investment decision making and services should be planned. The **Sustainable Travel Hierarchy** defines the priority which will be given to each mode of transport in future investment planning and is shown on the right. It prioritises walking, wheeling and cycling, with the private car being the lowest priority.
- 6.2.12 The *Sustainable Travel Hierarchy* is complemented by the **Sustainable Investment Hierarchy**, which establishes a structured set of steps to be followed when planning investment in transport provision. This hierarchy focuses on how to reduce unsustainable travel, where journeys must be made.

Prioritising Sustainable Transport



Sustainable Travel Hierarchy

- 6.2.13 The CFL Gourock – Dunoon service in its current guise is well aligned with the *Sustainable Travel Hierarchy* in that it is passenger only, has a significant walk-in catchment and is well-connected with bus and rail services at Gourock.
- 6.2.14 The impact of any diminution of the CFL Dunoon – Gourock service on the *Sustainable Travel Hierarchy* would again depend on the behavioural response to the reduction in services. On the one hand, it may lead to reduced travel overall, which could be positive from an environmental perspective (depending on how connecting journeys are made) but at the same time could have negative equalities impacts. On the other hand, it may encourage increased car-based travel from Cowal, either by road or via Western Ferries. The extent of these behavioural responses could only be determined through further primary research.



Sustainable Investment Hierarchy

- 6.2.15 As noted above, the implications of reducing the frequency and / or length of operating day on the CFL Dunoon – Gourock route are not yet understood. However, what is evident is that there is significant spare capacity on the route and thus there is a question as to whether this could be used more fully through rationalising the number of services, in line with the principle of 'making better use of existing capacity'.
- 6.2.16 On similar lines, 'targeted infrastructure improvements' are at the foot of the sustainable investment hierarchy. This should inform, through the relevant business case, the timing of investment in vessel replacement and port upgrades, taking into account asset life expiry but also reliability, as described earlier in this report.

National Islands Plan

6.2.17 The National Islands Plan (NIP) was published in 2019 and provides a framework for action aimed at improving outcomes for island communities, based around 13 Strategic Objectives. As Cowl and Rosneath are peninsular communities, they are out of scope from an NIP perspective. However, the reliance on a ferry service means that they share several characteristics with island communities and it is thus worth reflecting on the NIP here. Three of these objectives are specifically relevant to this CNA, as outlined in the table below:

Table 6.3: Relevant National Islands Plan Strategic Objectives

List	Strategic Objective	Relevance to the CNA
1	To address population decline and ensure a healthy, balanced population profile.	The quality of an island or peninsular community's connections to services, including health facilities, is an important factor in determining how attractive that location is to live, work and do business.
2	To improve and promote sustainable economic development.	Ferry services play an essential role in connecting labour-to-employment; suppliers to customers; students to education; and residents to personal business and leisure opportunities.
3	To improve transport services.	The quality of ferry services is evidently a key determinant to Strategic Objectives 1 and 2 outlined above.

6.2.18 With regards to the CFL Dunoon – Gourock route, it is evident that any diminution of that service would be negative in the context of the above strategic objectives and the NIP more generally.

Risk and Uncertainty

6.2.19 Uncertainties are potential external factors which could impact on a policy or project and are thus difficult to control for. Risks are low-level uncertainties where the potential outcome can usually be defined and therefore the risk more easily quantified. In an appraisal and subsequent business case, a risk register and uncertainty log would be developed and monitored. However, for the purposes of this piece of work, the focus is on identifying risks and uncertainties only.

Risk

6.2.20 The primary risks relevant to the options are as follows:

- At present, there is little to no understanding of the **behavioural response** that would be prompted by a change in frequency or length of operating day, apart from revealed (but likely atypical) behaviour during and immediately after the pandemic when the route was operated by a single vessel. To mitigate this risk, any service change should be preceded by a data collection exercise intended to elicit potential behavioural responses to service changes.
 - It should though be noted that, when the CFL Dunoon – Gourock route was suspended for five full days in July 2023, a replacement shuttle bus to connect with Western Ferries' service was offered. CFL maintained a record of the number of passengers using the bus - whilst only a temporary change, this provides an insight into the passenger response to the absence of the service. By comparing the days on which the service was suspended with the equivalent day of the previous year, it is estimated that only **32%** of Dunoon passengers used the bus, with the equivalent figure of **57%** for Gourock. What is not known is whether the passengers who did not

use the bus chose not to travel or travelled by car instead (either getting dropped off at the ferry terminal or taking the car on the ferry).

- The 'cost to government' section simplistically assumes that reductions in frequency and / or length of operating day would allow for a **reduction in crew complement**. Whilst this is true, CFL has a 'no compulsory redundancies' policy and thus crew displaced from the route would need to be found alternative roles within the business or incentivised to take voluntary redundancy. This could make the change process longer and more expensive.
- Reducing the Dunoon route to a single vessel would present a **resilience** risk. As well as the need to cover scheduled drydocking, relief arrangements would need to be put in place in the event of a breakdown. Whilst the Kilcreggan vessel could potentially cover (assuming compatibility with the infrastructure), this would lead to a reduction in service on that route. An alternative solution would be to offer a bus replacement service via Western Ferries, akin to the situation on the railways and as happens now when the CFL service is cancelled / suspended (see above).
- The switch of some CFL foot passenger journeys to car trips by Western Ferries could put increased pressure on **capacity** on that route.

Uncertainties

- 6.2.21 The primary uncertainty is that any reduction in service on the CFL Dunoon – Gourock route, particularly a reduction in the length of the operating day, would be undertaken on the assumption that passengers that would have used the withdrawn service(s) could travel on another CFL sailing or via Western Ferries. As a commercial company, Western Ferries is at liberty to change its frequency, length of operating day, fares etc at any time, and thus there is uncertainty over how that route could change in future.
- 6.2.22 However, it is important not to exaggerate the likelihood of this occurring: Western Ferries is a successful operator, long-established on the route. It operates an intense service over a long operating day and thus there appears little risk of any major change in service provision whilst it continues to be profitable. Moreover, if any reduction in the operating day ever did occur, this could be compensated by scaling-up the length of the CFL operating day, albeit there may be a lead-in time.

6.3 Rosneath

- 6.3.1 To recap, the options still in play are:
- **Option R1:** Continue the service on the current basis (the effective 'Do Minimum')
 - **Option R2:** Operate a Sunday Kilcreggan – Gourock service
 - **Option R3:** Operate Kilcreggan service via Dunoon in 'peak' hours ('V' option)
- 6.3.2 Note that **Option R3** could be delivered in tandem with **Option R2**.

STAG Criteria

- 6.3.3 The table below summarises the appraisal of the three options against the five STAG criteria, using the same seven-point scale as that adopted for Cowal:

Table 6.4: Appraisal of Rosneath options against STAG criteria

Criterion	R1: Current service	R2: Sunday service	R3: 'V' service
Environment	Neutral	Neutral	Neutral
Climate change	Neutral	Minor negative	Neutral
Health, safety and wellbeing	Neutral	Neutral	Minor negative/Minor positive
Economy	Neutral	Minor positive	Minor negative/Minor positive
Equality and accessibility	Neutral	Minor positive	Minor negative/Minor positive

6.3.4 Key points of note from the above table are as follows:

- The operation of a Sunday service would have a (very) minor negative **climate change** impact equal to the marginal emissions generated by the additional sailings. It would however generate minor **economy** and **equality and accessibility** benefits for Rosneath. As well as facilitating seven-day commuting to HMNB Faslane and RNAD Coulport, it would allow Rosneath residents to access Inverclyde and Glasgow by ferry and train on a Sunday and would also allow daytrippers to access the peninsula by ferry. Indeed, given that there are few other public transport services on the Rosneath Peninsula on a Sunday, this option could be of particular benefit to those who are non-car available.
- The option of running a 'V' service (**Option R3**) in peak hours would have differential impacts on Cowal and Rosneath. There would be benefit for Cowal in terms of mitigating the reduction to a single vessel service (albeit this would be worse than the present-day position). However, there would be an offsetting disbenefit for Rosneath.

Key Point: The operation of Sunday services between Kilcreggan and Gourock could support increased commuting, personal travel and tourism / leisure travel. This would be particularly advantageous for non-car available Kilcreggan residents given the paucity of other Sunday public transport options.

Should the option of a 'V' route in the peak periods be considered further, it would be important to undertake further research on the components of the morning commuter market from both Rosneath and Cowal to more fully understand the impacts of such a change.

Cost to Government

6.3.5 Our analysis suggests that the current Kilcreggan – Gourock service could be expanded to offer a limited Sunday service within the existing crew complement (i.e., no additional crew members would be required). The marginal costs would therefore be limited to additional crew salaries to operate the service, fuel, dues and any required Argyll & Bute Council pier staff to meet the ferry.

6.3.6 It is likely that on most if not all sailings, costs will exceed revenue and the difference between the two would be borne as additional subsidy by Transport Scotland.

- 6.3.7 On **Option R3 (the 'V' route variant)**, there would be minimal, if any, change in the cost to government. Whilst the route structure would change for part of the day, the operational hours of the service would be broadly the same and any revenue difference would be marginal.

Key Point: The costs of scaling up the Kilcreggan – Gourock service to operate on a Sunday would be marginal. Nonetheless, cost is likely to exceed revenue on most, if not all, sailings and thus the subsidy paid by Transport Scotland would increase.

Similarly, there would be little change with **Option R3** (the 'V' route variant).

Public Acceptability, Feasibility and Affordability

Public Acceptability

- 6.3.8 The outcomes of this study have not yet been presented to the public or stakeholders. Public acceptability associated with the different options therefore remains to be tested.

Feasibility

- 6.3.9 Detailed engagement would be required with CFL and the crew to establish the operational mechanics of expanding the service to include a Sunday. Whilst our analysis suggests that additional sailings could be operated within the regulations on crewing hours, it is important to note that these are regulatory maximum hours rather than contracted hours. The difference in hours relative to current contracts and the steps required to deliver the service would need to be subject to further detailed work with the operator.
- 6.3.10 Moreover, consideration could be given as to whether to adopt an annualised hours approach, operating a longer Sunday service in the summer months and a reduced or no Sunday service in the winter months, although it is our understanding that CFL does not routinely do this.
- 6.3.11 On **Option R3**, the 'V' route variant, the optimal timetable would need to be established to serve peak demand at Kilcreggan whilst also complementing the Dunoon service.

Affordability

- 6.3.12 There are no affordability issues associated with the options presented beyond payment of any additional subsidy, which is likely to be modest.

NTS2 Hierarchies

Sustainable Travel Hierarchy

- 6.3.13 The expansion of the Kilcreggan – Gourock service to include a Sunday is likely to align with the *Sustainable Travel Hierarchy*. Whilst there is a risk that this could generate journeys that would not otherwise be made, it would also significantly improve Sunday public transport connectivity in the Kilcreggan area, which is otherwise very limited.
- 6.3.14 **Option R3**, the 'V' route variant would have little impact with regards to the *Sustainable Travel Hierarchy*.

Sustainable Investment Hierarchy

- 6.3.15 **Option R2** would have no notable implications for the *Sustainable Investment Hierarchy*.
- 6.3.16 **Option R3** would support the *Sustainable Investment Hierarchy* in so much as it would maximise the use of the two vessels over the two routes.

National Islands Plan

- 6.3.17 As with Cowal, there is some value in considering how the options would support the NIP, even though Rosneath is a peninsular community. The provision of a Sunday service for the Rosneath Peninsula (**Option R2**) would support the NIP, particularly in terms of Strategic Objective 3: to improve transport services.
- 6.3.18 The impact of the ‘V’ route variant (**Option R3**) would have differential impacts on the Rosneath and Cowal communities. These impacts would need to be explored further with communities to fully understand how such a change would impact on the NIP Strategic Objectives.

Risk and Uncertainty

Risk

6.3.19 The primary risks relevant to the Rosneath options are as follows:

■ Option R2: Sunday sailings

- Whilst there are in theory benefits from operating a Sunday Kilcreggan – Gourrock service, the **market is not well understood** beyond the limited online research undertaken to inform this study. Evidence from the previous trial suggests that demand would be limited but, equally, we do not know how this was promoted and the trial nature of it would certainly have prevented any longer-term change in travel patterns. Moreover, the pilot was undertaken at a time when reliability was poor and may therefore have further suppressed demand.
- As previously alluded to, the **operational mechanics of scaling-up the service** would need to be worked through in detail with CFL and the crew. Any scaling-up of the service beyond the current crew complement would lead to significant marginal costs for likely small marginal benefits.

■ Option R3, ‘V’ route variant

- The key risk with this option is that the timetable changes make ‘commuter’ services unattractive / unviable for one or both communities.

Uncertainties

6.3.20 There are no significant uncertainties which would impact the Rosneath options.

Appendix A RSM / CNA Guidance Update for ICP

Community Needs Assessment – Islands Connectivity Plan

Background

The Islands Connectivity Plan (ICP) will replace the Ferries Plan 2013-22 and will consider island connectivity more broadly having regard to aviation, ferries and fixed links, and to connecting and onward travel.

Central to the Ferries Plan was a community needs assessment undertaken using a repeatable Routes and Services Methodology (RSM), equivalent to a Scottish Transport Appraisal Guidance (STAG) pre-appraisal report, developed for the Ferries Review. This primarily considered ferry service frequency and the length of the operating day.

Transport Scotland are now undertaking a series of community needs assessments to inform the delivery of the Islands Connectivity Plan for the Clyde & Hebrides (CHFS) and Northern Isles (NIFS) networks.

The RSM process

RSM is a six step process to identify whether gaps exist in the current level of service. Where gaps are identified, options to address the gaps are developed and appraised to set the priorities for future spending.

The first step in RSM is to identify the dependencies of the communities. Four dependencies are considered:

- commuting and frequent business use;
- personal;
- freight;
- tourism

These dependencies are assessed using 11 quantitative indicators, and communities are categorised into 'pots' and ranked from A to D for each dependency. Only those communities scored as A or B indicates a priority need in that area.

Step 2 defines service profiles for the summer and winter seasons that fit the community's dependencies based on the dependencies identified in Step 1 as a 'priority need' and the crossing time (in minutes).

Steps 3 and 4, compare the "model service" produced by Step 2 to current service, producing a gap analysis which identifies under or over provision in terms of:

- Number of sailing days
- Length of day
- Frequency

If Step 4 concludes that the current service meets the identified needs and there is no evidence of over or under provision, then no further action is needed.

If Step 4 identifies evidence of over or under provision, the significance of this is considered by Transport Scotland in consultation with stakeholders and, if it is considered material in terms of impact or cost, including of future investment, then the assessment moves to Step 5.

Step 5 considers the options for addressing the over or under provision identified through Steps 1-4.

Step 6 considers the prioritisation across the ferries network (and potentially wider, in terms of island connectivity more broadly).

Additional assessment

In reviewing the original methodology ahead of the ICP, and taking account of feedback from local authorities who have used it more recently for their own services, a number of points to take cognisance of when re-using RSM are:

- It was developed to consider ferry services, however, the ICP requires consideration of aviation and fixed links (e.g., peninsulas, bridges or tunnels) where these already exist (or, in the options appraisal stage, where these could be viable options).
- Similarly, the scope of the ICP includes “connecting and onward travel” whereas the RSM was only originally applied to the ferry leg of a journey.
- It assumes some key operational aspects are fixed (e.g., improvements to crossing times etc are not taken into account).
- It only considered meeting “community needs” in terms of timetabling – sailings days, length of day, frequency – and did not consider capacity or reliability/resilience or wider socio-economic factors.

The community needs assessments being undertaken for ICP are based on a re-run of the RSM. However, in response to the above feedback on the original methodology, in addition to assessing current services against the model service produced under Step 2, under Step 4 the assessment also assesses the current performance of the service against other identified needs:

- reliability
- resilience
- capacity
- connecting and onward travel
- Wider socio-economic needs and alignment with the National Transport Strategy and the National Islands Plan.

Appendix B Gourock – Dunoon rail interchange

Dunoon – Gourock sailings, Monday-Friday

Arrive Gourock	Train Departure	Wait Time	Fast or All-Stop
07:15	07:28	00:13	All-stop
07:40	07:50	00:10	Semi-Fast
08:15	08:23	00:08	All-stop
08:45	09:08	00:23	All-stop
09:15	09:39	00:24	All-stop
09:45	10:08	00:23	All-stop
10:15	10:38	00:23	All-stop
10:45	10:54	00:09	Fast
11:15	11:38	00:23	All-stop
11:45	12:08	00:23	All-stop
12:15	12:38	00:23	All-stop
12:45	12:54	00:09	Fast
13:15	13:38	00:23	All-stop
14:15	14:24	00:09	Fast
15:15	15:24	00:09	Fast
16:15	16:38	00:23	All-stop
16:45	17:08	00:23	All-stop
17:15	17:24	00:09	Fast
17:45	18:08	00:23	All-stop
18:15	18:24	00:09	Fast
18:45	19:08	00:23	All-stop
19:15	19:24	00:09	All-stop
19:45	20:24	00:09	All-stop
20:15	20:24	00:09	All-stop
20:45	21:24	00:39	All-stop
21:15	21:24	00:09	All-stop
22:05	22:24	00:19	All-stop
22:35	23:24	00:49	All-stop
23:35	No connecting train	<i>Not applicable</i>	<i>Not applicable</i>
00:35	No connecting train	<i>Not applicable</i>	<i>Not applicable</i>
01:50	No connecting train	<i>Not applicable</i>	<i>Not applicable</i>

- The 07:40 service does not call at Langbank or Paisley St James
- The 00:35 and 01:50 services operate on Fridays and Saturdays only

Gourock - Dunoon sailings, Monday-Friday

Train Arrival	Depart Gourock	Wait Time	Fast or All-Stop
No connecting train	06:20	<i>Not applicable</i>	<i>Not applicable</i>
06:35	06:45	00:10	Fast
07:11	07:20	00:09	Semi-Fast
07:11	07:50	00:39	Semi-Fast
08:09	08:20	00:11	Semi-Fast
08:30	08:50	00:20	All-stop
09:03	09:20	00:17	Fast
09:32	09:50	00:18	All-stop
10:04	10:20	00:16	Fast
10:33	10:50	00:17	Fast
10:58	11:20	00:22	All-stop
11:26	11:50	00:24	All-stop
11:59	12:20	00:21	All-stop
12:57	13:20	00:23	All-stop
13:59	14:20	00:21	All-stop
14:59	15:20	00:21	All-stop
15:27	15:50	00:23	All-stop
15:59	16:20	00:21	All-stop
16:27	16:50	00:23	All-stop
17:09	17:20	00:11	All-stop
17:37	17:50	00:13	Semi-Fast
18:07	18:20	00:13	Fast
18:28	18:50	00:22	All-stop
19:08	19:20	00:12	Fast
19:08	19:50	00:42	Fast
20:04	20:20	00:16	Fast
20:59	21:10	00:11	All-stop
20:59	21:40	00:41	All-stop
21:58	22:40	00:42	All-stop
23:31	23:40	00:09	Fast
00:40	01:00	00:20	All-stop

- The 07:11 service does not call at Cardonald, Hillington East or Hillington West
- The 08:09 service does not call at Paisley St James or Langbank
- The 17:37 service does not call at Cardonald, Hillington East or Paisley St James
- The 23:31 and 00:40 operate on Fridays and Saturdays only

Appendix C Gourock – Kilcreggan Rail Interchange

Kilcreggan – Gourock sailings, Monday-Friday

Arrive Gourock	Train Departure	Wait Time	Fast or All-Stop
07:17	07:28	00:11	All-stop
08:03	08:11	00:08	Fast
08:56	09:08	00:12	All-stop
10:06	10:38	00:32	All-stop
11:06	11:38	00:32	All-stop
11:52	12:08	00:16	All-stop
13:32	13:38	00:06	All-stop
14:18	14:24	00:06	Fast
15:08	15:24	00:16	Fast
16:08	16:38	00:30	All-stop
17:15	17:24	00:09	Fast
18:01	18:24	00:23	Fast
18:49	19:08	00:19	All-stop

Gourock - Kilcreggan sailings, Monday-Friday

Train Arrival	Depart Gourock	Wait Time	Fast or All-Stop
06:35	06:41	00:06	Fast
07:11	07:27	00:16	Semi-Fast
08:09	08:20	00:11	Semi-Fast
09:03	09:16	00:13	Fast
10:04	10:16	00:12	Fast
10:58	11:16	00:18	All-stop
12:35	12:56	0:21	Fast
13:26	13:42	00:16	All-stop
13:59	14:28	00:29	All-stop
14:59	15:18	00:19	All-stop
15:59	16:18	00:19	All-stop
17:09	17:25	00:16	All-stop
18:07	18:13	00:06	Fast

- The 07:11 service does not call at Cardonald, Hillington East or Hillington West
- The 08:09 service does not call at Paisley St James or Langbank