

HITRANS Pilots

Evaluation report, February 2022



Lessons Learned

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1 General idea

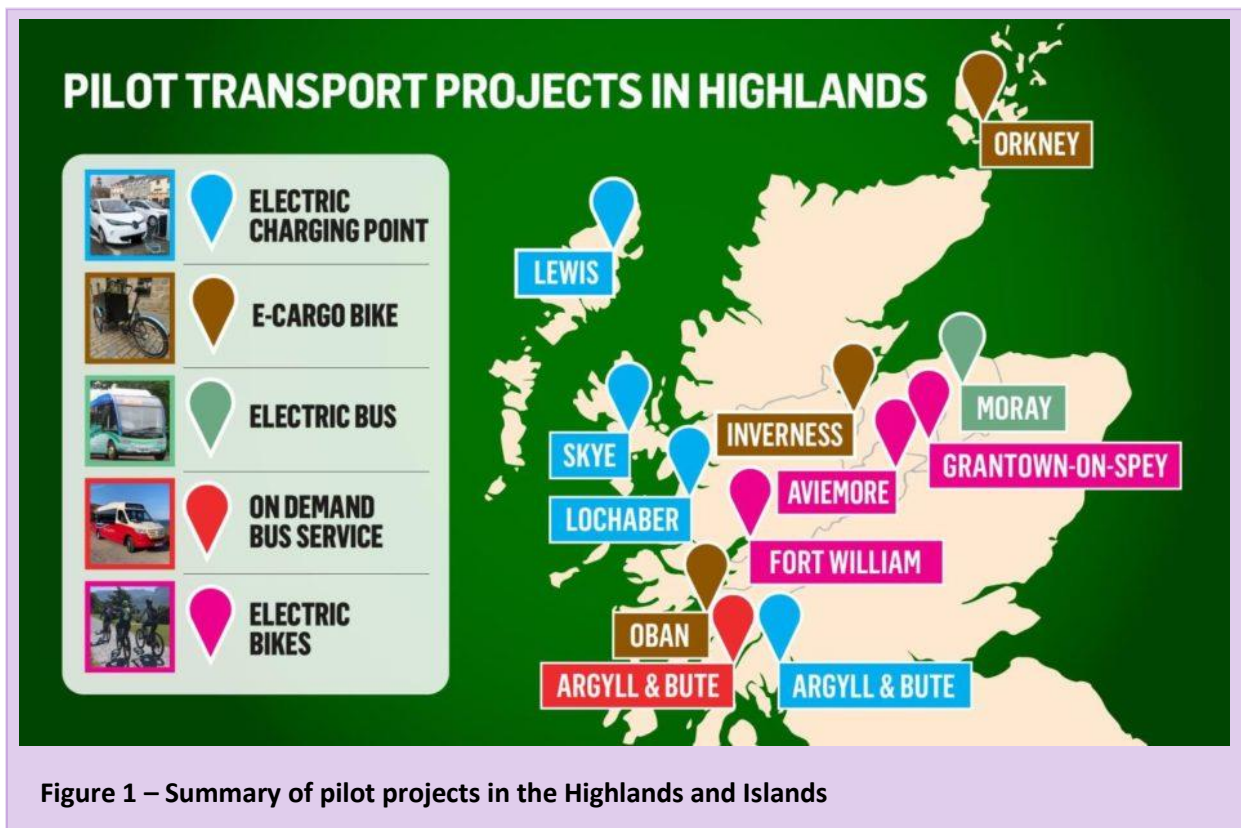
The MOVE project aims to shape a new approach to develop innovative and sustainable mobility initiatives through co-creation, bringing together local authorities, knowledge centres and local economic players which specifically targets transport in rural or semi-rural areas. The MOVE project will share best practice in sustainable mobility and governance to increase take up in other regions, and support the greening of transport and stimulate rural areas in the North Sea Region.

HITRANS is leading on the delivery of three pilots to address social exclusion by improving accessibility and low carbon travel opportunities into main population centres from rural and peri-urban areas. HITRANS main aims are outlined as;

- Reducing the use of private cars in local mobility streams – a 10% reduction in car trips of specific target groups within the pilot area. Baseline set at start of project.
- Increase the usage of sustainable mobility solutions – 20% increase in passenger numbers from the existing sustainable mobility solutions. Baseline will be 0 passengers.
- Increase social integration through mobility. 20% increase in km travelled by target groups. Baseline will be 0 as currently no sustainable mobility solutions.

HITRANS is conducting three pilot projects

1. Skye Pilot Project
2. Ferintosh Pilot Project
3. E-Cargo Bike Pilot Project



2 Skye Pilot Project

2.1 Geographic context

Sleat is located in the southern peninsula of the Isle of Skye consisting of a number of small crofting township including Camuscross, Teangue, Drumfearn, Ferrindonald, and Tarskavaig, as well as the village of Ardsvar and the ferry port at Armadale.

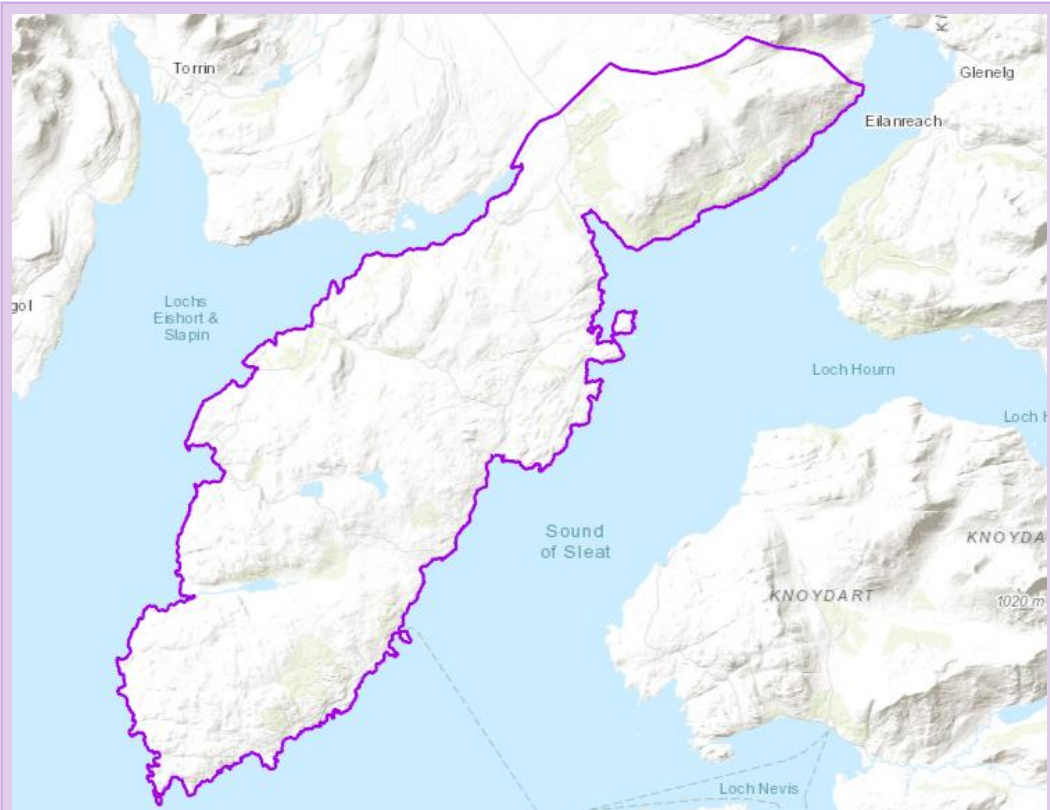


Figure 2 – Boundary map of Sleat Peninsula, Isle of Skye



Figure 3 – Sabhal Mor Ostaig College and Tarskavaig, Sleat Peninsula, Isle of Skye

2.2 General statistics

Sleat has been one of the fastest growing rural areas of Scotland for over 30 years, currently having a population of around 900. Within its boundaries are two pioneering estates; Scotland's Gaelic College at Sabhal Mòr Ostaig, and a major visitor centre at Clan Donald in Armadale.

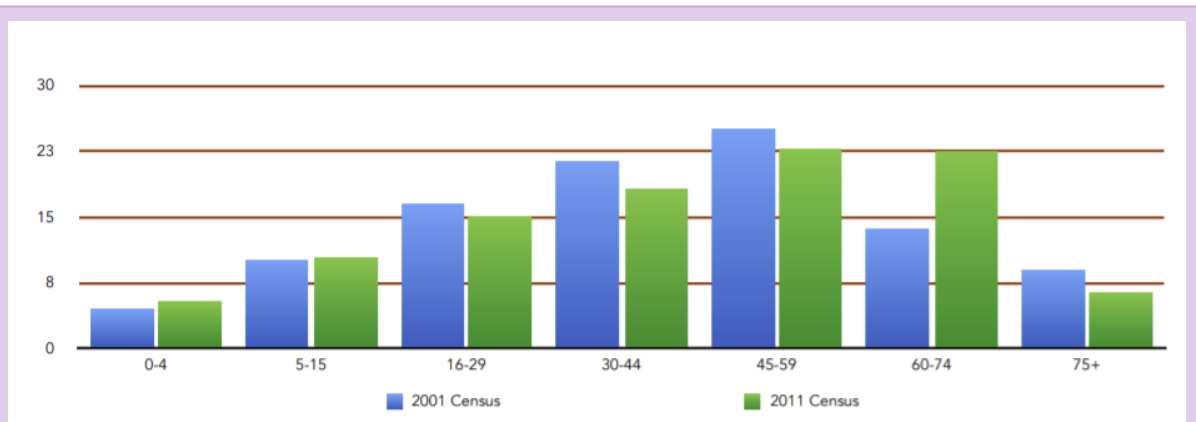


Figure 4 – Census data for Sleat comparing 2001 and 2011 census data

Sleat's approximately 900 population are split into demographics in the graph above, comparing 2001 and 2011 census data. There has been a 12% increase in population overall, but is mainly concentrated in the 60-74 age range. There are approximately 383 households in Sleat with a high prevalence of small households in the area, almost 5% greater than Highland Council as a whole which reflects the high percentage of older people in the area.

After Trotternish on Skye, the Sleat peninsula is the second largest Gaelic speaking area on the island and is home to Scotland's Gaelic college, Sabhal Mòr Ostaig. The college provides university level education with degrees such as Gaelic and Media Studies, Gaelic and Music as well as a range of other full-time, part-time and summer courses. Sabhal Mòr Ostaig is the largest employment provider in the area with around 120 full-time employees. Almost 60% of people in Sleat can speak Gaelic, compared to 1.1% of the Scottish population over the age of 3.

Food costs about 10% more in remote rural Scotland and considerably more in local stores. Longer commutes in rural areas typically add £30/40 per week to fuel costs and household fuel bills tend to be 50-90% higher, according to the Minimum Income Standard report by Highlands and Islands Enterprise (HIE).

2.3 Integration into the public transport network

Skye is connected to the mainland by a bridge, which opened in 1995, from Kyleakin on the island's east coast to Kyle of Lochalsh. A Caledonian MacBrayne ferry service runs from Armadale to Mallaig and Scotland's last hand-operated, turntable ferry boat provides a service to Kylerhea leaving from Glenelg. The Isle of Skye Ferry Community Interest Company owns and operates this ferry service. The island acts as a link to other isles too, Caledonian Macbrayne operate ferry services to Lochmaddy on North Uist and Tarbert on the Isle of Harris from Uig, north west of Portree. Citylink and Stagecoach run frequent bus services from Glasgow and Inverness to Skye. Over half of the households in Sleat have a car or van available to them.

The existing bus service operates only two times a day to coincide with school times though there are some additional services in the Summer months. In recognition of the lack of existing public transport the Sleat Community Trust run a subsidised taxi service with funding support from the Highland Council. The proposal would be that an electric 7 (Nissan NV Note) or 15 seater (Mellor Tucana II)

vehicle would replace the existing subsidised taxi service. The service would run on a combination of a fixed schedule element as well as a demand responsive basis. The service would work on a co-creative basis to facilitate appointments for the GP surgery, for the new Broadford Hospital, the over 60's lunch club, mobile bank, swimming lessons in Kyle and links to onward to Broadford and Portree and to connect into main spinal routes to larger towns and cities in the Highlands and the central belt. There is also potential to explore home grocery delivery for Armadale Stores and potential outreach postal office services. The innovation element of this project would be to offer over 60's free bus travel if they are in possession of the blue highlife card.

2.4 Political context

The Ross, Skye and Lochaber constituency was created in 2005 and is one of three Westminster constituencies covering the Highland council area. The constituency covers a central portion of the Highland council area, and at 12,000 square kilometres (4,600 sq mi), it covers the largest area of any House of Commons constituency in Britain. Until the 2015 general election, it was represented by former Liberal Democrat leader Charles Kennedy. Since then, it has been represented by Ian Blackford, the leader of the Scottish National Party in the House of Commons. With a majority vote for Ian Blackford the residents of Skye must have appreciated the views and policies he stands for, such as; determination to get to net-zero, transition away from fossil fuels and to support families and protect the environment, with sustainable transport by proposing a free bike to all children of school age who can't afford one, so every child in Scotland leaves school able to cycle safely.

3 Pilot description

3.1 Target groups

Initially, the pilot was designed to aid in a study with NHS to understand health demand and develop solutions to improve access to care and to create a framework that could be applied nationally. However, the outbreak of Covid 19 changed the focus of the pilot. Target users became those in need of home deliveries as a result of the lockdown, the vehicle was used to deliver groceries and prescriptions to community members who were isolating, shielding or couldn't get out for other reasons. Goods delivery became very popular, servicing 25 households per week at its peak.

3.2 Organisation

Several proposals for pilot projects were received from member local authorities one from Highland Council for a hybrid type service using scheduled and demand responsive to serve the remote community of Sleat in Skye that currently has no dedicated public transport available to all settlements. The service is being run by volunteers and the Sleat Community Trust.

3.3 Communication

This new service was advertised locally and gained a number of users through word of mouth in this small community. The pilot has proved valuable during the Covid pandemic from a social interaction point of view enabling the driver to be able speak to people and find out how they are whilst exchanging a few words whilst doing the shopping deliveries.

Jul 25, 2020 | Transport

Greening Transport on Sleat



Sleat Community Trust's redevelopment of the community shop and Trust office at Armadale will include a bike shelter for 10 bikes, fully funded from Transport Scotland through HI TRANS. It will allow bikes to be locked up securely whilst people are shopping or away on the community bus for the day, and is part of a bigger project for shelters throughout the island. The Trust's community bus follows on from the previous subsidised taxi service for community members, and the current vehicle will soon be replaced by an electric minibus. The bus service is run by volunteers.

An electric car sharing club is also coming to Sleat. The first electric vehicle will be located at a new charging point planned for Sabhal Mor Ostaig Gaelic College. Initially, to comply with advice around COVID-19 the vehicle will only be available to students and staff at the college and will be booked through an innovative Well@Getting Around App, but in time (as COVID-19 restrictions ease) the opportunity to use the vehicle will be extended to the whole community. More information [here](#).

Figure 5 – Publicity for the Sleat Pilot Project

3.4 Service description

Service replacing existing contract operated by Sleat Development Trust on behalf of Local Authority. Combination of demand responsive and scheduled service. A diesel vehicle was used initially and then replaced with an ENV200 Combi Nissan EV with charge point. Pre-Covid we were running two weekly pilot runs, one to the local shop and one to Kyle of Lochalsh (which has more shops and services), and patronage was building momentum. A purpose built charge point has been installed at the Sleat Community Transport hub specifically for the MOVE vehicle (6 hours full charge for ENV200).

The bus needed repairs during February and so was in the garage twice for repairs to be carried out (13th to 19th, and again on 28th). However, outwith these dates the bus was fully operational until the pandemic hit the UK and lockdown began. From 18th March, the bus was being used for shopping deliveries to the vulnerable once a week throughout lockdown. The bus was not available for passengers during this time due to Covid-19 restrictions. This picked up again very slightly in the month of September when restrictions began to lift, and SMO (Gaelic college) borrowed it for

students on 1st, 3rd and 5th. The bus was thoroughly sanitised before and after. However, the bus was broken for part of this month so shopping deliveries were not made on the 15th as planned.

As can be seen in the graph below, the passenger numbers dropped to zero as the pandemic grew in the UK through February and March, but has started to pick back up again slowly after restrictions were eased in August. Similarly with the graph below, the bus was still in use for deliveries through lockdown, travelling around 150km a month to make food deliveries to the vulnerable in rural areas. This has again picked up as restrictions were eased.

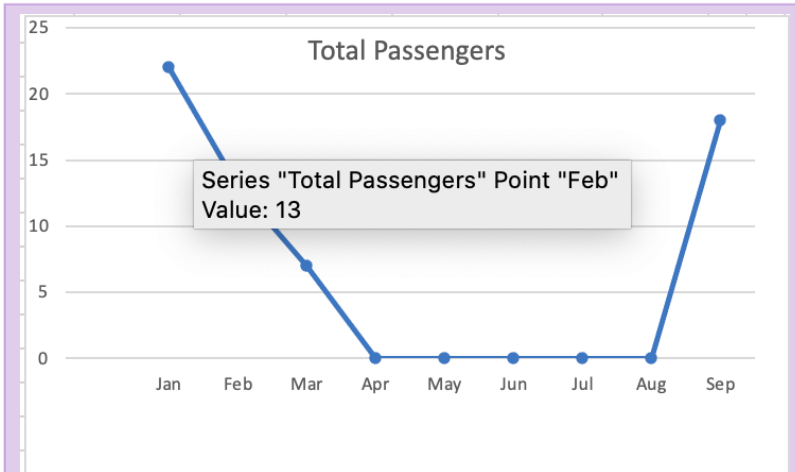


Figure 6 – Number of passengers using the service (Jan-Sept)

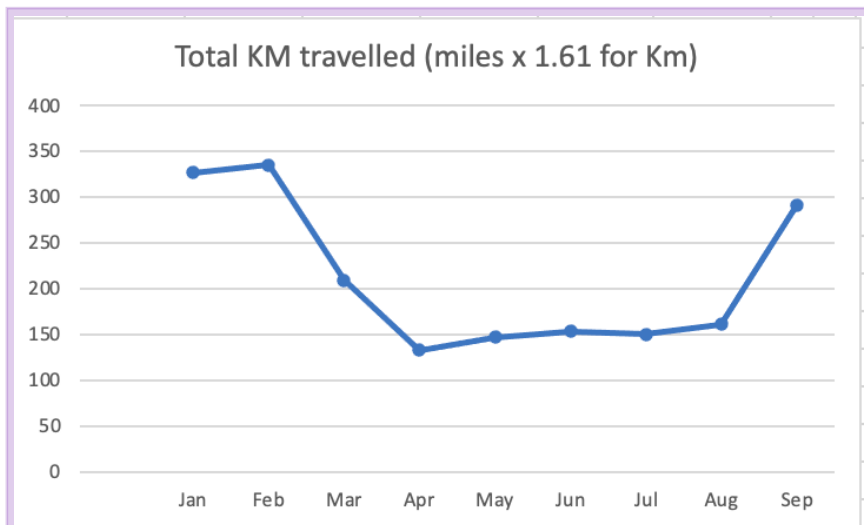


Figure 7 – Number of km travelled (Jan – Sept)

The Sleet pilot in Skye is fully implemented with an EV running a combination of a scheduled service and DRT and is a great example of the adaptability and flexibility during the Covid 19 pandemic where the vehicle is primarily being used for the movement of goods rather than people.



Figure 8 – Photographs of the Sleaford bus and electric charging infrastructure

3.5 Financial aspects

Estimated Budget over 3 years is £25,000.

4 Ferintosh Pilot Project

4.1 Geographic context

Ferintosh is a small community council area, on the Black Isle near Inverness in the Highlands of Scotland. It is a rural area of agricultural land and woodland with scattered houses and small settlements such as Culbokie, Easter Kinkell, and Duncanston. Its name in English, Ferintosh, derives from the Gaelic: Fearann Tòisigheachd, literally 'estate of the thanedom'.

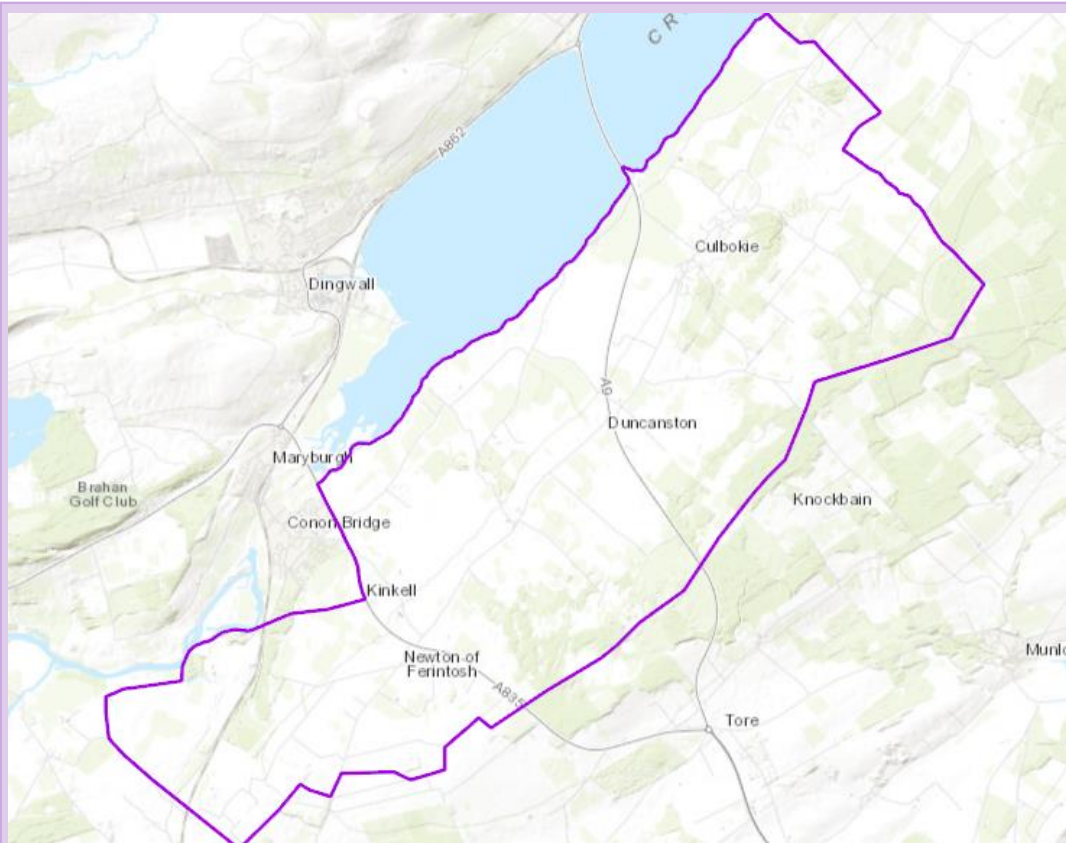


Figure 9 – Boundary map of Ferintosh



Figure 10 – Ferintosh Community Hall

4.2 General statistics

This community is located on the Black Isle with approximately 2000 residents in the area. It is a rural with productive agriculture. The majority of residents not working in agriculture work in the main nearby towns of Dingwall and the main regional centre, Inverness which has a population of around 60,000.

4.3 Integration into the public transport network

The aim of the pilot was to replace the current Service 22 – 3 return services each weekday to Inverness - Current Covid-19 Service 22 - 2x return services to Inverness (Monday – Friday) with a more flexible, innovative solution that is more economically efficient, reduces emissions and most importantly better meets the needs of the local community.

This would consist initially of a mixture of scheduled peak time services to Inverness along with a period of operation where the service will operate on a demand responsive basis with passengers able to book journeys to/from any point within the Ferintosh Community Council area or to Tore where they will be able to transfer onto any of the Stagecoach services operating through the Tore junction with connection to Inverness, Dingwall, Alness etc possible.

4.4 Political context

The main local operator Stagecoach diverts a couple of its scheduled services into the main settlement in Ferintosh (Culbokie) on a commercial basis. Beyond these services all other public transport in the area is supported by the Local Authority with the services that are provided supported largely through its funding of school transport in the area. With rising costs and pressures on the local authority budgets increasing there have been cuts to any non statutory support for public transport services in recent years and it is recognised that new models of public transport provision are required.

5 Pilot description

5.1 Target groups

The bus was to target all local residents and visitors of the area as a new flexible way to connect them to key services. The Ferintosh Community Bus is an example of a demand responsive form of public bus transport customised for the Ferintosh area that around the UK and beyond is proving to provide a more accessible, more frequent and more sustainable service for rural residents. Generally rural residents live considerable distances from fixed route bus services and the Ferintosh community bus can travel all the public roads as a flexible routing service the frequency of bus journeys can therefore now be increased since the bus will only be travelling within a small contained area and will link with the more frequent A9 bus services operated by Stagecoach. An 8 seat Electric Vehicle has been leased for the pilot with The Local Authority committing to continuing to support the lease and operation of the service beyond the timeframe of the MOVE supported Pilot. The FCB is based in Culbokie where an EV Charging point has been installed to support the operation of the service

5.2 Organisation

A partnership of HITRANS, Stagecoach, The Highland Council, CSI Rossshire and Ferintosh Community Council (supported by Culbokie Community Trust) has assembled this pilot. The new flexible bus service in the Ferintosh Community Council area of the Black Isle was introduced on Monday 28 June 2021, making it easier for local residents to use public transport. The demand responsive service operated between 9.30 am – 4.15 pm, Monday to Friday, and complement the scheduled peak services on Service 22 to Inverness that will continue to be operated by Stagecoach. In addition to the core service, local community members have been working to train volunteer drivers who they hope will be able to offer the service outwith the hours of the pilot including in the evenings and at weekend. In the evenings it is hoped that the bus can help local school children access after school activities at the High School in Fortrose on the Black Isle.

5.3 Communication

The new community bus was advertised on a number of the stakeholder websites, as well as being covered by the local press. Furthermore, leaflets were created and delivered to all homes in the Ferintosh area discussing the change in service and including the new bus timetable which could be torn off and kept for reference. The public can phone at any time between 10.00 - 14.00 Monday to Friday to book at least 1 day in advance of travel (every effort will be made to accommodate same day requests). They will then agree with the administrator all the details of the agreed journeys (times and places) and provide a contact phone number. There is no requirement to explain the reason for your journey.

Monday to Friday

Saturdays

And a BONUS for the FCC area Community

During the pilot (estimated Autumn 2021) a small 5 seater (plus wheelchair place) electric vehicle will replace the diesel Sprinter (16 seater). By then we are planning to have volunteer drivers trained, registered, PVG checked and insured to enable the FCB to be available through late afternoon into night time and also on Sundays thus providing essentially a 24/7 service (the modest fares for these volunteer services have not yet been decided). So for 7 days a week, FCC area residents will have access to all Stagecoach's A9 services at Tore Service Station. For example, for the first time, residents will be able to access evening events and activities in Inverness.

Is the FCB Pilot just to link with A9 bus services?

Initially, yes that is the plan and the existing 21 service through the FCC area to Cromarty and Dingwall remains as a fixed route service. If the pilot goes well, a Phase 2 trial of 'demand responsive' services for journeys between Cromarty and Dingwall will be considered but only after extensive consultation.

Who is putting this pilot together?

A partnership of HITRANS, Stagecoach, The Highland Council, CSI Rossshire and Ferintosh Community Council (supported by Culbokie Community Trust) has assembled this pilot.

Who can I contact for more information?

Your local community councillor for this pilot is Bruce Morrison who you can contact on **01349 877 127** or at **ferintoshcc30@gmail.com**

Ferintosh Community Bus S22

From 4th May 2021

Operator: Stagecoach Highland

Service available in the Ferintosh Community Council area, Monday to Saturday, between the hours of: 09.30 to 16.15

For bookings phone: **07518 722 456 / 07519 772 376**

What is the Ferintosh Community Bus (FCB)?

The FCB is a new flexible bus service for residents in the Ferintosh Community Council (FCC) area. Complementary scheduled peak services to Inverness that will continue to be operated by Stagecoach (See Service 22 timetable), the new FCB will operate between 09.30 - 16.15 and take residents to and from Tore Service Station where passengers can join any of Stagecoach's mainline A9 buses.

The FCB is an example of a demand responsive form of public bus transport (customised for the Ferintosh area) that, around the UK and beyond, is proving to provide a more accessible, more frequent and more sustainable service for rural residents. Generally, rural residents live considerable distances from fixed route bus services and the FCB can travel all the public roads as a flexible routing service. The frequency of bus journeys can therefore now be increased since the FCB will only be travelling within a small constrained area and will link with the more frequent A9 bus services operated by Stagecoach.

Who can use it?

Just like an ordinary bus, it is available to all residents in (and visitors to) the FCC area (Culbokie in the east to Mulbuie in the west, Mulbuie Ridge in the south down to the Cromarty Firth in the north).

Where can I travel to and from?

The FCB will be able to travel on all the public roads in the FCC area and collect / drop off residents anywhere where it is safe for the bus to stop and as near to your home as possible. The FCB will then link at Tore Service Station* with all of Stagecoach's A9 bus services south into Inverness and northwards up the A9. Door to door journeys within the FCC area will also be possible.

At the Tore Service Station, the FCB will meet the A9 bus (having diverted off the A9) for passenger transfer. The FCB will plan to arrive 5 to 10 minutes before the arrival of the chosen A9 bus. Passengers will be welcome to use the café / toilet facilities at Tore Service Station or may prefer to wait on the FCB.

*Tore Service Station is open 06.00 - 22.00 (Mon-Thu), 06.00 - 21.00 (Fri), 07.30 - 20.00 (Sat) and 09.00 - 20.00 (Sun) Refer to the tear off timetable attached.

When can I travel?

Stagecoach will continue to operate a peak time Service 22 timetable (refer to tear off timetable attached) while the FCB will operate between 09.30 - 16.15. The FCB can be organised to collect you in the Ferintosh area for your outward journey or from Tore Service Station for return journey between 09.30 - 16.15 Monday to Saturday.

How do I book it?

Phone at any time between 10.00 - 14.00 to book at least 1 day in advance of travel (every effort will be made to accommodate same day requests). You will then agree with the administrator all the details of the agreed journeys (times and places) and provide a contact phone number. There is no requirement to explain the reason for your journey.

Will the bus come exactly when I want it?

Because the FCB could be carrying a small number of other residents in other parts of the FCC area, both residents and the administrator will agree a time which will then be adhered to. The FCB will collect you even if you are the only passenger.

What is the fare?

All journeys, including concessionary travel, will be no more costly than current fixed route journeys, even although the journey to / from Inverness is a two bus journey. The National Entitlement Card can be used with this service. The cost of a bus journey is very much lower than the fuel and parking costs of a private vehicle or a taxi.

Why is a demand responsive, flexible route and flexibly timed service being piloted?

The current fixed route bus service is used by a very small number of residents. Financial support for public bus services from Councils around the UK is in decline as funding is diverted towards services required by higher numbers of residents. Demand responsive bus services are proving more useful for residents in rural areas and therefore easier for Councils to justify financial support.

Timetable for Inverness - Tore - Inverness

Showing all Stagecoach buses serving Tore Service Station

Monday to Friday	Saturday
Time	Time
0937	0948
0957	1010
1007	1020
1017	1030
1027	1040
1037	1050
1047	1100
1057	1110
1107	1120
1117	1130
1127	1140
1137	1150
1147	1200
1157	1210
1207	1220
1217	1230
1227	1240
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1697	1710
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2087	2100
2097	2110
2107	2120
2117	2130
2127	2140
2137	2150
2147	2160
2157	2170
2167	2180
2177	2190
2187	2200
2197	2210
2207	2220
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2957	2970
2967	2980
2977	2990
2987	3000

For bookings phone: **07518 722 456 / 07519 772 376**

Figure 11 – Ferintosh Community Bus Leaflet

5.4 Service description

Service replacing existing contract operated by Sleaf Development Trust on behalf of Local Authority Combination of demand responsive and scheduled services. Initially a diesel vehicle was used then

replaced with an ENV200 Combi Nissan EV with charge point. Pre-Covid we were running two weekly pilot runs, one to the local shop and one to Kyle of Lochalsh (which has more shops and services), and patronage was building momentum.

As a result of the outbreak of Covid-19 there was a change in focus for the pilot – the vehicle began to be used to deliver groceries from the local shop to members of the community shielding/isolating, or who couldn't get to the shops for other reasons. Goods delivery became very popular, and at its height was providing deliveries to 35 households per week.

ENV200 is now being used on the route with the charge point having been installed at the Sleat Community Transport hub specifically for the MOVE vehicle (6 hours full charge for ENV200)

Ferintosh Community Bus (FCB): A community consultation document went out to the email list and displayed in Culbokie Spar last week. The key question asked was whether the community would (or would not) support the FCB becoming a permanent service with the upcoming end of the pilot phase. The document contained the evidence of bus usage, the environmental impact, the views of passengers, the views of the project partners and the responses to residents' queries provided to FCC last month.

The results of the consultation were 38 saying 'yes', 3 saying 'no' and 1 'undecided'. Many comments were also received (FCC received a report of all unedited comments) which will be used as a rich source of ideas for the improvement and extension of the FCB service in the future.

FCC discussed the feedback and presented its own thoughts including preventing loss of precarious bus services / good for those not being able to get to a bus stop / house collection and especially delivery back very positive / link at Tore virtually seamless / continue and allow it time to expand / connectivity for an ageing population / reduced carbon footprint / residents seem to accept the difficulties of the pilot through covid and must be given time to work effectively / exciting new concept of bus from your own house / many special circumstances to be explored and satisfied.

FCC unanimously agreed that the FCB should become a permanent feature of the public bus service. One resident has requested of the three Black Isle Highland Councillors that, in the public interest, they look into the personal liability of residents as members of the FCB. FCC has received in writing the assurance of THC that all insurance policies are in place in order to exclude residents of any liability.

5.5 Financial aspects

The Ferintosh pilot is funded by the MOVE project, HITRANS and The Highland Council. Costs include an allowance for the electric vehicle, operation and management of the service. In addition, an EV charger has been required for the vehicle to support the efficient running of the service. The aim of the service is to provide more sustainable mobility options to the community rather than travel by private cars. The service links up with existing Stagecoach services to promote onward sustainable travel for longer journeys

6 E-Cargo Bike Pilot Context

6.1 Geographic context

Our ecargo bike trials are taking place in 3 separate locations; Oban, Orkney and Inverness.

Oban (in Scottish Gaelic meaning The Little Bay) is a resort town within the Argyll and Bute council area of Scotland. Despite its small size, it is the largest town between Helensburgh and Fort William. During the tourist season, the town can have a temporary population of up to over 24,000 people. Oban occupies a setting in the Firth of Lorn. The bay forms a near perfect horseshoe, protected by the island of Kerrera; and beyond Kerrera, the Isle of Mull. To the north, is the long low island of Lismore and the mountains of Morvern and Ardgour.

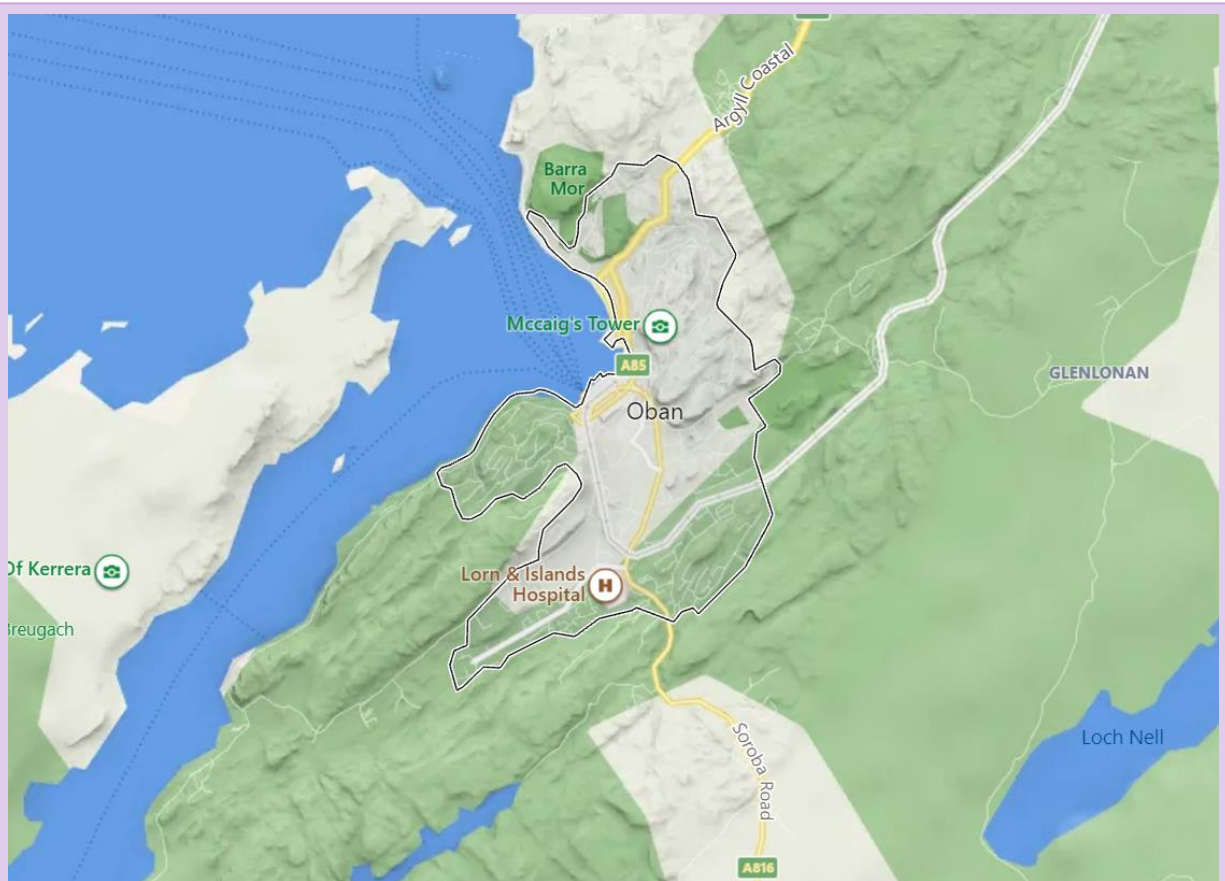


Figure 12 – Boundary map of Oban

Orkney is separated from the Scottish mainland by the Pentland Firth, which is only 11km (7 miles) wide at its narrowest point. There are roughly 70 islands in Orkney, of which 20 are inhabited. The largest island is Mainland, where the administrative capital and major city of Kirkwall is located. Those islands north of Mainland are called the North Isles and those to the south are called the South Isles. Generally, islands with 'Holm' in the name are uninhabited. Islands with 'Papay' indicate that the island was associated with early Celtic Christian missionaries.

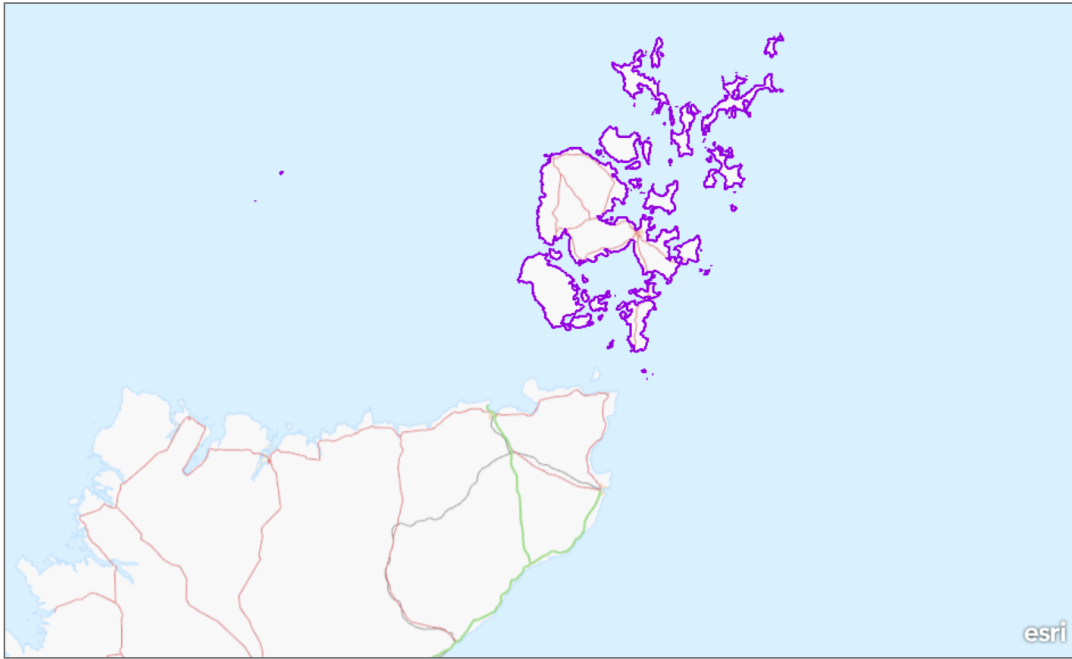


Figure 13 – Boundary map of Orkney

Inverness is located in the Scottish Highlands. This city is one of the fastest growing not just in Scotland, but in all of Europe. An exceptional quality of life and a ranking of “the happiest city in Scotland has made this an ideal place to call home, which is why the population is growing so quickly and was at last count made up of 46,870 people. The population of Inverness is rapidly growing and is, in fact, the second fastest-growing in the United Kingdom



Figure 14 – Boundary map of Inverness

6.2 General statistics

Oban's total population was 9,974 in 2011, an increase of 5.6 per cent from 2001. By industry of employment, there is a higher share of employment in wholesale and retail, transport and storage, and accommodation and food services than the Highlands and Islands and Scotland. By occupation, a higher share of employment in managers, directors and senior officials, and elementary occupations than the Highlands and Islands and Scotland.

Orkney's total population was 22,190 in 2018, an increase of 3.6% from 2011. Population density (22 people per sq. km) is higher than that for the Highlands and Islands (12 people per sq. km) but lower than the Scottish average (70 people per sq. km). Orkney has an older age profile than both the Highlands and Islands and Scotland as a whole.

The Greater **Inverness** area, including Culloden and Westhill, had a population of 56,969 in 2012, growing to 63,320 in 2016. The primary languages spoken in Inverness are English and Scottish Gaelic. The city in recent years has had a booming economy, leading many to want to live in the area. Inverness is ranked fifth across British cities as having the highest quality of life. It has also been named the happiest place in Scotland, as well as one of the happiest places in the United Kingdom.

6.3 Integration into the public transport network

The pilot areas were each evaluated during the application stage for their existing bike infrastructure. In each of the 3 pilot locations there was sufficient active travel network to ensure the success of a trial.

6.4 Political context

Promotion of sustainable transport is at the heart of government transport agendas in Scotland. At present, there are a very limited number of eCargo bikes across the region, and introducing this as a new service brings its challenges in terms of encouraging people to try something new and being open to change. The uptake has been very promising with several businesses now planning to purchase their own eCargo bikes in the future.

7 Pilot description

7.1 Target groups

Demand for the project is multi-pronged, as we have gathered from prospective participants; on the one hand, many businesses are increasingly keen to minimise their carbon emissions, both for altruistic reasons, and as part of their sales pitch to existing and new customers. As you would expect therefore, consumers are increasingly looking for, and particularly during the Covid-19 pandemic, businesses that are local, smaller scale, and which do good through their businesses practices. The use of e-cargo bikes to undertake business and to fulfil local orders is an increasingly attractive business proposition that HITRANS would wish to support other businesses in adopting. For example, HITRANS have held discussions with partner councils and BIDs to assess demand, receiving positive responses from all. Other aspects identified as opportunities for added community benefit as part of the project include a prescription delivery service, as this is not offered by the NHS, and so the housebound have difficulty in gaining prescriptions as well as the many, particularly more elderly residents, that continue to shield at home, and particularly since visitors have started to return to the island.

7.2 Organisation

Initial discussion with Local Authorities, community organisations and Business Improvement District (BID) organisations identified an interest in exploring alternative delivery modes from which we

narrowed our focus to three trial areas. Local shops, restaurants, bars and cafes are increasingly offering delivery services to retain their customer base through the pandemic, and most businesses are using petrol or diesel vehicles to make deliveries. eCargo bikes will provide a superior service at a lower running cost, and refrigerated compartments and other modifications can be added, according to demand. Furthermore delivery via eCargo bike means that those operating them need not have to have a driving licence - particularly suited to help young people jobless as a result of the pandemic.

In order to supply and maintain the eCargo Bikes in each location HITRANS published an invitation to tender on Public Transport Scotland. The tender included the Pricing Schedule for the Work Package and was weighted 60:40 price:quality during the selection procedure. As much as possible we wanted to engage local bike shops to the trial location.

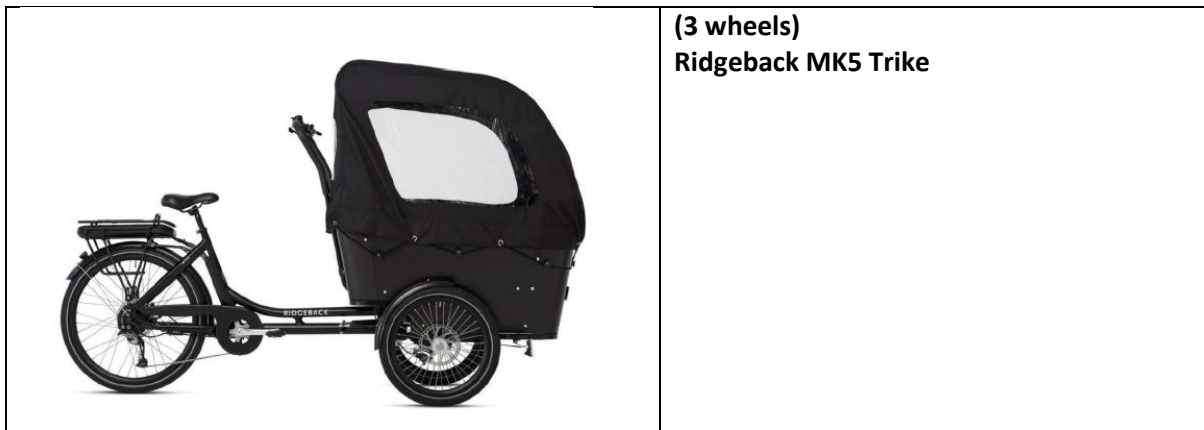
The trials were promoted through BID and other local authority organisations as well as social media platforms. An Inverness eCargo bike was also made available to the public and local businesses at a HITRANS hosted Low Carbon Transport Day.

Supply & Maintenance of E-Cargo Bikes.

Inverness	Highland Bikes
Oban	Oban Cycles
Orkney	Glasgow Bike Hive

The Bikes

	(2 wheels) Ridgeback
	(2 wheels) Tern GSD L10 LR



Bike type	Quantity	Load capacity (kg)
eBullitt e6100 XT	3	100
Tern GSD L10 LR	1	200
Ridgeback MK5 Trike	3	150
Ridgeback	5	150

We contacted local businesses, councils, and community groups in each area to establish different uses for the E-cargo bikes. The bikes are being offered to businesses and community groups until the pilot project ends in February 2022, with the bikes being available for up to 3 months per user to give an opportunity for other businesses to use the bikes following the first set of trials. All necessary lights, locks and safety equipment are provided as part of the trial. Training is also offered to ensure that users are confident in using the bikes before starting the trial.

If a business is interested in using an ecargo bike they are asked first to complete an online survey/questionnaire where they outline how the bike would benefit their business etc. HITRANS would then read and evaluate the businesses response before selecting the successful parties.

7.3 Communication

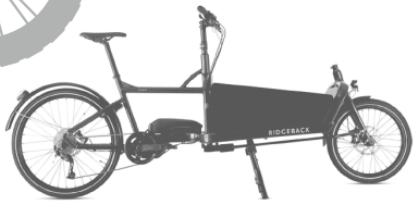
The new mobility options created by the ecargo bikes had to be communicated to the public to generate interest in the pilot. The ecargo bikes were promoted through BIDs and via local community anchor organisations. Furthermore posters were created to advertise the pilot outlining the aims and providing contact information for those interested.






E-CARGO BIKE TRIALS

INVERNESS

If you are based in Inverness, find out if an electric cargo bike could benefit your business or group and apply for one of our bike trials

From carrying equipment, parcels and mail, to deliveries of groceries, prescriptions or even flowers, businesses are saddling up and exploring the ways in which cargo bikes can complement their business model.



-  Reduce carbon footprint
-  Reduce pollution and improve air quality
-  Reduce fleet and fuel costs
-  Avoid congestion
-  Improve employee health and wellbeing

WHY TRIAL?

With a variety of e-cargo bike types to choose from, it's understandable that businesses might wish to trial a bike to see how it could complement and fit in with their existing methods. HITRANS has secured four e-cargo bikes for Inverness which we are pleased to be able to offer to businesses and community groups for 1-3 month hires.

The bikes and their load capacity available include Ridgeback (150kg), Tern GSD L10 LR (200kg) and the Ridgeback MK5 trike (150kg).

In addition, all necessary lights, locks and safety equipment are provided as part of the trial. Training will also be offered to ensure that users are confident in using the bikes before starting the trial.

WHY E-CARGO?

At a time when customer demand for same-day service and delivery is increasing, alongside expectations of sustainability, light electric freight vehicles such as electric cargo bikes (otherwise known as e-cargo bikes) are an appealing option to many businesses.


E-cargo bikes fill the gap between traditional bicycles and delivery vans, and are a perfect option for transporting work equipment, light freight or completing 'last-mile' deliveries. With electric pedal assistance, they have the capability and power for transporting significant loads with the benefit of being able to move freely through congested areas, avoid parking tickets and truly achieve a door-to-door service.


E-cargo bikes are easy to charge, with removable batteries that can be plugged into any ordinary wall socket. Charging generally takes around 4 - 8 hours, depending on the size of the charger, and most bikes will be able to provide at least 20 miles from a single charge, although many can achieve much more than this. Exact mileage depends on a number of factors, including weight of load and the terrain, but even if the battery does run flat the bikes are still able to be used normally without the electric assistance.

E-cargo bikes are suitable for a wide range of users, whether you are a regular cyclist or have not ridden a bike in a while. They can be used both on and off road, and on rough or cobbled surfaces, and can make tackling that steep hill a breeze.

FIND OUT MORE...

If you are interested in trialling an e-cargo bike, or if you have any further questions, please contact HITRANS:

 info@hitrans.org.uk

 01463 719002












Figure 15 – eCargo Bike Trial Poster

Each eCargo bike user was sent a monthly survey to aid in tracking their progress and note any issues or queries. Moreover, at the conclusion of each business trial they are asked to complete an end of trial survey which contains more comprehensive questions. Results are reported in the Evaluation section below.

7.4 Service description

At a time when customer demand for same-day service and delivery is increasing, alongside expectations of sustainability, light electric freight vehicles such as electric cargo bikes (otherwise known as e-cargo bikes) are an appealing option to many businesses.

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being able to move freely through congested areas, avoid parking tickets and truly achieve a door-to-door service and to promote a modal shift from van/car deliveries towards a low carbon environment.

In Inverness, working in partnership with Highland Bikes, the first set of E-Cargo bike trials include Laughing Tree Couriers, Velocity, High Life Highland and Prissy Queen of Desserts.

Laughing Tree Couriers want to replace the current manual bike and trailer they use to enable higher load capacity and allow them to cycle further with electric assistance, thereby increasing the viability of the cycle courier concept for potential customers. Velocity intends to replace travel by van and establish proof of concept, while High Life Highland will use the E-cargo bike for transporting supplies between four catering units in Inverness, including the Botanic Gardens, Canal Park Pavilion and Bellfield Park. Prissy Queen of Desserts will be delivering parcels to local customers, including post office deliveries, replacing daily journeys that would have been made by car.

Graham Cross, Commercial Manager for High Life Highland said: “The Cargo trike is a really useful piece of kit – carrying capacity is surprisingly large and it actually takes less time to travel between the Bught Park, IMAG and Bellfield Park than it does to drive, helping protect the environment and giving our staff some enjoyable exercise! We are very grateful to HITRANS for this opportunity, and we will be strongly considering purchasing our own E-Cargo Bike when the loan period is over.”

Velocity will be using their e-cargo bike to collect supplies for their popular healthy eating café in Crown Avenue, and for transporting equipment for the community cycle skills training and bike checking events run in and around Inverness. Projects Coordinator, Helen Smith, said: “Encouraging sustainable living is at the heart of everything Velocity does, and we are delighted to have this opportunity to trial the use of an e-cargo bike in our daily activities.”

Neil Young, Transport Planning Officer with The Highland Council said: “It is fantastic to see this project come to Inverness to promote modal shift for some very short business journeys that would otherwise be undertaken by car or van. I am confident that the 4 organisations who have signed up to the pilot will find success with this sustainable and enterprising alternative and I hope that in the future many more organisations across the Highlands will have the opportunity to participate in similar ventures.”

In Oban, working in partnership with Oban Cycles, The Hope Kitchen will be using the E-cargo bike to distribute local food parcel deliveries as well as food between their community garden and the community café two miles distant. Go Naked Veg will replace travel by van, delivering fresh organic fruit & veg to customers around the local area. Act Now (Mid Argyll), Argyll and the Isles Coast and Countryside Trust will be sharing a bike in the Lochgilphead area for the benefit of many local businesses, and MacQueen Bros will be replacing 3-4 daily van/car journeys for small deliveries around Oban.

In Orkney, working in partnership with Glasgow Bike Hive, E-cargo bikes will be going to Rousay, Egilsay and Wyre Community Council, Stronsay Development Trust, Sanday Community Council and Kirkwall Pier for a variety of uses around the islands.

Orkney Islands Council’s Marine Services’ cargo bike will be based at Kirkwall Pier and used by staff to transport smaller items such as parts and tools between Kirkwall, Hatston and Scapa piers. Jim Buck, Harbour Master and Head of Marine Services, said: “This project gives us the chance to test a zero-carbon alternative to using cars and vans, when a smaller carrying capacity would do. “We welcome this opportunity to try out an electric cargo bike as part of our pier operations.”

Helen Castle, Rousay Egilsay Wyre Development Trust Company secretary and finance officer, said: “We’re very pleased to be given this opportunity and would like to thank the funders of this innovative project for providing us with an E-cargo bike for this trial. One of our island businesses is going to be using the bike for deliveries to local homes and is very keen to see how well this works.”

HITRANS would ultimately like to have a blue print which has been created by learning from the pilot projects within MovE as well as the shared knowledge we have gained with our North sea partners and this blue print could be rolled out throughout the HITRANS area which would detail the entire process of implementing a pilot project. This blue print could also be used to share with other regional transport partnerships in Scotland as a framework for this type of activity and project implementation.



Figure 16 – Publicity photograph for the eCargo Bike Trials

7.5 Financial aspects

The project is part-funded by the Euro Interreg North Sea Region project MOVE and Transport Scotland, administered by Energy Saving Trust. HITRANS has been awarded EST funding to introduce eCargo bikes to local businesses in key local centres. Staff time in managing the project will be absorbed by HITRANS. This approach has worked well with the previous eBike pilot in the Cairngorms National Park and Fort William, where HITRANS is working in partnership with local bike shops.

8 Lessons Learned

8.1 Reducing the use of private cars in local mobility streams

The Sleaf Development Trust EV community bus provided members of the public with an alternative to private car. Previously, the service was operated through a subsidised taxi service which was expensive for both the local authority and user. Also, it was not efficient in terms of number of passengers it could transport and not environmentally friendly. The replacement EV minibus helped to contribute to the reduced use of private cars, being used more than any previous council bus and can take people on longer journeys than was previously possible.

The eCargo bikes have offered users an alternative to private cars for local deliveries. As an example, in Oban, one of the bikes has been given to the Argyll and the Isles Coast and Countryside Trust. The bike has been offered to a variety of different users: photographers, Scottish canals, woodland trust,

carriers and Coop food share. For this bike alone, 900 miles has been recorded in place of a van or car. Another user did not use their car for 2 months while having the bike, as it was the easiest mode of travel for making small deliveries locally.

The Ferintosh pilot has reduced private car use by providing a service where one did not exist before – evidenced through the recent consultation with an overwhelming positive response to retain the service after the pilot phase ends. The feedback noted:

- prevents loss of precarious bus services
- good for those not able to get to a bus stop
- house collection and especially delivery very positive
- connection links virtually seamless
- offers connectivity for an ageing population
- reduced carbon footprint

8.2 Increase in the usage of sustainable mobility solutions

The eCargo bikes have increased the usage of sustainable mobility solutions, providing an alternative to van or car deliveries. Feedback has been hugely positive across the 12 eCargo bike trials, and they have taught both users and operators of eCargo bike schemes about the practical delivery of these services in rural communities. The load capacity and power are surprising to most users, and many have gone on to purchase their own eCargo bikes.

Both the Sleat and Ferintosh EV bus pilots offer new sustainable mobility solutions for the areas, and also offer links to meet onward public transport connections that increases the use of sustainable transport overall.

Of the eCargo bike survey responses gathered to date in January 2022, the average usage by the businesses was 3-4 times per week. The range cycled per month for the businesses ranged from 26-232 miles with a load capacity from 7-45kg. We have had very positive survey responses with some stating the bikes were “a convenient means of delivering goods to customers who reside a long way from the main road” and “it has massive potential as an alternative to a small car/van, this is ideal for towns like Lochgilphead”. Some responses suggested that the business would be keen to make a modal shift: “Firstly - I wasn’t sure if an e-bike was what I needed - The road I travel is very steep and I’m not an accomplished rider. But using the e-bike has made me 100% sure that it’s the right thing. It has helped my confidence on the road. My business has been able to expand because I can take more product to the post office. I am definitely getting fitter and saving money. I feel great not using petrol”.

8.3 Increase social integration through mobility

The eCargo bikes offer environmentally friendly alternatives to cars or vans and are more accessible overall. They do not take up the same space, are available to those without a driving licence (as well as younger users) and are shareable amongst an organisation. In many of the trials, several employees shared an eCargo bike throughout the day, enhancing social integration. The availability of eCargo bikes helps businesses meet customer needs by having the ability to offer deliveries that might not have otherwise been possible – particularly due to Covid-19 and the increased demand for deliveries to vulnerable members of society. The eCargo bikes help to offer this and enhance social integration through mobility, such as the use by community woodlands and food delivery schemes. Future events include bike festivals and local sustainable transport initiatives.

The Ferintosh pilot offers a service that links with existing public transport, increasing social integration in rural areas where residents are often isolated.

The Sleat bus offers a community-led project that increases social integration through offering an on-demand service, which also served as a support service through Covid-19 delivering food parcels around the local area to vulnerable members of the community.

9 Possible Improvements

9.1 Challenges and Solutions

For the eCargo bikes, the 3-wheel trike, while being the most requested bike at the start of the trials, is not always suitable in rural locations – it's too big for easy storage and is a large bike that is required to be stored indoors for battery safety. Transporting the bike between different businesses is suitable for around 5 miles, but not much longer than that as it is unrealistic to travel far with that style of bike, so moving it around sustainably might be a challenge. A variety of bike types would help. When asked, if applicable, why some eCargo bike users didn't use the bike as often as expected, poor weather and restrictive load capacity were common themes. Furthermore, the topography of the regions were a further factor with comments such as: "the island's rural roads and pathways are not suitable for this type of transport" and "the bike is not really suitable for the rough tracks from the main road to the residents' homes on Rousay".

Training for the users would also help to teach how to safely unload/load the bike. A community-based training scheme could help to encourage lots of interested companies and also offer group training sessions. Covid-19 had an impact on this at the beginning however, as group gathering was discouraged and in-person training was not favoured. Despite these challenges, the bike trials were a huge success and something that will be continued in the future, helping to push the sustainable travel agenda.

Covid-19 clearly had an impact on passenger services, however the Sleat pilot adapted by offering food deliveries to local community members which was well received.

For both the Sleat and Ferintosh bus pilots, enhanced marketing could help to reach increased passenger numbers, and running for longer periods throughout different seasons will help to establish the business case for the services. Both services are committed to lasting well beyond the MOVE pilot phase with good local support.

10 Conclusion

Overall, all three HITRANS pilots have contributed significantly to improving sustainable transport options in the area. All were developed through co-creation and will have lasting impacts in the local communities, with all services continuing beyond the MOVE project end date.