1 Description of Package

This package includes the production and maintenance of a longterm plan and investment programme for new ferries and development at ports. The long-term plan would help address and improve resilience, reliability, capacity, accessibility, increase standardisation, and reduce emissions across the Clyde and Hebrides ferry service (CHFS) and Northern Isles ferry service (NIFS) network, to meet the needs of island communities. This measure was identified in the draft Infrastructure Investment Plan (IIP) for Scotland 2021-22 to 2025-26¹ and is supported by investment of at least £580 million during the next 5 years.

Updated plans, outlining the future make-up of the ferry fleet serving the Clyde and Hebrides ferry service network, were last published in January 2018. The Vessel Replacement and Deployment Plan (VRDP) gives an overview of how existing, planned and prospective vessels could be deployed across the CHFS network. An updated VRDP for consultation is in draft for the CHFS network and it is planned to commence a similar exercise for NIFS in 2021 to inform consideration of future vessel and port/harbour investments.



Figure 1: CalMac Ferry at Oban

The £580m investment planned for the next 5 years will see committed projects and programmes delivered, including the new Islay vessel, vessels 801/802, Skye Triangle ports (Uig, Tarbert and Lochmaddy) and Ardrossan. The funding will also support the pipeline of planned projects which include major harbour upgrades at Gourock, Lochboisdale and Armadale and vessel projects for Gourock-Dunoon/Kilcreggan, the small vessel fleet, Mallaig-Armadale/Lochboisdale and Oban-Craignure. Final decisions on project priorities will be taken in the light of the outcomes of STPR2, VRDP and the Island Connectivity Plan and following public consultation.

¹ Scottish Government, Infrastructure Investment, 2019, <u>https://www.gov.scot/policies/government-finance/infrastructure-investment/</u>



2 What we have heard?

The National Transport Strategy highlighted the following key challenges related to this package:

SCOTLAND'S REGIONAL DIFFERENCES – ISLAND COMMUNITIES

Transport challenges differ across Scotland's regions, with island communities in many cases facing greater challenges than those living in remote and rural areas. The minimum income that households require for an acceptable standard of living in island communities in Scotland is above that in the rest of the UK (and is, in many cases, higher than in other parts of rural Scotland). Households in island communities face higher costs due to longer commuting distances (magnified by higher fuel prices), issues relating to integrated timetabling, additional costs associated with occasional trips to the mainland and additional ferry/air costs for inter-island travel. Transport can have an adverse impact on the long-term sustainability of island communities, with communities facing additional freight costs and charges for deliveries, contributing to these challenges.

The National Islands Plan² (NIP) also recognises the transport challenges faced by island communities, noting that:

Without adequate transport links to and from an island and between islands, the island community will be in a disadvantaged position compared to similar mainland communities. Transport links within an island are also essential to allow the island community to be mobile within the island. Transport links between the mainland ports that serve the islands and Scotland's urban centres are also important in enabling access for the islands to services and markets. A fair, low carbon transport system is needed so that island communities are put on an equal footing with people on the Scottish mainland, and in order for transport to fully allow the fulfilment of basic human rights. It also enables the growth of sustainable tourism, allowing those who want to visit our islands to do so.'

Extensive engagement undertaken with the STPR2 Regional Transport Working Groups (RTWGs) has set out a range of problems relating to island connectivity in Argyll and Bute, Ayrshire and Arran, the Highlands and Islands and the Shetland Islands. As set out in the regional Case for Change³ reports:

• There are pressures placed on ferry capacity due to the competing demands of residents, business and the increased demand resulting from the growing popularity of Scotland's rural areas and islands as tourist destinations;



² Scottish Government, The National Plan for Scotland's Islands, 2019, <u>https://www.gov.scot/publications/national-plan-scotlands-islands/</u>

³ Transport Scotland, Strategic Transport Projects Review 2, <u>https://www.transport.gov.scot/our-approach/strategy/strategic-transport-projects-review-2/</u>

- Passenger and vehicle numbers on ferries have been increasing, especially those that are subject to the Road Equivalent Tariff (RET), where vehicle numbers have risen significantly more than passenger numbers. It is noted that RET is not in place on routes between either the Orkney Islands or the Shetland Islands and the Scottish mainland and on internal services in either archipelago;
- During periods of peak demand and at popular times, many of the primary ferry services to the larger islands are operating at, or close to, full vehicle capacity, with island residents and businesses struggling to book vehicle spaces during periods of peak demand, creating disruption and delay – Stakeholders also reported vehicle and cabin capacity issues on services from the Shetland Islands to the Scottish mainland during the peak tourist season, making it difficult for islanders to travel to the mainland, particularly for an unplanned trip. For services in the Highlands and Islands, capacity constraints are generally for vehicular travel (and are seasonal);
- There are similar vehicle capacity issues on freight services between the Shetland Islands and the Scottish mainland, particularly during livestock season (autumn), which is reported by stakeholders to be constraining the economic development in the region;
- Concerns were raised about the average age of ferry fleets, which has impacts on service resilience and reliability;
- The further increase in the interoperability of ferries across the CHFS network would allow for a more coordinated approach to vessel redeployment during adverse weather conditions or when vessels are taken out of service for maintenance or repair;
- Poor connectivity to the islands is seen as a constraint on local economies, with stakeholders expressing concern over frequency and vessel suitability, as well as delays and cancellations;
- Island-based firms have reported that transportation issues such as disruption to travel due to ferry cancellations have been factors that have caused their business to struggle; and
- Significant volumes of freight are carried on passenger/vehicle ferries and forecast growth in some industries (notably whisky, fisheries and aquaculture) can cause conflicts between the needs of passenger vehicles and freight traffic.

Satisfaction with aspects relating to island connectivity⁴ were also explored in the STPR2 online public survey. A question on 'connectivity to the mainland' produced the following responses across all island respondents. The values showing the degree of satisfaction for each aspect relating to connectivity represent the number of respondents that provided feedback.



Figure 2: All Island Responses – Satisfaction with Connectivity to Mainland

⁴ This included satisfaction with aspects of aviation (as shown in the outputs/figures), which although explored in the STPR2 online public survey, are not relevant in the context of this Phase 1 package.



Mainland respondents were asked about 'connectivity to the islands', which produced the following responses across all mainland respondents:



Figure 3: All Mainland Responses – Satisfaction with Connectivity to Islands:

Based on the public survey feedback above, the main areas of ferry-related dissatisfaction (listed in order of occurrence) in island responses were:

- 1. Connectivity to mainland;
- 2. Access to ports;
- 3. Reliability of ferry services;
- 4. Capacity on board ferries; and
- 5. Cost of ferry services.

The main areas of ferry-related dissatisfaction (listed in order of occurrence) in mainland responses were:

- 1. Cost of ferry services;
- 2. Connectivity to islands;
- 3. Reliability of ferry services;
- 4. Access to ports; and
- 5. Frequency of ferry services.

Looking at the public survey responses by STPR2 regions identified the following problems⁵:

- Reliability of ferry services was identified as the number 1 problem in Argyll & Bute and the 3rd most noted problem in Ayrshire & Arran.
- Connectivity to the Scottish mainland was the number 1 problem in the Shetland Islands.
- No ferry related problems were identified in the top 5 for the Highlands and Islands region by either Island or Mainland respondents.

3 The evidence base to support a case for change?

The baseline work undertaken as part of STPR2 has identified issues relating to reliability, resilience and capacity utilisation with the current CHFS and NIFS fleets. The development of a long-term investment plan for ferries and ports would help address these matters across the CHFS and NIFS network.

⁵ It should be noted that the number of responses in some STPR2 regions were low and hence care should be taken when interpreting the findings.



OPERATOR	NUMBER OF VESSELS	AVERAGE FLEET AGE (YEARS)
CalMac	34	22
Serco NorthLink	5	20 ⁶
Western Ferries	4	13
Pentland Ferries	1	0.5
John o' Groats Ferries	1	34
Highland Ferries	2	38
Western Isles Cruises	2	36
Argyll and Bute Council	6	30
The Highland Council	2	32
Orkney Islands Council	9	32
Shetland Islands Council	13	28

 Table 1: Ageing vessels

- Overall, the profile of ferry vessels in Scotland is generally one of an ageing fleet (with a vessel having a typical working life on these services of approximately 30 years).
 - The average age of vessels operated in the CHFS network is 22 years.
 - The average age of vessels operated in the NIFS network is 20 years.
- Two new vessels, MV Glen Sannox (Vessel 801) and Vessel 802 will be introduced on the Ardrossan-Brodick and Uig-Tarbert- Lochmaddy routes. Latest delivery dates provided by the shipyard (August 2020) are: April-June 2022 for 801 and



⁶ The average age of the fleet reduces to 18 years when considering the car/passenger ferries only.

December 2022-February 2023 for vessel 802. There are also plans for a new vessel on the Islay route in the next few years.

- It was announced in January 2021 that CMAL has awarded a contract for the concept design of new vessels to serve the Gourock-Dunoon and Gourock-Kilcreggan crossings.
- The Small Vessel Replacement Programme will also be progressed with the aim 'to achieve a very substantial renewal of the small vessel fleet during the 2020s'⁷, initially looking at the replacement of up to seven of the current small ("Loch class") vessels due to operational life expiry.
 - There will be an aim to achieve increased standardisation in hull design, propulsion and internal layout as well as to improve reliability, resilience, accessibility and capacity.
 - The programme will also consider alternative fuel options for a low emission vessel design.

Sailing Disruptions

- Disruptions to sailings (2018 data⁸) are largely caused by environmental (climatic) conditions, primarily adverse weather events. Details by area our outlined below:
 - Argyll and Bute: Routes between Islay and the mainland had the most disruptions as a percentage of total sailings. In absolute terms, Rothesay – Wemyss Bay and Gallanach – Kerrera were more frequently disrupted. The Campbeltown – Ardrossan route had a larger proportion of technical issues than the other routes, with approximately one quarter of disrupted sailings being classified in this category (the route is served by MV Isle of Arran, one of the oldest in the fleet).
 - Western Isles: The Uig Tarbert / Lochmaddy, Oban Castlebay / Lochboisdale and Stornoway Ullapool routes experienced a significant proportion of disrupted sailings, with approximately two thirds of sailings recorded as being disrupted in some way. These routes also had a higher number of disrupted sailings in absolute terms than the other routes in the council area. Most disruptions were as a result of environmental (climatic) issues, although Uig Tarbert / Lochmaddy was notable for having a higher proportion of knock-on delays than other CalMac routes, accounting for



⁷ Ferry Stakeholder Groups – Transport Scotland Update (December 2020).

⁸ Analysis considered the frequency of disruptions, % of delayed sailings and % of delayed sailings with long delays >30 mins in 2018 across CalMac routes by council area, as well as the month which experienced the highest proportion of disruptions per route.

Jacobs AECOM

approximately 16% of total sailings. This route had a relatively high proportion of delays over 30 minutes in length, accounting for 6% of total sailings.



Figure 4: Number of CalMac disruptions and causes in 2018

North Ayrshire: Brodick – Ardrossan incurred most disruptions in the North Ayrshire Council area, with over 50% of services being disrupted. Approximately 2% of services on this route experienced disruptions with a delay of over 30 minutes, again higher than the other routes across the council area. Technical issues are also more common on this route, with "navigational issues" accounting for two-thirds of sailings within this disruption category with the remainder largely attributed to mechanical problems.

- **Highland**: In absolute terms, Armadale Mallaig had the largest number of disruptions over the year, and environmental (climatic) disruptions were the primary type recorded across all routes in the region.
- Orkney Islands and Shetland Islands: There is a strong seasonality associated with the number of 'failures' (cancelled sailings) across the Lerwick-Kirkwall-Aberdeen and Stromness-Scrabster routes, although it is more clearly prevalent on the longer distance Lerwick-Kirkwall-Aberdeen route. The percentage of delayed sailings increased to approximately 6% on the Lerwick-Kirkwall-Aberdeen route and to approximately 14% on the Stromness-Scrabster route in the winter months.



Figure 5: Lerwick Ferry Terminal

Analysis has also been undertaken of capacity on CalMac routes across the year, showing the total calculated shipped passenger car units (PCUs) by month for CalMac routes. Each route has been coloured according to the volume of PCUs across the months for that route only and it is noted that this figure does not take into account vessel capacity (which may change) across the months.

Route	January	February	March	April	Мау	June	July	August	September	October	November	December
Fishnish - Lochaline	2,492	3,148	4,033	5,004	7,256	7,360	7,307	7,825	6,339	5,128	2,905	3,036
Kennacraig - Islay	7,336	8,364	9,422	11,872	14,252	14,763	14,515	15,680	13,265	12,151	8,873	7,609
Largs - Cumbrae Slip	9,832	10,550	13,363	16,363	20,874	19,618	24,370	21,290	17,104	14,010	11,600	11,197
Mallaig - Eigg/Muck/Rum/Canna	162	236	191	230	314	289	275	375	259	281	278	205
Oban - Castlebay/Lochboisdale	839	1,072	1,533	2,717	3,619	3,241	3,497	2,828	2,090	1,505	1,307	1,176
Oban - Colonsay	214	252	397	581	745	580	711	664	576	438	326	217
Ardmhor (Barra) - Eriskay	1,140	1,839	1,768	2,647	4,229	4,414	4,522	4,062	3,302	2,161	1,858	1,311
Ardrossan - Brodick	13,225	15,273	17,187	20,033	25,106	25,479	29,249	26,862	19,312	19,167	14,742	13,201
Oban - Craignure	7,905	9,093	12,063	18,352	22,964	22,433	24,857	25,928	19,483	16,532	10,039	7,767
Oban - Lismore	467	459	650	702	878	802	1,115	1,097	697	713	571	527
Tayinloan - Gigha	1,171	1,382	1,888	1,929	2,660	2,696	3,003	2,881	2,144	1,832	1,450	1,362
Sconser - Raasay	1,402	2,072	2,263	2,651	3,299	3,309	3,669	3,968	3,193	2,659	1,873	1,573
Uig - Tarbert/Lochmaddy	4,477	4,852	6,574	7,977	11,157	12,125	13,699	13,275	9,116	9,070	5,978	4,964
Wemyss Bay - Rothesay	14,274	15,000	17,499	18,473	22,602	21,341	24,833	25,870	20,270	20,021	16,692	16,134
Berneray - Leverburgh	1,125	1,557	2,090	3,100	4,892	4,714	5,199	5,013	3,932	2,392	1,669	1,355
Claonaig - Lochranza	101	261	615	2,554	3,795	4,098	4,721	5,143	4,309	1,920	334	259
Fionnphort - Iona	671	837	999	1,129	1,276	1,162	1,094	1,059	801	957	922	741
Tobermory - Kilchoan	133	204	334	959	1,717	1,616	2,006	2,300	1,333	789	259	199
Ullapool - Stornoway	7,029	7,806	9,587	11,955	14,217	14,420	16,808	16,336	13,553	11,098	8,884	8,124
Kennacraig - Islay/C'say/Oban	129	210	527	797	876	1,590	1,431	1,561	918	840	289	263
Mallaig - Lochboisdale	321	348	275	133	481	1,204	2,278	2,189	1,453	966	16	515
Tarbert LF - Portavadie	951	1,496	1,741	2,783	3,492	3,430	4,101	4,126	2,757	2,934	1,504	1,058
Oban - Coll/Tiree	962	1,294	1,633	1,982	2,370	2,586	3,749	3,165	2,383	1,975	1,462	1,307
Mallaig - Armadale	587	815	1,479	6,679	11,399	13,061	14,873	15,755	9,124	4,308	936	631
Oban - Coll/Tiree/Castlebay	-	-	-	145	285	375	264	595	332	255	-	-
Ardrossan - Campbeltown	-	-	-	-	262	610	735	444	250	-	-	-
Gallanach - Kerrera	90	88	102	75	119	94	93	141	161	163	142	142
Colintraive - Rhubodach	7,755	8,123	9,425	10,499	12,685	11,982	12,433	13,772	10,895	9,803	8,841	7,412

Figure 6: Total Calculated Shipped Passenger Car Units (PCUs) by Month (CalMac Routes)

There are several routes in the CHFS network experiencing average vehicle deck capacity utilisation of 70% or more (2018 data) – where full sailings are a regular occurrence and an increasing number of customers may choose not to travel as they do not want to travel without their vehicle and alternative sailing times are not suitable for their journey purpose. These routes are: Islay-Kennacraig; Craignure-Oban; Mallaig-Lochboisdale; Uig-Tarbert-Lochmaddy; Stornoway-Ullapool; Brodick-Ardrossan; and Armadale-Mallaig. In some cases, customers may displace to another route if an alternative is available.

4 The Strategic Rationale

The challenges facing island communities have been clearly set out in both the National Transport Strategy and National Islands Plan. The baseline work on island connectivity that is progressing as part of STPR2 has also highlighted a range of issues currently facing Scotland's island (and remote) communities:

- Limits to the resilience of the transport network in island and remote communities The resilience of the transport
 network that provides connections to and from the Scottish mainland for island (and other remote) communities is a key
 consideration as this governs the ability of residents to conduct key activities where these cannot be conducted on the island.
- Economic activity is vital for sustainability Many island communities are faced with challenges associated with transport, access to facilities and services and the need for economic activity. Impacts of austerity can be felt more intensely, as can the impact of job reduction or creation; the loss of one job could mean the loss of a family from the island, which on some islands might be a significant percentage of the population, or even threaten the closure of a school. Conversely, the creation of a small number of jobs in such islands can have significant social and economic benefits.
- Geographical location often defines connectivity needs The geographical nature of islands varies around the coast and to some extent determines where island communities gravitate to in order to access the services and facilities that they need.
- Health care has a major impact on wellbeing and sustainability When it comes to health care an island resident may
 have to spend several weeks on the Scottish mainland as it is not possible due to connections to access secondary and
 tertiary care and treatments that would otherwise be offered as a day patient, or which would otherwise be possible to travel
 home at least for weekends.
- Enabling the future sustainability of our islands and remote communities is key People choose to live on our islands, not only because their forefathers did or because they have inherited property or business, but because these islands are very special places, where 'community spirit' continues to be at the core of life itself, enveloped by culture, tradition and



nature. There has to be some acceptance that living on an island will have challenges; at the same time every island community should have the appropriate level of accessibility to employment opportunities (though for those islands which are not commutable, opportunities have to be on-island) as well as goods, services, and facilities to enable a satisfactory living and quality of life.

Why now?

 Islands and remote communities are an essential and integral part of Scotland's fabric and identity, as recognised within the National Islands Plan:

'Our islands are synonymous with Scotland and the nation we are. In particular, they help define how international audiences see Scotland and contribute hugely to our national identity while also preserving and promoting strong local identities...

While islands in Scotland are great places to live, they have been, and in some cases remain, challenging because of a number of circumstances – not least their geographical location and remoteness.'

- Analysis of population data between the 2001 and 2011 censuses, and between the 2011 census and the Mid-2018 Small Area Population Estimates for Scotland shows that for Scotland's islands and remote communities, there is an overall trend of population decline across all of the Western Isles, areas of the Shetland Islands and Orkney Islands and many other islands in Argyll and Bute.
 - Specifically, around 12 islands with scheduled transport connections experienced decline in population greater than 5% between 2001 and 2011: Arran, Bute, Tiree, Islay, Luing, Kerrera, Raasay and Muck; parts of the Western Isles (Flodaigh, Scalpay, Grimsay North); and several smaller islands in the Orkney Islands and Shetland Islands (Egilsay, Papa Stour and Fetlar).

The production and maintenance of a long-term plan and investment programme for new ferries and development at ports will ensure synergy with the National Islands Plan⁹ which commits to this long-term plan to give confidence to island communities on Transport Scotland's ongoing commitment.

⁹ Scottish Government, The National Plan for Scotland's Islands, 2019, <u>https://www.gov.scot/publications/national-plan-scotlands-islands/</u>





5 Meeting the STPR2 Transport Planning Objectives

TRANSPORT PLANNING OBJECTIVE	CONTRIBUTION	SCALE OF IMPACT (-3 to +3)
A sustainable strategic transport system that contributes significantly to the Scottish Government's net zero emissions target.	The introduction of low carbon interoperable vessels and development at ports will improve the efficiency of the network and reduce emissions, supporting the 2018-2032 Climate Change Plan outcome for the proportion of ferries in Scottish Government ownership which are low emission to increase to 30% by 2032.	\checkmark
An inclusive strategic transport system that improves the affordability and accessibility of public transport.	As stated in the draft VRDP 2020, design of vessels and ports and – as importantly – the passenger interface between the two and with connecting travel will reflect good practice and aim for standards which exceed regulatory requirements. No significant benefits in terms of affordability are anticipated in relation to ferry fleets and development at ports.	\checkmark
A cohesive strategic transport system that enhances communities as places, supporting health and wellbeing.	Deployment of planned and prospective vessels across the network will improve resilience and, in turn, help sustain ferry services to island and remote rural communities.	$\checkmark\checkmark$
An integrated strategic transport system that contributes towards sustainable inclusive growth in Scotland.	The sustainable, inclusive growth of island communities would be promoted by the long-term plan to help address and improve resilience, reliability, capacity, and accessibility across the CHFS and NIFS network.	$\checkmark\checkmark$
A reliable and resilient strategic transport system that is safe and secure for users.	Improving ferry fleets and ports will enhance the reliability of the transport network through improved infrastructure quality. There could also be minor associated safety benefits, but these benefits are not likely to be substantial.	$\checkmark \checkmark \checkmark$



6 Addressing the Post Covid-19 Priorities

POST-C19 PRIORITIES ¹⁰	CONTRIBUTION
Employment	There could be a minor beneficial impact for island communities in terms of improved levels of accessibility and reliability to employment opportunities. In particular, vehicle deck capacity benefits would be associated with the new Islay vessel, vessels 801/802 and small vessels in Mull.
The Environment	The introduction of low carbon interoperable vessels and development at ports will improve the efficiency of the network and reduce greenhouse gas emissions.
Education	Given not all children of school age can travel to school daily, rather they must board in hostels on other islands or on the mainland, either weekly or during term time, driven by the connectivity of their home island and the transport available, there is potential for minor beneficial impact in terms of improved levels of accessibility to education.
Equalities	This theme will tackle issues of social exclusion and equal opportunity for island communities.

7 SEA, EqIA and Other Impact Assessments

ASSESSMENT	COMMENTARY
SEA (Strategic Environmental Assessment)	The introduction of low carbon interoperable vessels and development at ports will improve the efficiency of the network and reduce greenhouse gas emissions. However, any infrastructure improvements at ports may need Environmental Impact Assessments and Environmental Management Plans. Providing these measures take place, the intervention is likely to complement the SEA, particularly the SEA objective to reduce greenhouse gas emissions.
EqIA (Equality Impact Assessment)	An improvement to ferries and ports will provide an opportunity to enhance facilities for those with disabilities. It may also improve access to services, employment and healthcare which could benefit younger people, people with disabilities, people seeking gender reassignment services and women who are pregnant or have recently given birth.

¹⁰ Criteria taken from The Scottish Government's response to the Advisory Group on Economic Recovery, August 2020

ASSESSMENT	COMMENTARY
ICIA (Island Communities Impact Assessment)	The main aim of this theme is to help address resilience, reliability, capacity and accessibility across the CHFS and NIFS network through the implementation of a long-term ferries and ports investment plan, it is therefore anticipated that there will be a beneficial impact on island communities.
CRWIA (Children's Rights and Wellbeing Impact Assessment)	There are likely to be negligible impacts in relation to children and young people from this investment in new ferries and at ports.
FSDA (Fairer Scotland Duty Impact Assessment)	There could be a moderate beneficial impact in tackling inequality, with improved ferry connectivity helping to improve access to employment opportunities, reduce social isolation and improve the health and wellbeing of those living in these areas.

8 Implementability and Interdependencies

IMPLEMENTABILITY CRITERIA	COMMENTARY	Key Interdependencies
Feasibility	Increasing standardisation of ferries in the CHFS and NIFS network is generally feasible, subject to further work to understand how this would be taken forward. Further feasibility work will be necessary to determine the technical and operational feasibility of development at ports.	There are interdependencies between the National Transport Strategy, National Islands Plan, STPR2, the VRDP and the forthcoming Island Connectivity Plan.
Affordability	This theme is supported by investment of at least £580 million during the next 5 years. Further work will be necessary to determine the affordability of individual schemes or projects identified to deliver the long-term investment plan.	I his long-term plan and investment programme will provide support for each of these strategies and projects that provide the strategic rationale to drive island
Public Acceptability	STPR2 engagement outcomes suggest there would be very strong support across the regions for investment in ferry and port infrastructure to enhance the quality of island transport connections.	CHFS and NIFS network.

Overall, addressing and improving resilience, reliability, capacity, and accessibility across the Clyde and Hebrides ferry service (CHFS) and Northern Isles ferry service (NIFS) network will contribute to improved safety and resilience on the Strategic Transport Network.

