PROJECT REF/NAME	**Bus Revolution**
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COMPLETED BY	**Nicola Moss**
DATE	**06/12/22 15/02/23 v1.4**
Project Category (Choose from drop down list)	**Strategic**

The following is to be completed by High Level Governance Board		
Approved By/Date		
Approval		
Comments	V1.0 Submitted to Scottish Government 14-06-2022 V1.1 Submitted to Scottish Government 23-10-2022 V1.2 Submitted to Scottish Government 09-12-22 V1.3 Submitted to Scottish Government 16-02-23 V1.4 In progress - *redacted*	

Table of Contents

1. Executive Summary

Bus Revolution is an innovative development built on established experience with clear aims to increase the number of people using public transport to get to and from rural areas to places of work, education and leisure, providing a step change in availability of public transport right across rural Moray.

Bus Revolution will achieve this step change by providing a flexible demand responsive service, operating when and where needed in an easy to use way; built upon an innovative platform to create app based technology that will allow real time journey bookings 'uber' style.

Bus Revolution will cost £4.3 million, this covering the capital investment required to set-up operational systems, branding and marketing, the purchase of electric vehicles, and the provision of associated charging infrastructure to deliver an efficient and robust transport network.

What are Moray's challenges?

To enhance inclusive growth and tackle inequality by removing barriers to employment and access to services in an environmentally sustainable manner.

It is an integral part of a whole-system approach to inclusive growth, providing the physical infrastructure to connect people to quality jobs as per the Inclusive Growth Commission's recommendations. There is substantial evidence that 'those lacking the resources and transport options required for being able to move become deprived from interacting with the opportunities offered by society'. This is through the effects of those who have financial resources moving to areas that are 'resource rich' meaning that jobs, services and transport provision become detached from lower income households (spatial mismatch and entrapment). Further it is compounded by the social exclusion that transport deprivation creates.

In rural communities in Scotland the accessibility and connectivity challenges are exacerbated – people in rural areas drive more frequently than those in urban areas[1]. The issue of 'forced' car ownership has been identified in both rural and urban areas, but is particularly pronounced in rural areas where lack of public transport means that people can be forced into running a car even if it puts real pressures on their budget[2]. Household expenditure on transport is approximately 1/3 higher in rural areas than urban areas, and furthermore, the travel of people on low incomes may not reflect their actual travel needs. They may have to restrict their activities, limiting opportunities for work, education, training or leisure activities, because they cannot afford transport.

As commercial bus routes are not viable for many parts of Moray the Council set up Dial M for Moray, which is our award-winning accessible door-to-door bus service for those unable to use existing forms of transport, or who do not have a regular scheduled bus service. This service is for everyone, regardless of age or disability. Unfortunately at

[1] Transport Scotland (2019) Scottish Transport Statistics, No 37, 2018 edition https://www.transport.gov.scot/publication/scottish-transport-statistics-no-37-2018- edition/

[2] Lucas, K., Mattioli, G., Verlinghieri, E. & Guzman, A. (2016) 'Transport and Its Adverse Social Consequences' Transport http://eprints.whiterose.ac.uk/94663/1/ICE%20paper%202016%20Symplectic.pdf

present routes are still limited, with service provision only available when vehicles are not being used for other local authority purposes (school and social care transport) and demand far exceeding supply in many areas.

The recent community engagement online survey identified Public Transport as one of the key areas people would most like to see improved in Moray, and this statistic was reinforced by students at the local college, who took part in workshops relating to their post-college plans, where issues with rural transport were cited as causing difficulties in job accessibility and studying locally.

The global climate emergency, and the specific targets to address it in the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 mean that we need to do something radical to change the reliance on private cars in our rural areas and drive down carbon emissions by increasing the availability of greener travel solutions.

How will we meet these challenges?

By building on the existing innovative on-demand bus services to provide comprehensive and cohesive public transport links tailored to the region's largely rural economy, but also to convert the extended fleet to non-fossil fuel vehicles.

The purpose is not to compete with scheduled services but to fill the gaps in provision in rural areas and to encourage more people to use public transport rather than use private cars in line with the Scottish Government priority to reduce carbon emissions.

To meet this need the Bus Revolution was identified as a project within the Growth Deal with three clear aims:

1. Increase the number of people using public transport to get to and from rural areas to places of work, education, etc.
2. Reduce the environmental impact of transport in the area
3. Reduce the number of people facing transport barriers to employment, education or recreation.

These outcomes have specific targets and timescales set against them as set out in section 2.4.

Who is involved?

In order to develop the Outline Business Case a stakeholder analysis was undertaken to identify the key groups and individuals to form a project board to direct this work. The board consists of representatives from Moray Council, Highlands and Islands Enterprise, Community Representative, Moray Chamber of Commerce, Highlands and Islands Transport Partnership (HITRANS), and Walkers Shortbread Ltd. The board membership was selected to be representative of passenger types, stakeholders, and organisations with strong knowledge of user aspirations.

How did we identify the solution?

The rationale for this project is underpinned by a range of business needs, which are expressed as issues and opportunities, particularly transport barriers to participation in society, and the adverse environmental impact of transport, as well as opportunities to green the public transport fleet.

A benefits identification and mapping workshop was held in May 2020 to serve three purposes;

- to align stakeholder views and ensure that everyone was working to the same aim;
- to identify inputs, activities, outputs, outcomes and impacts to enable the logic model to be developed;
- to identify the key benefits to be measured in order to demonstrate success.

Following on from these a number of options appraisal workshops were undertaken with a wider range of stakeholders to identify the options to be appraised during the economic case.

The results of economic appraisal were considered by the board who made the final decision on the preferred option in October 2020.

What is the solution?

The Bus Revolution project proposes to:

- Increase the fleet of vehicles to enable bus services to operate an on-demand service 4am to midnight (Mon-Sat) and 7am to 10pm (Sun) for anyone travelling to or from the Moray area, and upgrade the fleet quality in line with the brand development set out below – including consideration of facilities such as on board Wi-Fi
- Provide a flexible demand responsive service, operating when and where needed in an easy to use way
- Innovate to create app based technology that will allow real time journey bookings ‘uber’ style, ensuring technology is accessible, and maintaining the existing telephone booking system (office hours)
- Embrace low carbon technology, ideally with fully electric vehicles to provide an environmentally sustainable service. The Project will introduce five additional electric vehicles (one per operational zone) in year one, and then introduce further vehicles on a phased basis in future years integrated with the fleet renewal programme
- Build on the existing brand identity of Dial M to create an engaging and responsive public transport identity for all customer groups, and use intelligence led marketing to generate business and communicate with customers
- Have excellent customer service at the heart of the operation
- Retain the current customer base which has a large proportion of elderly customers, but use the above principles to target the youth and working populations of Moray to provide a real rural alternative to the private car and to make a step change in independence within the rural community
- Create a demand responsive bus network which has long term sustainable operations at its heart

The project has 2 key elements:

1. The development of an “uber-style” app to enable customers to track the position of buses and book journeys within a reasonable response time (max. 1 hour).

2. An investment in quality green fleet (electric buses), to increase the flexibility and hours of operation of on-demand bus provision across Moray, with additional facilities such as on board Wi-Fi, charging facilities etc.

The project is a build on the council’s existing Dial M demand responsive bus service which operates up to 12 vehicles each weekday between 0930h and 1430h – utilising vehicles that are also used for school and social care transport. Bus Revolution sees this fleet size increase over the lifespan of the project, initially with the injection of an additional five operational vehicles enabling the service to operate in the peak hours where existing vehicles are currently fully utilised. As the project builds up over time additional vehicles will be introduced to cater for growth in service provision. It is anticipated that a total of 20 additional vehicles will be introduced over the life of the project. There is flexibility in the project remit to adapt – i.e. more smaller vehicles or fewer larger vehicles to adapt to the emerging demand profile.

How much will it cost?

The project is currently estimated to cost £4.3 million. This covers the capital investment required to set-up operational systems, branding and marketing, the purchase of electric vehicles, and provision of charging infrastructure.

How will it be delivered?

Implementation will be phased, with additional vehicles being introduced and existing vehicles being replaced / rebranded in line with fleet renewal programme. This will allow lessons learned from each phased implementation to be applied to planning of forthcoming phases and maximise the impact of the project.

It is intended that Moray Council will work collaboratively with other providers in the area to ensure comprehensive coverage and a seamless service from the customer’s perspective. This partnership will recognise the existing timetabled ‘fixed links’ in the bus network, and provide additional timetabled fixed links to create a skeleton structure, around which flexible demand responsive services will operate.

The development of new technology will allow a customer to plan a door-to-door journey, even if this involves changing from one bus service to another, so that the network can operate as efficiently as possible.

How will the benefits accrue?

By increasing the number of passengers on local buses the number of journeys by private vehicle will reduce. This will result in savings in carbon emissions as the new fleet will be non-polluting.

Longer operating hours (including peak hours) will increase mobility and access to work, education and recreation for all residents regardless of economic status, geography, age or ability. This will also contribute to reducing social isolation. This will offer particular benefits to groups who are otherwise isolate, notably people who are older, people who are younger, those at home with young children and lower income households.

Is it financially sustainable?

The financial case projections were prepared on the basis that costs were estimated at the highest level and benefits generally understated to ensure that results were realistic and achievable.

Discussions are ongoing with some of the larger employers in the area regarding workplace transport partnerships and potential for season ticket employee benefits.

There is evidence, which is set out in the financial case and Appendix 10 that demonstrates the financial sustainability of the project.

What demand is there for the solution?

An online survey conducted in autumn 2020 gathered Moray residents'[3] views on the proposals finding that a significant percentage (40%) of respondents would be interested in using the service on a regular basis, and a further 29% would be likely to use the service occasionally.

The community engagement survey cited above (p4) showed that transport is perceived as a significant barrier to education and employment.

Public transport, particularly bus is a suppressed demand given the lack of provision in rural areas, and journeys are either not undertaken or alternative solutions (particularly use of private car) are utilised. The purpose of this project is to unlock that suppressed demand and also to encourage and deliver mode shift in line with transport and environmental policy.

How does the project fit in the strategic landscape?

The project is in line with growth strategies guidance and will enable the delivery of a number of key regional growth priorities including:

- Industrial Strategy
- Scotland's National Strategy for Economic Transformation
- Moray Economic Strategy
- Local Outcomes Improvement Plan
- National Transport Strategy (NTS)the objectives of the project have a clear alignment with the NTS vision to have a sustainable, inclusive, safe and accessible

[3] Sample size 316 residents

transport system, helping deliver a healthier, fairer and more prosperous Scotland for communities, businesses and visitors.

- Protecting Scotland's Future: the Government's Programme for Scotland 2019-2020 “Rural Scotland makes a vital contribution to our national economy. We know that more young people want to stay in the areas where they grew up, but we need to do more to stem rural depopulation and attract more people to live and work in rural and island communities.”
- Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 with Moray Council leading by example to provide green bus services and encourage residents to migrate from private car use.
- Securing a green recovery on a path to net zero: climate change plan 2018–2032[4]
- Scotland Outlook 2030 contribute towards the aims for Scotland to become a world leader in 21st century tourism by proactively investing in the right transport to improve connectivity.
- The Moray Local Development Plan 2020 sets out that well planned transportation infrastructure supports economic growth by connecting Moray to markets and services, promotes use of public transport and encourages active travel in preference to the private car, bringing health and environmental benefits.
- Draft National Planning Framework 4 sets out a spatial framework aiming to ensure that each part of Scotland can be planned and developed to create sustainable places where we reduce emissions.

The project has clear links to this, as reflected in the overall Growth Deal vision that By the year 2030 Moray is a destination of choice, the area being known and recognised as an outward facing and ambitious community with a thriving and well connected commercial base and an environment in which quality of life is valued and supported. These ambitions link in with local and national economic strategy, development planning aims and the imperative to make climate change plans.

In particular the project has a strong relevance to the aim of retaining and attracting young people/families (16-29yrs) to live and work in the area, and addressing occupational segregation and gender imbalance.

There are cross project linkages, for example, by

- facilitating access to the aerospace campus as part of the MAATIC project,
- enabling sustainable transport solutions for new housing in the Housing Mix Delivery project
- using the Cultural Quarter as a key destination encouraging tourists to use sustainable transport modesand these synergies will be built on through the development of all the projects.

[4] Securing a green recovery on a path to net zero: climate change plan 2018–2032 – update https://www.gov.scot/publications/securing-green-recovery-path-net-zero-update-climate-change-plan-20182032/

What else is happening in the region?

In general scheduled bus services have been in decline regionally and nationally for a number of years and public satisfaction with local transport has decreased mainly due to the lack of service in many areas.

What has been the impact of the Covid-19 pandemic?

Along with the rest of the world the project will be affected by the global coronavirus pandemic. The full business case details specific mitigations to address the situation during the delivery phase but current considerations include;

- Impacts on customer confidence, travelling on public transport
- Potential for changed ways of working altering the need for travel

In order to address these issues the full business case details specific marketing to ensure it addresses the issue of customer confidence and a follow-up survey will be conducted to ascertain the impact on demand.

The 'smart' element of the project will enable consideration of highlighting to prospective users how busy any particular services might be, in order that intending passengers can determine when to travel, for example, identifying the quietest times of travel.

What are the implications of Brexit for the project?

There have been no material impacts of Brexit on the project, however the situation will continue to be monitored particularly focused on any effects relating to:

- visitor economy
- international supply chain disruption
- the impact on EU migrant workforce.

Project solution summary

The *Bus Revolution* project will innovate to create a step change in the availability, efficacy, awareness and acceptability of bus as an option for everyday travel across Moray, providing new travel opportunities and creating accessibility where there has previously been isolation.

The project is fundamental to Moray Growth Deal's four pillars of:

- Connections;
- Business Support, Skills and Employability;
- Moray the Place/Brand;
- and Moray's Priority Business Sectors.

and has a strong relevance to the aim of retaining and attracting young people/families (16-29yrs) to live and work in the area, and addressing occupational segregation and gender imbalance.

The project will provide a comprehensive demand responsive bus network across Moray, utilising fully electric vehicles, and modern app based booking technology to increase the overall number of journeys made by public transport, reduce carbon emissions and reduce the impact of transport as a barrier to employment.

2. Strategic case

Organisational Overview

The case has been developed by Moray Council, Highlands and Islands Enterprise, University for the Highlands and Islands, Moray Chamber of Commerce, Highlands and Islands Transport Partnership (HITRANS), and local business representatives including Walkers Shortbread Ltd.

The Strategic Context Introduction

The strategic drivers for this investment and associated strategies, programmes, and plans are contained in the vision for the Moray Growth Deal which is:

"***By the year 2030 Moray is a destination of choice, the area being known and recognised as an outward facing and ambitious community with a thriving and well connected commercial base and an environment in which quality of life is valued and supported***."

The project aims to enhance inclusive growth and tackle inequality by removing barriers to employment and access to services in an environmentally sustainable manner.

Providing the physical infrastructure to connect people to quality jobs is an integral part of a whole-system approach to inclusive growth as per the Inclusive Growth Commission's recommendations. There is substantial evidence that 'those lacking the resources and transport options required for being able to move become deprived from interacting with the opportunities offered by society'. This is through the effects of those who have financial resources moving to areas that are 'resource rich' meaning that jobs, services and transport provision become detached from lower income households (spatial mismatch and entrapment). Further it is compounded by the social exclusion that transport deprivation creates.

This links closely to the overall inclusive growth aims of the whole Moray Growth Deal in retaining and attracting young people/families (16-29yrs) to live and work in the area, and addressing occupational segregation and gender imbalance.

Rural transport challenges are recognised in the National Transport Strategy which states "Rural Scotland accounts for 98% of the land mass of Scotland and only 17% of the population are resident there. Those living in remote and rural areas face many different transport challenges when carrying out their daily lives compared to, for example, those living in less rural areas of the mainland and urban areas. People in rural areas usually have to travel further to access services and tend to have more limited choices when it comes to public transport, the latter meaning that rural households tend to drive more frequently than urban households. It is also more difficult to integrate services in rural areas given the dispersed residents and low population densities. Adding to this, demand can be relatively low in many rural areas due to the tendency to drive more, which can lead to high fares for users and/or need for subsidy." "There are urban and rural locations within Scotland where the current level of public transport provision, including accessible transport, and connectivity issues can act as barriers to accessing healthcare,

employment, education, or training opportunities. Satisfaction with public transport in large urban areas was 77%, compared to only 44% in accessible rural areas. A particular issue for rural areas is the lack of public transport acting as a barrier for young people accessing education, training and employment. This can result in long term out-migration and impact on the sustainability of remote and rural communities."

The National Transport Strategy has four key priorities; to reduce inequalities, take climate action, help deliver inclusive economic growth, and improve our health and wellbeing, all of which are at the heart of this project, and reflected in the project's objectives.

In rural communities the accessibility and connectivity challenges are exacerbated – people in rural areas drive more frequently than those in urban areas[5]. The issue of 'forced' car ownership has been identified in both rural and urban areas, but is particularly pronounced in rural areas where lack of public transport means that people can be forced into running a car even if it puts real pressures on their budget[6]. Household expenditure on transport is approximately 1/3 higher in rural areas than urban areas, and furthermore, the travel of people on low incomes may not reflect their actual travel needs. They may have to restrict their activities, limiting opportunities for work, education, training or leisure activities, because they cannot afford transport. A state of the area summary of relevant data in terms of population and transport and travel in Moray is presented at Appendix 8, which also provides comparisons to Scotland-level data. These data having been used to inform the Outline and Full Business Case.

Notably, Moray has an increasing population, between 1998 and 2019 the population has increased by 10.4%, with in 2019 with an additional 9,020 persons.. The population from the most recent mid-year population estimates is 95,710 people in Moray. [7]

From the 2019 Transport and Travel in Scotland (TATIS) data from the Scottish Household Survey, 14% of households in Moray do not have a car/van available to them. This is lower than the national rate of 27% of households, but to be expected with large rural areas, and even so means more than 6,000 households across the area that do not have access to a car/van.

In terms of local bus services, the Scottish Household Survey shows a very high proportion of Moray respondents that had not used a local bus service in the past month – 81%, which compares to a national rate of just 61.5%. In terms of satisfaction with public transport, only six per cent of Moray respondents reported being very satisfied, compared to 21% when considered at a national level.

From the 2018 *Young People and the Highlands and Islands: Maximising Opportunities: Moray* report[8] published by Highlands and Islands Enterprise highlighted a number of key salient points:

[5] Transport Scotland (2019) Scottish Transport Statistics, No 37, 2018 edition https://www.transport.gov.scot/publication/scottish-transport-statistics-no-37-2018- edition/
[6] Lucas, K., Mattioli, G., Verlinghieri, E. & Guzman, A. (2016) 'Transport and Its Adverse Social Consequences' Transport http://eprints.whiterose.ac.uk/94663/1/ICE%20paper%202016%20Symplectic.pdf
[7] National Records of Scotland (NRS) Mid-Year Population Estimates for Scotland, mid-2021: Time series data

[8] https://www.hie.co.uk/media/6488/2018-young-people-maximising-opportunities-moray.pdf

- Lack of affordable transport (and childcare) were particular barriers for those in West Moray, cited by 17% of respondents, which compares to nine per cent for Elgin residents and seven percent for those in East Moray.
- Young people in Moray see compromises as a necessary feature of life in the Highlands and Islands (87% agree, matching the regional average). The key compromises that young people report relate to: more difficult and expensive transport (77% in Moray and 79% in the region overall); limited job opportunities (76% for both); and limited access to events, services, amenities and leisure facilities (72% vs 65% regionally).
- Young people in Moray have similar views to those across the region overall on the economic and social factors required to make the Highlands and Islands an attractive place to live, work and study. Good pay levels (69%), high quality jobs (68%), opportunities for career progression (68%) and affordable, reliable, well-scheduled transport (66%) were see as the most essential economic factors.

These data set out the Moray context, which lays the platform for the Project's development, and present the environment for the Project's success in terms of delivering against the Transport Planning Objectives, which are introduced and validated in the following sections.

Problems / Challenges

Dispersed Rural Population

The Moray Council geographical area covers 864 sq. mi (2,238km.sq) and of 32 Local Authorities, Moray is ranked the 8th largest area. With a relatively small population of 95,510 Moray is ranked 26th (7th smallest) area in terms of population.

The average **population density is low** at just 39 people per square kilometre, compared with 67 people per square kilometre nationally, presenting particular challenges for operating a local bus service network.

Rurality is a known issue that can cause people difficulty in accessing services. Access to services, which is based upon travel time by car and public transport to essential services shows up as the main area of deprivation in Moray with over 20% of its population living in the most deprived 10% for this domain.

Specifically in Moray *Transport and Travel in Scotland 2018 Scottish Household Survey Local Authority Results* show that only 34 per cent of Moray-based adults could use public transport for their journey to work. This is comparable to the 32 per cent level across the whole of the Highlands and Islands, but given that this region includes many remote and island areas, the Moray level seems to be somewhat high, and is significantly below the national rate of 44 per cent would state that they could use public transport for their journey to work.

In Moray in 2018 five per cent of adults travelled to work by bus, which is half the national rate. In terms of all use of bus services, 82 per cent of adults in Moray have not used the bus in the past month compared to only 58 per cent in Scotland, and only six per cent of adults in Moray report that they are using the bus once a week or more frequently, with only two per cent using the bus every day or almost every day. This compares to a little over 27 per cent in Scotland as a whole that use the bus at least once per week.

These gaps in usage and potential usage (in terms of those that could use the bus for the journey to work) suggests that there is significant potential in Moray, with the right availability of services to match the geographical spread of the population, to claw back some of the mismatch between Moray and national levels of bus suitability and bus usage.

Furthermore, the mid-2020 population estimates give an overview of the distribution of the population across the main settlements of Moray. There are 19 recognised settlements of localities in Moray, ranging from the smallest two Garmouth and South Forres, with populations of 540 each at the mid-2020 population estimates, to the largest Elgin with 25,040 people.

Table 1 lists the Moray localities together with their mid-2020 population estimates and additionally sets out the distances to two key employment sites at Fochabers and Forres – this gives a flavour of the dispersal of populations across the area and infers the complexity then of providing meaningful public transport to multiple major manufacturing bases across the area. As described in more detail in subsequent sections, Moray is home to more than 6,500 jobs in manufacturing across these and other sites, which rely upon a travelling workforce from across the area. Greater mobility means both that the talents and experience of all people are recognised and nurtured, and that the barriers to some jobs are reduced – barriers can exist because of biases in recruitment processes or inequality of educational opportunity, but in striving for a more physically (in terms of transport) and socially mobile society, it is more likely that a job will be filled by someone with the highest level of potential to perform well in that job, rather than someone who may be less well suited but, for example, better connected.

Table 1 Moray Locality Populations and Distances to Key Employment Sites at Fochabers and Forres

Locality / Settlement	Population – mid-2020 population estimates	Distance to Fochabers, e.g. Baxters (Miles)	Distance to Enterprise Park Forres (Miles)
Burghead	1840	16.6	9
Cullen	1390	13	31.6
Dufftown	1590	16.4	27.7
Elgin	25040	8.5	10.8
Findhorn	1030	21	4.4
Findochty	1130	11.7	30.3
Fochabers	1770	0.8	19.4
Forres	9900	20.5	2.7
Garmouth	540	3.6	19
Hopeman	1710	15.3	10.2
Keith	4610	8.7	27.4
Kinloss	1440	18.5	2.3
Lhanbryde	1830	4.9	14.8
Lossiemouth	6840	12.4	15.5
Mosstodloch	980	0.8	18.1
Portgordon	790	5.3	24
Portknockie	1230	12.5	31.2
Rothes	1160	8.8	20.3
South Forres	540	20.1	2.2

If is further highlighted that more than two-thirds of the Moray population live within these settlements and localities – 68 per cent or 65,360 – while the remaining 32 per cent of people live beyond the settlements in more rural and dispersed areas, again which presents a particular challenge for providing a meaningful, accessible public transport offer.

The current public transport offer is not able to match this dispersed population as has been described in Table 1 above to employment and other key local, health and social etc. destinations, and through the appreciation that a further near one-third of the population live more rural and remote than these settlements further demonstrates the gap between the current public transport offer and the geography-driven needs of this dispersed population.

Young People

Moray has a deficit of young people, a trend that parallels in neighbouring Highlands and Islands, and there has traditionally been an outflow of young people from the region. Moray has a smaller proportion of 16-29 year olds (16%) compared to Scotland (19%). There are a wide range of factors that impact on the choices and aspirations of young people, including educational and employment opportunities, the cost of living, transport, housing, cultural and connectivity issues. There are also strong local factors affecting decision-making, including close community ties for many young people in the region. The lower proportion of young people also suggests that the area is not attracting people in this age group to move from other areas.

Despite young people in Moray having a strong attachment to the area, 45 per cent describe themselves as 'committed leavers' and plan to settle and work away from the area, or to move away to study. This is higher than the Scottish average of 40 per cent.[9]

From the City Regional Deal Baseline Economic Assessment there was general agreement that one of the reasons for leaving Moray was for young people to broaden their worldview. A further 10 per cent wanted to stay but did not think they would be able to given the limited employment opportunities available in Moray, and the narrow employment base especially in the rural settlements.

Good access to housing and affordable public transport links were also seen as important in keeping young people in the area.

Tourism

The strategic case includes the aspiration for Moray to become 'a destination of choice'. The lack of affordable and sustainable transport solutions present currently will also impact visitors and tourists to the area, who will be key to achieving the ambition. Scotland's Outlook 2030[10] sets out a commitment to ensure Scotland is an inclusive and accessible destination, enabling all visitors to travel widely and enjoy the full range of the country's visitor experiences.

Public transport links to local airports

The Inverness-Aberdeen rail service currently offers access near to Aberdeen Airport, accessed via Dyce. Dyce Railway station is 2.7 miles to Aberdeen Airport and accessible via Bus or Taxi.

[9] HIE Young People in Moray Attitudes and Aspirations 2015

[10] Scotland 2030, Scottish Tourism Alliance

Plans are confirmed and work has begun on the new Railway station at Inverness Airport providing direct pedestrian access from the railway station to Inverness Airport[11].

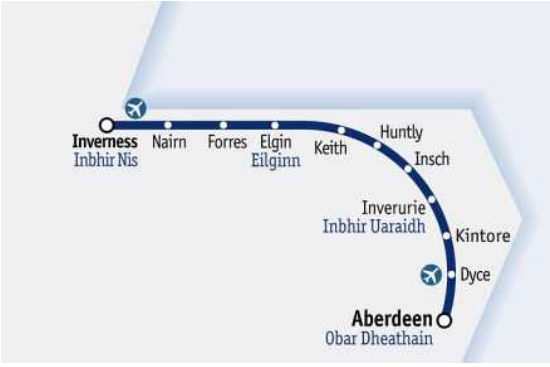
Railway services

There are three existing railway stations within Moray; Forres Railway Station, Elgin Railway Station and Keith Railway station connected via the Inverness-Aberdeen services. The current timetable offers 11 end to end journeys from Inverness to Aberdeen and 10 end to end journeys from Aberdeen to Inverness, Monday to Saturday. These journeys cover all three Moray railway stations at Forres, Elgin and Keith. There are additionally 6 "short" journeys in each direction Monday to Saturday between Inverness and Elgin which service Forres and Elgin railway stations. The Sunday timetable offers 5 end to end journeys in each direction between Inverness and Aberdeen.

In terms of access, Elgin Railway Station is situated around half a mile from the town centre and can be accessed for much of the day by a half hourly commercial bus service. However the evening and Sunday service is infrequent and a demand responsive bus service will improve connectivity at these times, or through the day should the passenger require to travel outside Elgin

Forres Railway Station is situated about a third of a mile from Forres High Street but is separated from the town by the A96 which is seen by many as a barrier to access. There is an island crossing but no Toucan type crossing to stop traffic which can deter less confident individuals from walking. The current Dial M demand responsive service is the only public transport access to Forres station and enhancing that provision will improve accessibility to the rail network for Forres area residents.

Keith Railway Station is situated half a mile from Fife Keith town centre and one and a half miles from Keith Town centre. It should be explained that the greater area of Keith town is made up of two constituent parts, Fife Keith to the West and Keith to the East. The current Dial M demand responsive service is the only public transport access to Keith station and enhancing that provision will improve accessibility to the rail network for Keith area residents and to the nearby village of Newmill as well as the greater hinterland. In particular, there is awareness of demand for transport links between the coastal area around Buckie requiring access to Keith Railway Station, there being no rail service along the Coast.



Source: Scotrail timetable Inverness-Aberdeen May 2022

[11] https://scotlandsrailway.com/projects/inverness-airport-dalcross-area-enhancements

Bus Services

As **commercial bus routes are not viable for many parts of Moray** the Council set up Dial M for Moray, which is our award-winning accessible door-to-door bus service for those unable to use existing forms of transport, or who do not have a regular scheduled bus service. This service is for everyone, regardless of age or disability. Unfortunately, at present **routes are still limited, with service provision only available when vehicles are not being used for other local authority purposes** (school and social care transport) and demand for vehicles far exceeding supply in many areas.

The Strategic Outline Business Case for Bus Revolution recognised this position, noting that research by Citizens Advice Scotland showed that **those living in Moray are more than three times less likely than the national average to be able to reach a supermarket by bus**[12], and overall Moray was one of the three local authorities which had the **greatest difficulty in reaching key services by bus**. It was felt that it was unlikely that the provision of public transport in rural areas would achieve full commercial sustainability without ongoing public subsidy, however, this was an opportunity to provide the best possible access solutions in the most efficient manner, with commercial principles guiding decisions around delivery and growth.

The specific problems reference in the Strategic Outline Case were summarised as:

- Lack of reliable rural transport to access employment;
- Difficulties accessing key services, public spaces and retail centres; and
- A declining working age population.

The Project Board reviewed the Strategic Case and found that the issues and context set out in the Strategic Case remained, and if anything were being exacerbated with continued reduction in the use of conventional bus services even prior to the impact of the coronavirus pandemic.

In general, **scheduled bus services have been in decline locally, regionally and nationally for a number of years**, and public satisfaction with local transport has decreased mainly due to the lack of service in many areas.

In Moray there are 1,559 kilometres of local authority roads, which given a population of 95,710 (2020 mid-year population estimate) gives an indication of the challenge associated with providing meaningful public transport suitable for a majority of households.

Specifically, local bus services across Scotland have been in sharp decline for the last 15 years or so. Much of rural Scotland continues to rely on supported local bus services, and communities are dealing with the reduction and demise of many routes in their areas.

In 2019, 39 per cent of survey respondents to the Scottish Household Survey had used the bus in the past month. Only eight per cent used the bus ever day or almost every day. These are the lowest figures since comparable records began in 2002. Bus service kilometres in the Highlands and Islands (including Shetland) have fallen by 11% in the five years to 2015/16. There is ongoing concern about the continued pressures on public

[12] Citizens Advice Scotland (2018) Creating Better Journeys – Findings from the Citizens Advice Scotland bus users survey p14

funding and hence pressure placed upon local bus services – predominantly subsidised services, which are most common in rural Scotland.

The Moray Economic Strategy highlights that access to key services, public spaces and retail centres is poorer than Scotland generally and is a barrier to growth. This is possibly due to uneven public transport connections across Moray, with limited public transport restricting access to employment and to opportunities to spend on retail and leisure. The Strategy further highlights that local public transport is a significant issue for people living in rural parts of Moray, and cost effective provision is an essential part of enabling people to travel to work across the area.

In Moray, reflecting the geography of the area, 79 per cent of respondents to the Scottish Household Survey in 2019 reported that the car / van was their usual method of travel to work, which compares to 68 per cent nationally, and while 12 per cent walk to work in Moray compared to a similar number nationally, only five per cent take the bus to work in Moray, compared to 10 per cent across Scotland as a whole.

For all adults, zero per cent of respondents (8% nationally) to the Scottish Household Survey reported using the bus every day or almost every day in Moray, while two per cent (9%) reported using the bus two or three times per week, four per cent (7%) about once per week, 12 per cent (14%) above once a fortnight, or about once a month, and a staggering 81 per cent (62%) had not used the bus in the past month.

In Moray, six per cent of respondents (21% nationally) reported being very satisfied with public transport, 45 per cent (47%) fairly satisfied, 21 per cent (16%) neither satisfied or dissatisfied, 17 per cent (9%) dissatisfied and 11 per cent (7%) very dissatisfied.

The above evidence from the Moray Economic Strategy and from a review of the most recent data from the Scottish Household Survey described above makes clear the issues associated with access to employment and wider access to services in Moray, particularly in terms of the rural areas of Moray which at present have identified gaps in terms of public transport accessibility, which in turn creates access barriers to employment, learning and social and health opportunities. These barriers being felt hardest amongst those without or with limited access to their own vehicle, younger people, older people, those on low incomes to name a few groups with similar characteristics.

In Moray, while car ownership is generally high – 51 per cent of households have one car available and 35 per cent of households have two or more cars available – this still leaves 14 per cent of households with no car available, in real terms around 5,600 households across the area. Furthermore, and particularly in rural areas and with poor public transport availability, a single car available does not equal wholesale household accessibility or inclusion for all within that household, as often a single car may be required for one member of the household to travel to work, which then leaves others in the household isolated, or unable to access employment or learning for example, during the working hours of the household member making use of that single car.

In summary, there is a gap derived from the geography, business growth projections and existing provision of local bus services across rural Moray that generates a real and sizeable need and opportunity for the project.

Commercial Bus Services and DRT

As **commercial bus routes are not viable for many parts of Moray** as set out in earlier sections, the Council set up Dial M for Moray, which is the award-winning accessible door-to-door bus service for those unable to use existing forms of transport, or who do not have a regular scheduled bus service. This service is for everyone, regardless of age or disability. Unfortunately, at present routes are still limited, with demand far exceeding supply in many areas.

The current Dial M service is resourced from the authority's vehicles for school and social care transport, which provides an efficient use of resources but means that the service provision is limited to weekdays in between the school and social care transport times. The knock on effect is that without additional capital investment in vehicles (as well as the required revenue resources) it is not possible to provide a service at peak times, which would expand the appeal of the service to more potential passengers. The current booking system is reliable, but the schedules have to be finalised and distributed to drivers by the close of the previous operating day, which does not allow for close-to-real time bookings to support a modern and flexible transport system. Prior to the pandemic the service averaged c.50k journeys p.a.

A user survey (in the same form as the national Bus Passenger Survey) of the existing Dial M customer base indicates high satisfaction levels with the service. It is also clear that the overwhelming majority of users have no other regular form of transport available to them, highlighting the importance of providing transport services in rural areas. This in turn presents the evidence to support the present project in terms of expanding this type of flexible and tailored service to meet the wider needs of those living across the area that require, or could require (if they are able to take up employment opportunities for example), transport during peak times, or early or late to support access to jobs and other opportunities. This also provides the confidence that the *project* continues to offer the best option for Moray.

In terms of consultation, the recent community engagement online survey identified Public Transport as one of the key areas people would most like to see improved in Moray, and this data was reinforced by students at the local college, who took part in workshops relating to their post-college plans, where issues with rural transport were cited as causing difficulties in job accessibility and studying locally.

The survey had a good representation from all demographic groupings particularly those in the 16-29 year age group, and covered all Moray residents – not just existing customers (see section 4.1).

Transport isn't an isolated topic – people need to get about to work, to access services, for shopping and leisure activities. Economic development is a key priority for Moray, and transport connectivity is a vital part of that development.

Transport Emissions

Moray Council has formally adopted their **Climate Change Strategy**. The strategy and action plan follows the Climate Emergency declared in June 2019 and aims to make the council carbon neutral by 2030. In terms of transport, the strategy sets out that **transport is the fastest-growing contributor to greenhouse gas emissions**, and that moving away from carbon-intensive, private transport towards decarbonised, more efficient, more

active forms of travel offers a wide variety of benefits environmentally, socially and economically.

> **“Transition to non-fossil fuel transport system. Promote, develop and encourage active travel.”**

Poverty

Moray has a **sizeable minority of the population experiencing poverty**. The economy comprises a low wage structure with a reliance on a small number of industries, reducing economic diversity. There is a noticeable variation in attainment at school, and as described above, young people who leave for higher education often don't return. There are less favourable outcomes in some smaller communities in Moray, and challenges in making all services accessible due to the areas rurality.

Specific issues in terms of poverty exist around the core issue of the high cost of living in Moray, costs associated with food, fuel, housing and transport. The Moray Child Poverty Action Plan calls for a positive change in the availability of affordable accessible transport.

Upon further review through the FBC, the international *cost of living* crisis exacerbates further the well documented cost of living differential for the Highlands & Islands[13] and makes the case for intervention in terms of providing more affordable transport options for people, particularly in rural areas, reducing the pressure on the household budget associated with transport for those that have no option other than travel to their employment, e,g, in manufacturing and associated roles.

Summary

To summarise, the issues that have been identified are validated and reinforced through a multitude of sources, primary and secondary, to the project. From consultation, the community engagement survey and student workshops referred to above highlighted the key issues for rural transport in Moray, the barriers that this generates, and the consequences of, for example, young people choosing to move away and people living in poverty, for example as they are *forced* into car ownership. The Moray Local Outcomes Improvement Plan, the Moray Local Child Poverty Action Report and the Moray Economic Strategy further highlight these key issues which require action through the matched Transport Planning Objectives to deliver the opportunities for all of Moray in a fair, sustainable and equitable manner.

[13] HIE, A Minimum Income Standard for Remote Rural Scotland: A Policy Update, 2016

Opportunities

In general terms, reducing the dominance of private cars offers significant benefits both to individuals and wider society, **including improved health and wellbeing**, **reduced inequalities** and **more inclusive economic prosperity**. Reducing car use will also improve our public places, making them more attractive, safer and healthier spaces in which to live, work and spend leisure time.

The community engagement online survey **identified Public Transport as one of the key areas people would most like to see improved in Moray**, and this statistic was reinforced by students at the local college, who took part in workshops relating to their post-college plans, where issues with rural transport were cited as causing difficulties in job accessibility and studying locally.

The global climate emergency, and the specific targets to address it in the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 mean that we need to **do something radical to change the reliance on private cars in our rural areas** and drive down carbon emissions by increasing the availability of greener travel solutions.

Thus supporting "A route map to achieve a 20 per cent reduction in car kilometres by 2030[14] – leading to "a healthier, fairer, and greener Scotland". This case supports progress towards the actions that the Moray Council can lead in how they will make it easier for people to reduce their car kilometres through the four key sustainable travel behaviours set out in the (draft) route map:

- to make use of sustainable online options to reduce your need to travel;
- to choose local destinations to reduce the distance you travel;
- **switch to walk, wheel, cycle or public transport where possible;**
- combine a trip or share a journey to reduce the number of individual car trips you make, if car remains the only feasible option.

The Strategic Case concluded that the *project* can make a real difference to the lives of those living in, working in, or visiting Moray with:

- Increased mobility and access for all regardless of economic status, geography, age or ability;
- A proposition that tackles social isolation;
- The potential to reduce single occupancy car use and its cost & environmental impacts; and
- Improved access to iconic tourist destinations.

Specifically, identifying the strategic drivers for this investment and associated strategies, programmes and plans that are contained in the vision for the Moray Growth Deal which is:

"***By the year 2030 Moray is a destination of choice, the area being known and recognised as an outward facing and ambitious community with a thriving and well***

[14] Consultation on the 20% Reduction in Car Km Route Map (transport.gov.scot)

connected commercial base and an environment in which quality of life is valued and supported."

There is potential to benefit from community involvement on the back of the strength of the community response through the Covid experience – growth in, and growth of, Community Anchor Organisations with a will to shape and deliver change and services within their communities. In the *project* is set out the approach to working with communities and employers to shape the detailed design and delivery of the Project on an ongoing basis. When the project *goes live*, i.e. when it is funded and proceeding towards delivery, a network of Community Anchor Organisations and other interested parties, such as employers, will be drawn together and will be engaged in locality-based planning around the detailed design of the service – timetabling, operating principles and priorities etc. This will allow the project team to test different ideas and concepts in an open way with representatives of the communities that will be served. This open approach to planning and delivery, and on an open and ongoing basis with regular review has been found to be a successful model and approach to ensure services best match user needs.

This community and business involvement in the detailed design and to inform ongoing service development will be approached from a person-centred perspective, what the people and communities need and see as important in meeting their needs and access requirements. This approach is congruous with the Community Wealth Building (CWB) people-centred approach to local economic development, which aims to redirect wealth back into the local economy, and places control and benefits in the hands of local people. The *project* is a key tool for Moray in delivering these aims, ensuring that all opportunities are equitably available to all people right across the area.

Community Consultation to Inform Project Development

Following on from initial comments received during wide-scale community engagement exercises during late 2017, and workshops held with students at Moray College UHI (based in Elgin) to identify issues influencing their decision to leave the area for further education or jobs, an online survey was launched in the autumn of 2020 to seek the views of the Moray population regarding their attitudes to public transport, and to assess their views on the *project* context and ideas.

It should be noted that Moray College is a further education college based in Elgin. It is the area's further and higher education institute with 1,500 full-time students and 8,100 part-time students. It employs approximately 370 staff and is a college of the University of the Highlands and Islands. Consequently, Moray Collage is an important destination in the area both for access to learning and in terms of employment.

The survey respondents covered a wide range of age groups. The survey did however comprise 19% of respondents in the 16-29-year-old age bracket, a key target group for the *project.* The 16-29-year-old age bracket currently make-up around 15% of the population in Moray. This is seen as a good indication of the level of interest in public transport and particularly environmental issues for this age group.

Highlights from the survey results are:

Modes of transport used regularly:

- 67% car (driver),
- 35% car (passenger),

- 27% bus.

Reasons for not using local bus services currently:

- 58% Buses are not frequent enough/do not run when I need them,
- 49% It's easier/more convenient by car,
- 37% It's quicker by car,
- 33% Bus fares are too high.

Factors that would encourage you to use a local on-demand bus service (top 4 rated):

1. Reasonable journey times,
2. Comfort/cleanliness,
3. Safety,
4. Guaranteed response times.

Forty per cent of respondents who currently do not use local bus services indicated that they would use a service as described in the proposal on a regular basis and a further 29 per cent said that they would use the service occasionally.

Economic Context and Issues

The *project* builds on **Moray Economic Strategy**'s objectives of ensuring population growth and diversification to create less reliance on the Public Sector in Moray, build on sectors that are under performing, and ensure the local economy is resilient to economic change.

The Moray Economic Partnership was established to boost economic growth in the region and create opportunities for our people and our businesses. The vision is to see Moray as:

A place that is thriving because of an increasingly diverse economy and a growing population that celebrates success, and values both education and training.

A distinctive and ambitious place that generates opportunities for everyone which in turn helps to drive up average earnings, retain balanced demographics, and encourages strong communities to flourish.

Moray Council is committed to the Place Principle and to a collaborative, place-based approach with a shared purpose to support a clear way forward for all services, assets and investments which will maximise the impact of their combined resources. This project will invest additionally in public transport, planned with local communities in order to improve the lives of people, support inclusive and sustainable economic growth and create more successful places.

The Economic Strategy highlights that 'access to key services, public spaces and retail centres is poorer than Scotland generally, possibly due to uneven public transport

connections across Moray. Limited public transport restricts access to employment and to opportunities to spend on retail and leisure'.

As highlighted in the appraisal in Section 2.2 above, the *project* programme also strongly supports the priorities of the **Local Outcome Improvement Plan** for Moray which are:

- Growing, diverse and sustainable economy;
- Building a better future for our children and young people in Moray;
- Empowering & connecting communities; and
- Changing our relationship with alcohol.

There is a strong strategic fit with the **UK Governments Industrial Strategy**, which has the following 5 foundations:

- Ideas: the world's most innovative economy
- People: good jobs and greater earning power for all
- Infrastructure: a major upgrade to the UK's infrastructure
- Business Environment: the best place to start and grow a business
- Places: prosperous communities across the UK.

and **Scotland's National Strategy for Economic Transformation**, which has the vision of a wellbeing economy, and the ambition of a fairer, wealthier and greener country,

- Enduring the work pays for everyone through better wages and fair work, reducing poverty and improving life choices
- Driving an increase in productivity by building an internationally competitive economy founded on entrepreneurship and innovation
- Demonstrating global leadership in delivering a just transition to a net zero, nature-positive economy, and rebuilding natural capital.

notably being a country where economic power and opportunity are distributed fairly across our regions, cities and towns, rural and island communities.

Economic Base

The **principal centre of population and business is Elgin**, which also has the area's main concentration of retail, commercial and leisure provision. Economically, the relationship between Elgin, the rural area of Speyside, and other main Moray towns (Forres, Keith, Buckie and Lossiemouth) is critical. There are mutually supporting roles that complement the special attributes of each location, and help to create a diverse economic base serving all of Moray.

Business stakeholders through the *Project* Steering Group report that the employment base is likely to remain broadly based around manufacturing, which, including with growth that is expected, will increase the number of staff needing to travel to the production sites within Moray. These are typically lower paid jobs, and will match with those in lower income households for whom the avoidance of *needing* to own their own vehicle could be welcome, and particularly in the context of the emerging crisis in the cost of living.

At present there is more than 6,500 jobs in the manufacturing industries across Moray. This includes more than half of the country's whisky distilleries and some of its best-known food producers. Leading Scottish brands such as Walkers Shortbread and Baxter's Food Group, makers of the popular Baxter's soups, have their headquarters in Moray. The food and drinks industry is a major employer. In Moray there are more manufacturing jobs per head of population than any other part of Scotland. It is also home to French IT contractors Atos, a growing band of digi-tech businesses as well as luxury cashmere clothing suppliers Johnstons of Elgin.

Currently some 73.8% of the population are in employment, which is in line with the national figure – but **wages remain lower**, with gross weekly pay at £498, or almost 10% below the Scottish average. Moray also has a higher percentage of older people, particularly in more rural and coastal locations, and in keeping with the rest of the Highlands and Islands, there is significant outward migration of young people. The areas of people leave home to complete further and higher education in other parts of the country, and there is then a low rate of return. Overall, this creates an imbalance in the working age population in Moray.

There is significant **gender inequality in Moray's economy**. The National Performance Indicator defines the gender pay gap as the difference in the median hourly earnings (excluding overtime) between men and women working full-time in Scotland. This estimates the gender pay gap in Moray at 9.6%, which is more than double the average across Scotland, at 3.6%. However, this indicator masks the real issue in that it does not account for the significant proportion of women who work in low-paid part time roles. When including both full-time and part-time employment, the gender pay gap in Moray is far higher 22.6%, well above that national average of 11.5% for Scotland. This imbalance means that a significant proportion of the population is not currently reaching its full economic potential. It is important to note that the data is for this metric is taken from the ONS annual survey of hours and earnings and at a Moray level is considered of lower quality.

Key growth sectors in Moray are:

- **Aerospace and defence:** accounting for 8% of total employment, or some 2,750 employees. There is optimism for the future of this sector driven the strategic importance of Moray to the defence of the UK and its allies.
- **Tourism:** Moray's Tourism Strategy recognises that the sector generates over 10% of Moray's total employment and 3.8% of the total turnover of businesses. Currently tourism, including accommodation and food services, is the sixth largest sector in Moray, with visitors to the area supporting more than 2,846 full-time equivalent jobs.
- **Food and Drink:** The food and drink industry in Moray employs 17.1% of the workforce – the highest per head of population in Scotland. Moray is home to almost 50% of Scotland's whisky distilleries, which contribute directly to both skilled employment and to the tourism sector. However, with product manufacturing becoming increasingly automated, employment in the food and drink sector is currently forecast to decline by 11% by 2027.
- **Creative Industries and Digital:** The creative industries and digital sector is incredibly diverse and ranges from arts-based organisations to the small cluster of technology businesses that are growing quickly from bases in Elgin and Forres. The

sector remains the UK's fastest growing sector, and in Scotland employment increased by 15% to 84,000 between 2015 and 2016. The sector's GDP is rising steadily.

- **Engineering and Construction:** Moray is an established base for light and heavy engineering – with a significant number of people employed in the offshore oil & gas industry, as well as in house building and in large infrastructure developments. With 8% of all employment in this sector, Moray is the headquarters location for a group of large businesses who are committed to workforce development and to apprenticeships, which underpin the predicted total employment rise of at least 300 jobs in skilled construction professionals in the area.
- **Life Sciences and Technology:** Moray is emerging as a strong location for research and development in life sciences and technology, with a number of different strands of activity energising the sector. In particular, the area has a growing reputation in the development of digital technologies designed to help improve service delivery and efficiency in the social care and health sector.

Moray is home to 5 of the 25 oldest family businesses in Scotland, each of which is widely recognised for the high quality of their offering at an international level. However most of these businesses are traditionally based in rural locations, which present logistical issues for their workforce. Meanwhile, a large proportion of local businesses have less than nine employees (81.5%) with only 2.3% having more than 50 employees. Much of Moray's economy as described above comprises multiple shifts working from the various plants, stretching the operating day far beyond the typical 9-5 of a more office-based economy, and thus generating accessibility needs over an extended day of operation. This extended accessibility is essential to ensuring inclusive availability of job opportunities across the economy.

Moray however has a more traditional industrial make up, with smaller businesses, slower business growth, and fewer opportunities for young people to go into their preferred sectors and a less developed infrastructure to support business.

The location of Moray and its rural nature has particular consequences for the economic growth of the area. At a national level, the north of Scotland competes with the central belt to attract new business and inward investment. Situated between the Highlands and Islands and Aberdeen City / Aberdeenshire council areas, Moray also has competition at a local level from its neighbours.

Two key factors are seen as having a major impact on the Moray economy: the missing generation of 16-29 year olds, and the issue of fair work for women, with evidence of occupational segregation, a significant gender pay gap, and additional under-employment issues for women.

Moray has a smaller proportion of 15-30 year olds (18%) compared to Scotland (20%). This is slightly higher than the Highlands and Islands overall level of 16%, but notably between 2011 and 2018, the number of 15-30 years olds living in Moray fell by 3.3% while the total population increased by 2.2%. A wide range of factors impact on choices and aspirations, which includes transport accessibility, but also aspirations in terms of preferred employment sectors. The young people of Moray have little interest in working in the food and drink sectors that dominate Moray's economy, due to weaker career progression opportunities and perceptions of low pay. The Moray economy is not currently

able to provide opportunities to fully match aspirations to enter the more sought after key industries of creative (including digital), energy (including renewables) and financial and business sectors.[15]

There is a very noticeable inequality in pay between men and women in Moray. In Moray the gender pay gap is more than double the Scottish average (9.6% vs 3.6% in 2021. The gap has closed in Moray in recent years, however it is still within the 10 poorest performing Council's against this metric. That said, Scottish Government analysis has been reported that the COVID-19 pandemic could exacerbate existing labour market inequalities for protected groups including women and overall the fallout from the COVID-19 pandemic, as well as Brexit, may put pressure on both the gender employment gap and the gender pay gap in coming years[16].

Taken from the 2021 ONS annual survey of hours and earnings, gross weekly pay for full-time workers in Moray was £668 for men (Scotland £650) and £491 for women (Scotland £577). Factors driving gender pay-gap include part-time employees being paid less than full-time employees, and with more women working part-time in Moray than men

The provision of accessible rural transport in Moray will be necessary to facilitate access to the jobs market for women and young people living in rural areas as many of them have no access to private vehicles. Other factors affecting economic growth include:

- Moray has a small number of large enterprises with more than 250 employees, but over 3,000 micro (0-9 employees), small (10-49 employees), and medium sized (50-249) enterprises, with micro enterprises forming over 88% of all Moray businesses. With support, this represents a massive potential for business growth. **The provision of reliable rural transport is important for many larger employers, a situation which may be exacerbated post-Brexit.**
- Access to key services, public spaces and retail centres is poorer in Moray than Scotland generally, possibly due to poorer public transport connections. **The provision of an enhanced rural transport network will promote inclusive access across the region.**
- Moray faces a declining working age population, while the number of residents of pensionable age and over is projected to increase by 33% by 2039. Initiatives that aim to reverse the trend in working age population decline could help deliver a more sustainable economic and fiscal model for Moray in the future. **The provision of an enhanced rural transport network will help to persuade more young people to remain in the area.**

Although Dial M for Moray is available for those unable to use existing forms of transport, or who do not have a regular scheduled bus service, this service availability is limited. The *project* will seek to expand the provision by using low-cost electric vehicles or other ultra-low carbon alternatives.

[15] HIE Young People in Moray Attitudes and Aspirations 2018

[16] Gender pay gap action plan: annual report, 8 March 2021, https://www.gov.scot/publications/gender-pay-gap-action-plan-annual-report/

Main Benefits Opportunities

Satisfying the potential scope for the *project* will deliver the opportunity for the following high-level strategic and operational benefits. These are set out as a scoping exercise here as part of the Strategic Case, which will then be developed further and evidenced in later stages of the Business Case.

Table 2: Benefits Opportunities Scoping

Class Of Objective	Main Benefits	Benefits Criteria	Stakeholders Affected	How will they be affected?	Scale of benefit
Strategic (wider social and Business related)	Travel	Reduce costs Reduce environmental impact of travel Increase satisfaction with public transport	Public Sector / Moray Residents	Affordable transport provided at the point of use and need leading to user and community satisfaction. Reduction in terms of poverty for those in low income households and the so-called working poor through reduction in transport outlay or increase in employment opportunities for example.	Significant scale benefits for Moray, with step change in rural areas. Potential for catalytic effect as scale of generated opportunity creates business growth potential, fosters entrepreneurial spirit etc.
	Attract / retain young people	Increase the percentage of the population aged between 16-29 years Reduce barriers to employment	Moray residents / Local businesses	Accessibility as a barrier is significantly diminished or removed across whole area. Young people can see opportunity to participate in learning, training and employment, as well as leisure and cultural activities.	Significant local benefit in terms of retaining and attracting young people in the area, may take some years to fully realise this potential; service stability will be essential.
	Rebalance demographic	Increase working population of the area as percentage of total	Moray residents / Public sector	Accessibility as a barrier to employment reduced / removed	Local benefit through more flexible labour pool to match between residents and opportunities that are available.
	Sustainable Economic Growth – Inclusive growth	All people able to access all opportunities;	Moray residents / Business / economy and public sector	Link up between business growth and wider pool of potential staff – realising potential and opportunities from a business and community perspective	Area-wide benefit, especially those unable to access entirety of labour market opportunities; business attract an inclusive and sustainable pool of applications to support growth.
	Tourism	Reduce barriers to tourism	Visitors and Tourism economy	Access to transport is a barrier to visitors accessing tourism businesses	Local benefit in attracting and satisfying visitors to Moray.
Operational (organisational and management related)	Travel	Reduce costs Increase opportunities Reduce CO2 emissions	Public sector / Moray residents / Global benefits	Viability of service provision enhanced through up-scaling and efficient operation leading to reduced operating costs. Whole life reduced operating costs of no / low emissions vehicles.	Significant scale benefit for service operation leading to enhanced viability and sustainability of the service. Global benefits in terms of reduction in emissions associated with transport.
	Attract / retain young people	Increase the number of young people	Local businesses	Greater catchment of employment opportunities, and local businesses across	Significant scale benefits both at the individual and local economy level, as well

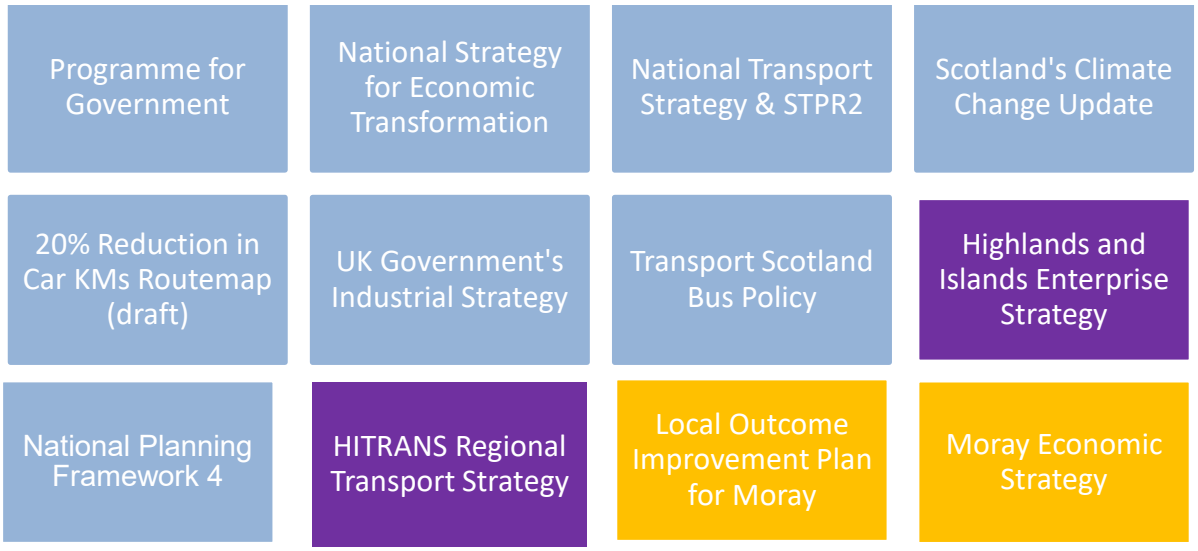
Class Of Objective	Main Benefits	Benefits Criteria	Stakeholders Affected	How will they be affected?	Scale of benefit
		choosing to live/stay in Moray		the area have a wider pool from which to recruit staff; leading to growth potential and greater personal development	as therefore wider Scotland-level benefits
	Rebalance demographic	Reduced cost of care for retirement age population	Public sector	Enhanced accessibility across the area leading to increased independence, people are able to live a fulfilling and health life for longer in their own homes and within their communities	Benefits across the area for people who are older, and knock on benefits to the public purse
	Sustainable Economic Growth – Inclusive growth	Increased match up between jobs opportunities and pool of applicants; business growth	Business / local business / wider economy /	Increased wages, reduced reliance on social security payments, greater contribution to public purse; business growth and sustainability	Benefits across the area associated with those enable to access labour market, and wider business growth opportunities. Knock on benefits to the public purse.

Policy Context

The policy context has been updated as the *project* has progressed through the business cases. This has allowed cognisance to be taken also of new and emerging policies and strategies etc.

The *project* offers a wide fit with specific local, regional, and national plans and strategies, including:

Figure 1: Policy Landscape

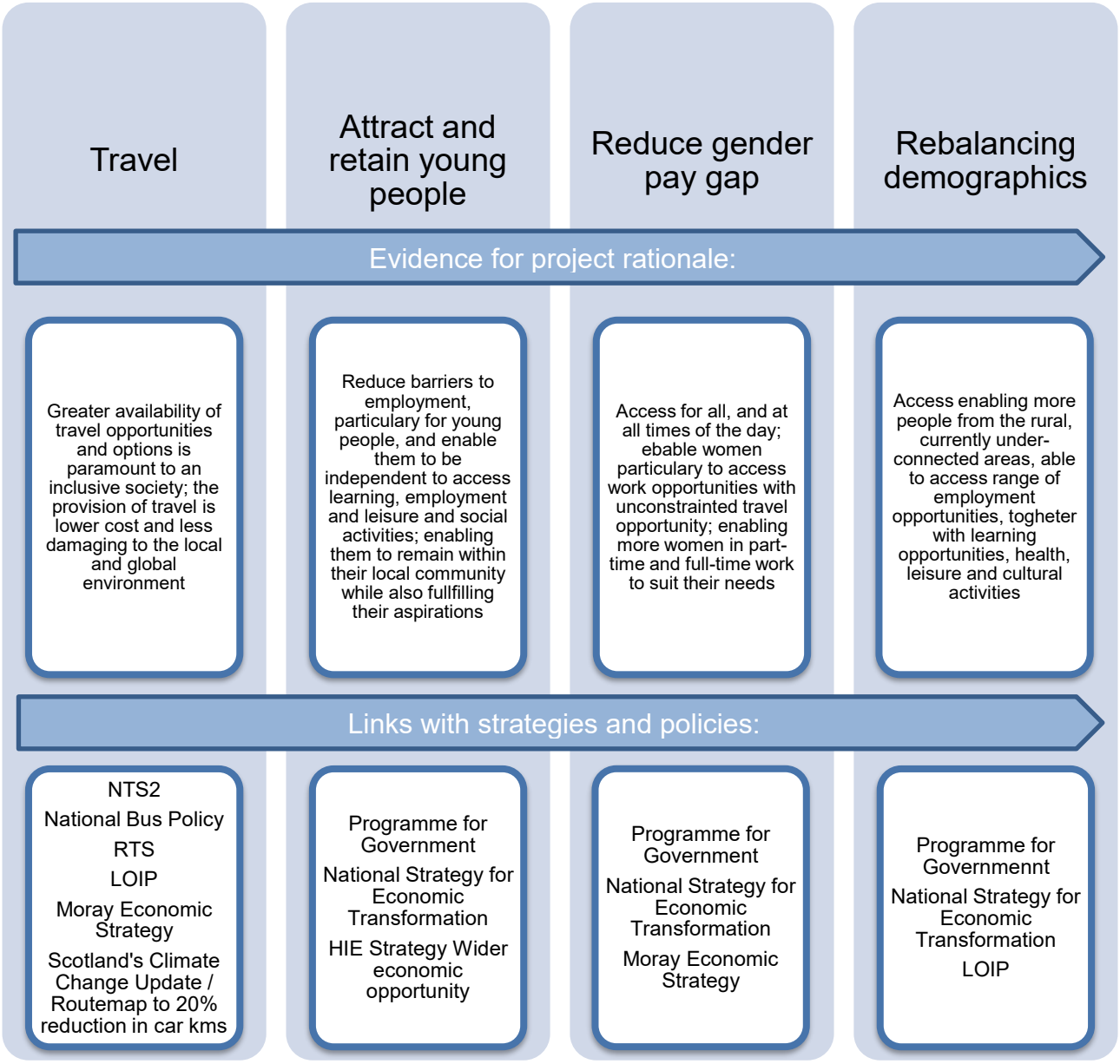


This policy context has been updated as part of the Final Business Plan (FBC) review and programme. A summary of the key salient aspects from each of these relevant strategies and plans is presented in Appendix 7. The Project is particularly congruent with the Transport Scotland Bus Policy, which in itself is aligned with wider Scottish Government policy and strategy, notably the National Transport Strategy. The national bus policy includes a suite of best practice guidance documents to assist in the provision of bus services, and with bus policy aims to:

- provide the environment for bus to act as an effective economic enabler by providing competitive, high quality public transport;
- enable bus to provide an effective alternative to the car by improving reliability, average bus speed and encouraging improvements to the quality of services and infrastructure;
- encourage investment in more efficient vehicles that produce less greenhouse gases and contribute to the targets in the Climate Change (Scotland) Act 2009; and
- link communities, people, places of business and employment and essential services through encouraging the maintenance and development of the bus network in Scotland.

All of the key plans and strategies shown above have been reviewed to assess the relevance of the *project* in supporting their delivery. A summary of the assessment is detailed below. This specifically sets out the project opportunities, the evidence for the project in the context of each of these, and how the project therefore links to and benefits other relevant plans and strategies.

Figure 2: Policy Relevance to Project



Finally, in terms of policy fit, in the table below, is presented an appraisal of the extent to which the *project*, in terms of its key opportunities, satisfies the key specific aims, objectives and initiatives of each of the key plans and policies that have been reviewed, and in the context of the four categories of benefits opportunities as described above in Section 0.

From this more detailed appraisal it is clear that the *project* offers a wide breadth of positive coverage across these varying geographical levels of policies and strategies.

Table 3: Policy Context and Fit with Project

✓✓✓ *significant positive impact / factor* ✓✓ *positive impact / factor* ✓ **slight positive impact / factor** / **neutral** ✖ **slight negative impact / factor** ✖✖ **negative impact / factor**		*Travel*	*Attract and retain young people*	*Reduce gender pay gap*	*Rebalancing demographics*
Programme for Government	*Introduce the Scottish Youth Guarantee to ensure every young person has the opportunity of work, education, or training*	✓✓	✓✓	✓	✓
	promoting place-based economic development and cohesion, helping communities across Scotland to improve key economic, social and wellbeing performance indicators	✓✓	✓✓	✓	✓✓
• *National Strategy for Economic Transformation*	*Investing in our people, infrastructure and assets in a sustainable way*	✓✓	✓	✓	✓
	Promoting inclusive growth	✓✓	✓✓	✓	✓✓
NTS2 / STPR2	*Reduces inequalities*	✓✓	✓✓	✓	✓✓
	Takes climate action	✓✓	/	/	/
	Helps deliver inclusive economic growth	✓✓	✓✓	✓	✓✓
	Improves our health and wellbeing	✓✓	✓✓	/	/
Scotland's Climate Change Plan Update 2020	*By 2032 our roads will contain* ***no new petrol and diesel cars and vans****; sustainable transport will be the instinctive first choice for people; embraced* ***more walking, wheeling, cycling, public transport and shared transport options***	✓✓✓	✓	✓	✓
Route map to 20% reduction in car KMs	*Reducing the need to travel*	✓✓✓	/	/	/
	Living well locally	/	✓✓✓	✓	✓
	Switching modes	✓✓✓	/	✓	✓
	Combining or sharing trips	✓	/	/	/
UK Industrial Strategy	*Clean growth*	✓✓	/	/	/
	Future of mobility	✓✓	✓	/	/
Transport Scotland Bus Policy	*bus to act as an effective economic enabler by providing competitive, high quality public transport*	✓✓	✓	/	✓
	bus to provide an effective alternative to the car by improving reliability, average bus speed and encouraging improvements to the quality of services and infrastructure	✓✓	✓✓	/	/
	investment in more efficient vehicles that produce less greenhouse gases and contribute to the targets in the Climate Change (Scotland) Act 2009	✓✓	/	/	/
	link communities, people, places of business and employment and essential	✓✓	✓✓	/	✓

✓✓✓ *significant positive impact / factor* ✓✓ *positive impact / factor* ✓ **slight positive impact / factor** / **neutral** ✖ **slight negative impact / factor** ✖✖ **negative impact / factor**		*Travel*	*Attract and retain young people*	*Reduce gender pay gap*	*Rebalancing demographics*
	services through encouraging the maintenance and development of the bus network in Scotland				
Highlands and Islands Enterprise 2019-22 Strategy	*Enabling infrastructure*	✓✓	/	/	/
	Business creation and growth	✓	/	/	/
	Community assets	✓✓	✓	/	✓✓
HITRANS Regional Transport Strategy	*Reducing journey times and improving journey reliability and resilience*	✓✓	/	/	✓
	Improving and maintaining the safety of transport and travel	✓	/	/	/
	Protecting the environment and mitigating the adverse impacts of transport / travel	✓	/	/	/
	Improve health and wellbeing	✓	✓	✓	✓
Moray Local Outcomes Improvement Plan (LOIP)	*a place where … young people thrive; a place where they have a voice, have opportunities to learn and can get around*	✓✓	✓✓	/	✓✓
	A thriving and well connected place, where more people live well in their communities	✓✓	✓	✓	✓
	By the year 2030 Moray is a destination of choice, the area being known and recognised as an outward facing and ambitious community with a thriving and well connected commercial base	✓✓	✓✓	✓	✓
Moray Economic Strategy 2019-2029	*A place that is thriving because of an increasingly diverse economy and a growing population that celebrates success, and values both education and training*	✓	✓	✓	✓
	A distinctive and ambitious place that generates opportunities for everyone which in turn helps to drive up average earnings, retain balanced demographics, and encourages strong communities to flourish	✓	✓	✓	✓✓

This analysis provides the evidence of the *Project* offering a good contribution to key local, regional, and national objectives. Specifically, there is strong correlation nationally with the Programme for Government, with the Project presenting the inclusive access opportunity to promote and build place-based economic development, which will help communities, and all within those communities, particularly those on lower incomes and who do not have access to a car/van, to participate in employment, training, learning and leisure activities.

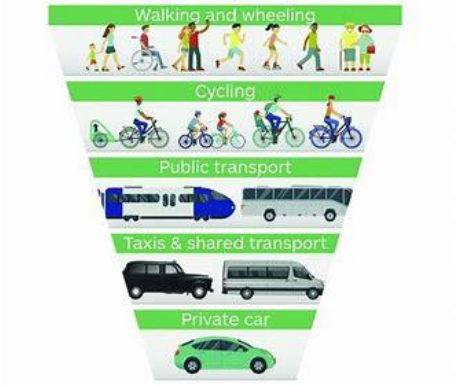
There is similarly a strong correlation between the project opportunities and the National Strategy for Economic Transformation particularly with the strands to invest in our people, infrastructure and assets in a sustainable way, and to promote inclusive growth. The Project opportunity will fully satisfy these objectives, delivering a step change through investment in inclusive accessibility, which will benefit most those with limited or no accessibility to a range of opportunities.

Likewise, the Project opportunity concords strongly with the more transport specific national objectives through both the National Transport Strategy (NTS2) and the mode specific Transport Scotland Bus Policy, and the recent transport elements of Scotland's Climate Change Plan Update and the Routemap to a 20% reduction in car KMs. In relation

to the former, the *project* will in a very targeted, but also widely inclusive way, positively address present inequalities that are driven by gaps in accessibility. Consequently, the Project opportunity will in turn help deliver inclusive economic growth and will enable individual members of the communities served to improve their own health and wellbeing.

Furthermore, as the NTS2 sets out, in order to address the challenges and achieve the Priorities there is a need to embed a *Sustainable Travel Hierarchy* in decision making by promoting walking, wheeling, cycling, public transport and shared transport options in preference to single occupancy private car use for the movement of people. The *project* is congruous to this approach, investing in a step change in public transport availability and quality, which as the NTS2 refers, is important given the dominance of bus as a public transport mode, already accounting for three quarters of all public transport trips, and being particularly important to areas which are not served by the rail network, including much of rural Scotland. It is also importantly highlighted in the NTS2, which will be supported through the delivery of the *project* that bus tends to be a more active mode than a car journey as travelling by bus typically involved a walk to and / or from the bus stop. Thus the *project* will support embedding healthy active lifestyles, as well as supporting the accessibility improvements to improve mental as well as physical wellbeing. Transport interventions in Moray promote active travel, and easy multi-modal journeys wherever possible – for example, through:

Figure 3: Sustainable Travel Hierarchy



- the trial of bike racks on commercial bus services in Moray;
- HITRANS MaaS project app Go-Hi, which enables people to book end to end journeys and see transport options; and
- the recent provision of Brompton Bikes at Elgin railway station.

However, there are practical limitations through vehicle size and layout in enabling bikes to be carried on demand responsive bus vehicles for bus/cycle journeys,

In addition, the NTS2 sets out the *Sustainable Investment Hierarchy,* which is set out to 'inform future investment decisions and ensure transport options that focus on reducing inequalities and the need to travel unsustainably are prioritised'. The *project* is a strong fit with this hierarchy, the provision of new transport opportunities to areas, and at times, currently without public transport will provide valid options that will reduce the need to travel unsustainably, as per the head of the hierarchy. People will have a strong and quality public transport choice, and this will particularly support people who are otherwise, as described above, 'forced' into car ownership through lack of suitable public transport alternatives.

From a local perspective, there is very strong correlation between the Project opportunities and the elements of the LOIP and the Moray Economic Strategy, providing clear evidence of the *project's* opportunity to make a significant contribution to individuals and the community as a whole through being a lynchpin in supporting a thriving and well-connected place across the area.

Project Outline SOC Objectives

The aims of the *project* continue to be valid at the time of writing this Final Business Case.

The project outline objectives were derived from the strategic context and issues presented above, from consideration of the key issues, constraints and opportunities, and considering how the *project* can help deliver wider local, regional and national policies and strategies.

The *project* initial outline objectives were:

- To increase use of public transport in the youth and working age population.
- To provide a low carbon and long-term sustainable transport connection.
- To tackle barriers to employment and improve access to services by providing transport connections that recognise the rural nature of Moray and the location of its SMEs.

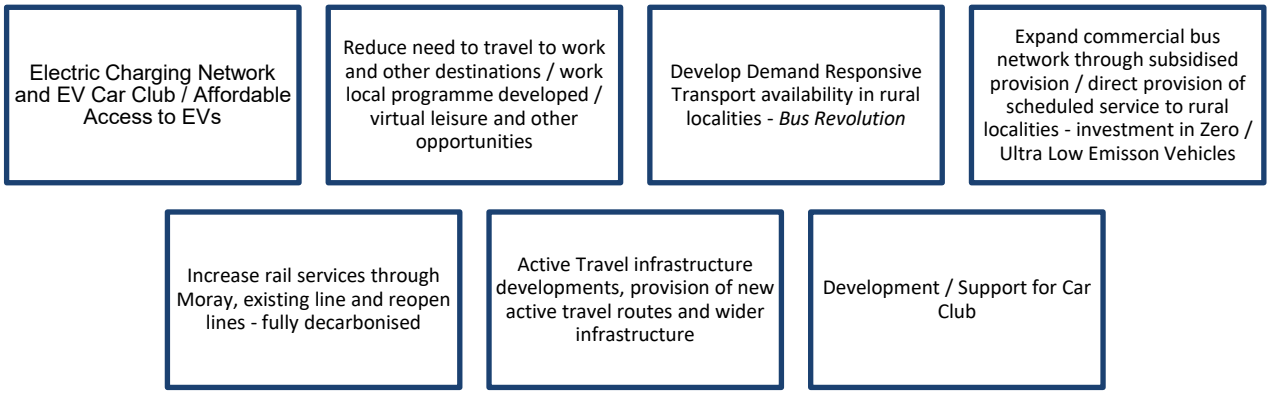
Long List Options

This section describes an overview of the considerations and thought process behind the initial options deliberation that channelled the early development of the *Bus Revolution* concept.

These initial *long list* options were derived from a desk-based scanning exercise to consider all those options that could hypothetically support realisation of the Project Outline Objectives – this process drew from existing work programmes within Moray as well as other actions, such as those subsequently set out in the policy review that has been described as part of this business case.

This initial long list of *options* drawn from this scanning exercise are as set out in Figure 4 below.

Figure 4: Initial Long List Options



Appraisal of Long List Options

As per the Scottish Transport Appraisal Guidance approach, this section then sets out an indicative appraisal of these initial long list of possible options that were considered at a high-level to determine which were appropriate to consider in further detail, to develop, refine and consider as part of the business case process.

This preliminary options appraisal was undertaken by first considering the above noted options in the context of the Investment Objectives (Section 0), the STAG criteria,

feasibility, affordability and public acceptability, and setting out then the rationale for selection or rejection. This appraisal is presented in Table 44.

Table 4: Long List Appraisal of Options

-3 Strong Negative -2 Moderate Negative Impact -1 Slight Negative Impact 0 Impact Neutral +1 Slight Positive Impact +2 Moderate Positive Impact +3 Strong Positive Impact	To increase use of public transport in the youth and working age population	To provide a low carbon and long-term sustainable transport connection	To tackle barriers to employment and improve access to services by providing transport connections that recognise the rural nature of Moray and the location of its SMEs	Environment	Safety	Economy	Integration	Accessibility and Social Inclusion	feasibility	affordability	Public acceptability	Rational for selection or rejection
Electric Charging Network and EV Car Club / Affordable Access to EVs	0	1	1	1	-1	1	0	1	1	-3	-1	REJECT: Positive project overall, increase in traffic, even EV could have adverse impact in terms of congestion. Will require massive investment and management to achieve scale of change to satisfy objectives. Consider elements as part of other complimentary projects in Moray.
Reduce the need to travel to work and other destinations / work local programme developed / virtual leisure and other opportunities	-2	1	1	1	1	-1	-1	-1	-2	-1	-1	REJECT: Will make positive contribution where some jobs can be worked from home, but challenges around matching with the large manufacturing sector in Moray, which requires a significant share of on plant working.
Develop Demand Responsive Transport availability in rural localities; build upon Dial M existing operation – *Bus Revolution*	3	3	3	2	2	2	1	3	2	2	2	SELECT: existing strong acceptability of project offer, DRT offers good fit with dispersed population and to multiple employment and other destinations
Expand commercial bus network through subsidised provision / direct provision of scheduled service to rural localities - investment in Zero / Ultra Low Emission Vehicles	1	1	1	1	1	1	2	2	3	-2	1	REJECT: dispersed population would result in very thin routes, which would be very expensive to operate at any coverage using conventional services
Increase rail services through Moray, existing line and reopen lines - fully decarbonised	1	-2	-1	1	1	1	1	-1	-3	-3	1	REJECT: difficult, expensive and long time to provide any uplift in accessibility which will not be able to penetrate well the dispersed population that require additional public transport offer to achieve the stated benefits
Active Travel infrastructure developments, provision of new active travel routes and wider infrastructure	-2	1	-2	1	0	1	0	0	-1	-2	1	REJECT: would offer distinct benefits, but not necessarily in respect to identified project objectives. Pursue as part of wider and specific programme in localities across Moray – complimentary to DRT option.
Development / Support for Car Club	1	1	1	1	0	1	0	1	1	1	1	REJECT: offers some potential to suit some community members, but does not offer full realisation of benefits as minimal coverage / acceptability in the short to medium term. Consider developing complimentary project alongside DRT option.

As a consequence of this high-level appraisal, the DRT option has been assessed as best satisfying the transport planning objectives and was consequently carried forward for further development through the bus case methodology. **The DRT option is selected – *Bus Revolution*.**

The **EV-based, work local programme, active travel and car club options were rejected** from this process, BUT continue to be considered as part of wider programmes and developments through locality-based approaches in Moray.

The **conventional bus and rail options were rejected** from the process altogether.

Development and Refinement of Detailed Investment Objectives

The investment objectives have been developed and refined from the outline objectives presented above at Section 0, and which were used as part of the long list appraisal, for this *project* specifically are as follows:

- **Investment Objective 1:** Increase public transport passenger journeys by 30,000 per annum by 2030.
- **Investment Objective 2:** To reduce the environmental impact of transport in the area by 30t CO2e p.a. by 2030.
- **Investment Objective 3:** 20% reduction in number of people facing transport barriers to employment, education or recreation by 2030

The project team have reviewed the most current data to inform and validate the issues and opportunities for the project in the context of the short-listed option, and this has been further endorsed by the involvement of a wide range of key stakeholders, both public and private sector, in terms of shaping the project and informing the evaluation and appraisal of options through the OBC and into the FBC.

There remained great similarity in the findings here, with some small changes:

- Proposed operating times; and
- The inclusion of some out-of-county journey opportunities retaining the service solution as being operated by Moray Council, but recognising the need to maintain a strong partnership approach with the commercial sector in regards to the 'whole' public transport offer in Moray.

The evolution of the objectives through the business case development process are as set out in Table 5.

Table 5: SOC Investment Objectives Refinement Process Log

SOC Investment Objective	OBC Investment Objective	Rationale	FBC Investment Objective	Rationale
To increase use of public transport in the youth and working age population by creating an engaging brand proposition which demonstrably meets their needs, and using financially generative marketing campaigns	To increase the number of public transport passenger journeys to get to and from rural areas to places of work, education, and tourist destinations etc. by 30,000 per annum by 2031.	To be more specific and measurable on passenger numbers to demonstrate impact, and recognise that marketing is a means to achieve the outcome	Increase public transport passenger journeys by 30,000 per annum by 2030	More focussed, covering all travel needs to align with 20% reduction in car KMs route map – realisation date brought forward to 2030 for alignment, but requires an expedient start.
To provide a low carbon and long-term	To reduce the environmental impact	To be more specific and measurable,	To reduce the environmental impact	Retain; supports Scotland's Climate

SOC Investment Objective	OBC Investment Objective	Rationale	FBC Investment Objective	Rationale
sustainable transport connection: to provide flexible, low carbon and long-term sustainable transport connection by innovating from the existing Dial M base	of transport in the area by 30t CO2e p.a. by 2031.	focussing on the environmental elements of the original objective – removing explanatory background text	of transport in the area by 30t CO2e p.a. by 2030.	Change Plan – realisation date brought forward to 2030 for alignment but requires an expedient start.
To tackle barriers to employment and improve access to services by providing transport connections that recognise the rural nature of Moray and the location of its SMEs	To reduce the number of people facing transport barriers to employment, education or recreation by 20% by 2031	To be more specific and measurable in relation to tackling barriers to employment, education and access to services	20% reduction in number of people facing transport barriers to employment, education or recreation by 2030	Reworded; good match with wider policy context, poverty and challenges around increasing cost of living – realisation date brought forward to 2030 for alignment, but requires an expedient start.

These are then the Transport Planning Objectives, and their scope is defined based on the full understanding of the issues and opportunities described above. This forms the foundation of progressing towards the detailed Preferred Option for the *project* as presented later in the Economic Case.

Note that initial objectives have been set to run until 2030, which is on the basis of allowing an initial run-in period following the commencement of the *Bus Revolution,* and to coincide with the Scottish Government interim carbon reduction goal of 75% by 2030. This also then critically links with the Moray contribution to the Scottish Government target to reduce car kilometres travelled in Scotland by 20% by 2030.

Investment Objective 1 is closely matched with the identified problems and opportunities and the policy context. Increasing the number of public transport journeys to and from rural areas to places of work and other destinations will make progress for the area in terms of unemployment and underemployment where transport is a barrier to participation. The target for objective 1 has been set based on a judgement assessment, which has been homed in on bridging the gap between the Moray (5%) and Scotland (10%) level, whereby bus is the usual mode for the journey to work. This judgment basis is set out further in the objective monitoring table that follows below, with the objective to progress towards a mode share in the order of 7.5% initially.

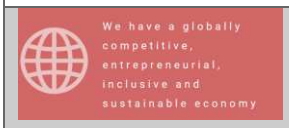
Investment Objective 2 is based on the carbon impact of the modal shift from private car to use of EV based bus journeys, using UK Government carbon conversion rates and Green Book carbon pricing information. The project carbon categorisation is detailed in Appendix 9.

Investment Objective 3 is in response to the real challenges associated with transport as a barrier to access. Notably, that two thirds of employed adults in the most recent Scottish Household Survey output report that they could not use public transport from the journey to work, and furthermore that lack of affordable transport acts as a barrier for between seven and 17% of young people across Moray from the Highlands and Islands Enterprise Young People in the Region research.

In order to validate the detailed investment objectives, and indeed the strength of the preferred option as part of that evaluation and appraisal in the context of these objectives, they have been considered alongside each other, and in the context of the overall objectives of the Scottish Government.

Table 6 then presents an assessment of the preferred *project* option against the Scottish Government's Objectives, drawn from the National Performance Framework 4 National Outcomes. This assessment is based on the preferred option as detailed in full in the Commercial Case at Section 4.1. Going forward a thematic approach to benefits reporting will be taken as part of the programme benefits plan and the monitoring & evaluation of the project, and we will articulate how improvements are being generated against agreed indicators – including project, programme and inclusive growth indicators.

Table 6: Assessment of project against SG objectives

Scottish Government Objectives:	**The development of an "uber-style" app to enable customers to track the position of buses and book journeys within a reasonable response time (max. 1 hour) Available across Moray, and to key destinations beyond the area; integrated with commercial routes. Brand marketing and promotion.**	**An investment in quality green fleet (electric buses), to increase the flexibility and hours of operation of on-demand bus provision across Moray, with additional facilities such as on board Wi-Fi, charging facilities etc. Real time booking technology, including scheduling, monitoring and customer interface.**
	Increased public transport availability connects rural communities to opportunities enabling all to reach their potential within their community	Community benefits from everyday usage of high quality vehicles and customer interface (as well as the access enhancements itself), supporting communities to feel a strong sense of belonging and respect for their community.
	Increased public transport availability for all supports widespread inclusion, leading to feelings of empowerment and resilience *note – existing telephone bookings will be retained for inclusivity	
	Inclusive economy whereby rural residents regardless of household income or car availability are able to participate in a sustainable economy. Transport accessibility is removed as a barrier for rural residents seeking employment or career progression etc. supporting an inclusive economy	Reduced emissions alongside increased participation in the local economy, supporting sustainable economic development in the area
	Transport accessibility is removed as a barrier for rural residents seeking learning and training opportunities	
	Reduction in car-based journeys; less reliance on private car; aspiration / need to acquire a car to participate, particularly for young residents is reduced	Reduction in car journeys and operation of low/zero emission vehicles; as well as technology to optimally route vehicles, minimising environmental impacts.
	Widening of labour market through step change in accessibility for rural Moray supporting thriving businesses in the area	Increased public transport availability across the area supports availability of quality jobs for everyone, in turn enabling innovation and business growth.
	Increased public transport availability directly tackles poverty within our community through removing transport barriers as a means to making opportunities available to all; leading to increased incomes across the community; poverty tackled directly by increasing household incomes and wealth.	High quality operation and provision of on board facilities, such as WiFi etc. Supports access for all agenda, both in terms of transport and to the internet.

From this appraisal against the Scottish Government Objectives, it is evident that the *project* will make a significant contribution across multiple of the Scottish Government objectives, notably then supporting locally across Moray the contribution to the Scottish Government's overall purpose, and indeed satisfying across all five strands:

- create a more successful country;
- give opportunities to all people living in Scotland;
- increase the wellbeing of people living in Scotland;

- create sustainable and inclusive growth; and
- reduce inequalities and give equal importance to economic, environmental; and social progress.

The investment objectives presented and appraised in the section above will be measured within the Moray Growth Deal Benefits Realisation Plan which is referenced in the Monitoring and Evaluation section of the Governance Framework for the Deal. The Baseline, targets and indicators will be revisited as the project progresses.

Specifically, the objectives will be measured and monitored as set out in Table 7.

Objectives 1 and 2 can be baselined and monitored primarily using ticketing data. These measures will be further supplemented by survey data in order to evidence judgement on whether the passenger journeys represent modal shift (informing the carbon savings calculations) and how many individuals from what demographic are using the transport in order to access education, employment or other recreation/services.

Existing survey data sources have been explored for evidence of TPO 3. Due to lack of reliable survey data with adequate sample size the Moray Council will need to commit to carrying out a primary survey of residents. This could be via existing surveys carried out by the council (of all residents or targeted resident demographics) and specific surveys targeted at bus users (carried out on the bus or emailed to registered users of the DRT booking application).

Table 7: TPO Baseline and Targets

Objective	Baseline (2018/19) (Pre-Covid)	Source	Frequency of Reporting	Target
To increase the share of public transport passenger journeys by 30,000 per annum by 2030.	Usual method of travel to work – bus 5% (2019) Actual passenger numbers prior to the project Adults' views on satisfaction with public transport – 4% very satisfied, 36% fairly satisfied	TATIS – Scottish Household Survey Ticketing information system TATIS – Scottish Household Survey	Continuous survey Continuous data feed Continuous Survey	Increase to 7.5% bus share Increase passenger numbers by 30,000 per annum by 2030 Increase shares to 15% very satisfied, 40% fairly satisfied
To reduce the environmental impact of transport in the area by 30t CO2e p.a. by 2030.	As above and converted to measure environmental impact, supplemented by survey data on previous mode of travel	Ticketing information system	Continuous data feed	30t CO2e p.a. by 2031
20% reduction in number of people facing transport barriers to employment, education or recreation by 2030	Primary Survey Employed adults (16+) - could not use public transport – 66% (2018)	Primary Survey TATIS – Scottish Household Survey	Annual Was not collected in 2019 – is collected in even years.	20% reduction in number of people facing transport barriers to employment, education or recreation by 2030 Reduced to: <53%

The rationale for this project is underpinned by a range of business needs, which are expressed as issues and opportunities, particularly transport barriers to participation in society, and the adverse environmental impact of transport, as well as opportunities to green the public transport fleet.

The summary of issues and opportunities that are described in more detail above in Sections 0 and 0 is summarised in the table below, together with, critically, how these issues then flow in terms of match with the developed and detailed objectives presented in this section.

Table 8: Match between TPOs and Key Issues and Opportunities

Key issues	Opportunities	Match with Objective
Dispersed rural population; major gaps in public transport provision to match up with economic, learning and social activities	Provision of bespoke public transport offer to match transport accessibility need with employment, learning and other opportunities in Moray	To increase the number of public transport passenger journeys to get to and from rural areas
Young people leaving Moray - Higher proportion of young people leave Moray after school than Scottish average and fail to attract other young people to move here.	Provision of public transport to currently unserved areas to match transport need to access employment, learning and other opportunities in Moray.	To reduce the number of people facing transport barriers to employment, education or recreation
Commercial bus routes are not viable for many parts of Moray	Develop modern transport solution, and using technology, to match travel demand and supply dynamically	To increase the number of public transport passenger journeys to get to and from rural areas
Transport is a major contributor to emissions and climate change	To create a public transport solution, available to all, using technology to route plan and operate efficiently and based on zero emissions vehicles	To reduce the environmental impact of transport in the area
Strong economic base with mix of very large and many small and medium enterprises with significant growth potential, based often across rural locations	Provision of responsive transport with mass coverage to connect people across rural Moray to workplaces (and other opportunities) across Moray	To reduce the number of people facing transport barriers to employment, education or recreation
Geographical 'pockets' of relative poverty; low wage employment; high costs of living (food, fuel, housing, transport)	Provision of affordable public transport options to meet needs well in order that community members can access wide range of opportunities; hence provision of affordable access	To reduce the number of people facing transport barriers to employment, education or recreation

Scope and Key Service Requirements of Short List Option

The preferred option – that selected through the appraisal – has then been refined and developed as part of the project evolution. Project development has been guided by the following range of service scope or requirements. These variances in terms of how the DRT option could be established and rolled out are considered and appraised in full within the Economic Case.

Table 9: Business Scope and Key Service Requirements for Consideration

	Minimum	Intermediate	Maximum
Potential business scope	Development of Dial M with limited brand revamp, using current fleet.	Expanded 'fixed' timetabled services. 6 days per week enhanced as 0700-2200h. Using electric vehicles/ other ultra-low carbon with high customer specification.	Expanded 'fixed' timetabled services. 7 days per week enhanced as 0500-0000h. Using electric vehicles/ other ultra-low carbon with high customer specification.

Key service requirements	Improved customer access.	Extended service plus green fleet/lower operating costs.	Service increased to meet social demands of younger demographic and across all areas.

The preferred option service requirement, based on the scope presented above, is then set out in full in Section 3.4, which describes the range of option development scenarios which were then developed to be considered for the economic appraisal.

Table 10 presents an assessment of the degree to which these *project* scope elements match with the objectives. This shows a high level of accord across all aspects, demonstrating a strong fit between the objectives and the *project* scope.

Table 10: Assessment of degree to which the project scope match TPOs

✓✓ positive impact / factor ✓ slight positive impact / factor / neutral x slight negative impact / factor xx negative impact / factor		Project scope		
		On-demand service early to midnight (Mon-Sat) and 7am to 10pm (Sun)	Service integrated with commercial routes	Booking to service time as close to real-time as possible
Investment Objectives/Transport Planning Objectives (TPOs):	To increase the number of public transport passenger journeys by 30,000 per annum by 2030.	✓✓	✓✓	✓✓
	To reduce the environmental impact of transport in the area by 30t CO2e p.a. by 2030.	✓✓	✓✓	✓✓
	20% reduction in number of people facing transport barriers to employment, education or recreation by 2030	✓✓	✓✓	✓✓

The table above demonstrates clearly that the three core strands of the project scope will provide the foundation for solid progress towards meeting the Objectives. That is, an increase in public transport journeys would be expected for new travel opportunities created; there would consequently through the shift of some journeys from car, and through the operation of new electric vehicles, be a reduction in the environmental impact of transport in the area, and this critically being in tandem with also a reduction in the number of people facing transport barriers to employment, education or recreation.

Given that significant areas of Moray have no bus service other than the off peak Dial M DRT service, and the mixed working pattern created by the shifts for core employment opportunities in manufacturing and hospitality, the provision of demand responsive transport 7 days a week with early 'til late services creates the strongest match with the objectives.

By planning the service provision in an integrated way with the existing commercial bus services, this allows for the greatest efficiencies without overlapping services, providing more journey opportunities for people – thus meeting all three objectives.

One of the current challenges with demand responsive transport is the need to pre-plan and book journeys at least 24 hours before travel, thus reducing flexibility and attractiveness of the service for customers. Introducing technology which enables as close as real time booking as is possible increases that flexibility for the customer, making the use of demand responsive bus travel much more appealing, and therefore more likely to achieve the objectives.

Main Strategic Risks

Risk management is an integral and critical part of the planning and procurement, and of project delivery generally.

A risk register has been developed as part of the project development where all key risks will continue to be recorded, assessed, and managed on a regular basis. Every project is subject to constant change, and it is essential that the risk register is reviewed regularly and treated as a live document through the project management approach.

The main business and service risks associated with the potential scope for this project are shown below, each showing a likelihood and impact score on a scale of 1-5, with 1 being low and 5 being high. Project risk categories cover financial, political, business, public acceptability, service, and external environment risks as follows:

Table 11: Risk Register

Risk categories	Description	Likelihood	Impact	Mitigation	Result
Financial	Uncertainty within costing for project	2	5	Apply suitable Optimism Bias to cost estimate; review costs as project evolves	Project costs are robust
	Quantified benefits not significant enough	2	4	Need to fully explain the context within the report and describe the magnitude of the benefits qualitatively	Readers have a full understanding of the benefits of the project
	Service does not generate demand as projected	3	3	Ensure community buy-in through close engagement adopting a people-centred approach to service design and development in keeping with Community Wealth Building approach; develop strong marketing plan	Service is well used by community and visitors; ticket sales match and exceed projections
Political	Degree of political and community acceptability with finalised options unknown	1	5	Report back to Elected Members on the detail emerging and develop full engagement programme for community as project develops	Elected members and community fully sighted on project and given opportunity to shape the *Bus Revolution* project as it progresses to the delivery stage
Business	Competing demands for resources	1	5	Project progressed in parallel through Growth Deal	Project progresses to budget and programme
	Inability to raise private sector funding (e.g. company purchased season tickets).	2	3	Ongoing discussions with service providers and larger employers.	Service providers and larger employers shape products and are bought into the project
Public acceptabili-ty	Community are not engaged in project; detailed design does not match needs and wants of the community	2	4	Community engagement reviewed regularly – recent online survey to gain views on proposals – follow up. Utilise established communication channels	Detailed design of project meets community needs; project is well supported by community
Service risks	Supplier availability	1	5	Early engagement with suppliers through established channels; supplier situation being monitored during pandemic.	Good range of suppliers engaged in procurement process
	Cost of vehicles	2	4	Regular review of costs Size of vehicles and or specification may be reduced if costs prohibitive.	Project delivered on budget
	Procurement delays	3	4	Early engagement with suppliers and early at risk acquisition for Phase 1 by Council	Project delivered on programme
External environmental risks	Impact of Covid-19 pandemic on public confidence / on future demand for bus services, including as a result of ongoing use of home working practices	3	3	Marketing campaign planned prior to launch-adaptions to vehicles considered to increase safety and security	Project delivers transport planning objectives; passenger carrying targets achieved and benefits realised

Risk categories	Description	Likelihood	Impact	Mitigation	Result
	Impact of Brexit. Legislative changes.	2	4	Ongoing discussions with service providers. Situation being monitored. Advanced planning and communication.	Project delivered on time and budget

These risks, and any others that emerge through regular review and consideration through the evolution of the project, will be reviewed on an ongoing basis and will be analysed and any mitigations identified to manage risks. This will form a core and important element of the project management arrangement for *Bus Revolution.*

Project Constraints and Dependencies

The project is subject to the following constraints:

- Compliance with procurement strategies.
- The project is subject to funding constraints and so cannot be completed within the timescale required to allow the benefits to accrue if funding is not realised.
- (Other than financial) resources that are available to enable the project to be delivered on time and to the right quality.

The project is subject to the following dependencies that will be carefully monitored and managed throughout the project life cycle:

- The project is dependent on ongoing political support and the relationship between partner organisations and stakeholders.
- Alignment with national / regional developments.
- The project has sufficient financial backing through implementation to ongoing delivery, including the release of funding dependent on development of the full business case.
- The project has sufficient external authorisations to proceed, e.g. licensing permissions.

3. The Economic Case

Introduction

At the start of the development of the Outline Business Case a project board was formed of key stakeholders to direct and guide the project. The key stakeholders included representatives from Moray Council, Highlands and Islands Enterprise, Moray Chamber of Commerce, Highlands and Islands Transport Partnership (HITRANS), and Walkers Shortbread Ltd.

At the inaugural meeting of the board on 3rd April 2020 the members of the board agreed to set-up a series of short virtual workshops to:

- identify and agree spending objectives, existing arrangements, business needs, and potential scope for the project.
- identify the key service requirements for the project, related benefits and risks, constraints and inter-dependencies.
- revisit in detail the options appraisal exercise undertaken in the Strategic Business Case to ensure that all options had been properly considered.

These workshops took place during May and June 2020 and included a benefits mapping exercise (Appendix 1) to assist in developing the logic model for the project.

The logic model developed from this activity was as described in Table 12.

Table 12: Project Logic Model

INPUTS	ACTIVITIES	OUTPUTS	OUTCOMES	IMPACTS
Resources needed to deliver the project.	Actions needed to deliver the project.	Measurable direct results of the activities.	Medium term benefits on the economy.	The long-term effect upon the economy or society
Funding, Plans, App technology – to enable booking and tracking, Operational Fleet (electric buses)	Licencing, Branding and fit-out of vehicles, Additional drivers recruited, Marketing and promotion	Expanded network and operational hours, Reduced private vehicles on roads, Reduced rural unemployment	Increased use of and satisfaction with public transport, Reduced carbon emissions Increased female and youth participation in labour market	Increased use of public transport, Reduced environment impact of transport in the area, Reduced transport barriers to employment, education and recreation

Critical Success Factors

A programme board meeting was held on 11th May 2017 to determine the CSF's for the short list project developments and refinements. The attendees included relevant stakeholders from Moray Economic Partnership, Highlands and Islands Enterprise, University of the Highlands and Islands, Skills Development Scotland, and Moray Council.

Following initial project scoring and prioritisation these CSF's were amalgamated and used alongside the detailed investment objectives for each project refinement option in the programme to evaluate this new long list of possible options (variations within the short list option from Section 0). The board decided that all CSF's should have equal weighting and be used for all projects in the deal to provide a consistent approach to evaluation.

Table 13: Critical Success Factors CSFs

CSF1	Strategic Fit (Vision / Government Policy)	How well the option provides holistic fit and synergy with other key elements of national, regional and local strategies
CSF2	Potential VFM	How well the option maximises the return on the required spend (benefits optimisation) in terms of economy, efficiency and effectiveness from both the perspective of the organisation and wider society and minimises associated risks.
CSF3	Potential Achievability	How well the option is likely to be delivered in view of the complexity of the option, and the experience, capability and capacity of the partners involved.
CSF4	Supply side capacity	How well the option matches the ability of the service providers to deliver the required level of services and business functionality, and appeals to the supply-side.
CSF5	Potential Affordability	How well the option meets the likely availability of funding and matches other funding constraints, including the capital and revenue consequences associated with the proposed investment.

Bus Revolution Long-listed Options

The Treasury's Green Book suggested options framework was used to generate a reasonable number of options for the long list (within the context of the preferred option from the earlier appraisal) by systematically working through the available choices for what, how, who, when and funding. This takes the optioneering process beyond the standard STAG approach, which had been earlier considered in order to undertake a wider-ranging review of issues and possible solutions.

As per the Green Book approach, options were generated by holding a series of workshops with a wide group of stakeholders and in cognisance of the identified issues and opportunities that have been summarised above, and within the context of the Scope and Key Service Requirements as set out in Section 0.

At the workshops, evaluation was undertaken to assess how well each option met the investment objectives and CSFs at each stage.

The initial long list options then comprised:

- **Option 1 – do nothing – current Dial M for Moray service.**
- **Option 2 – the 'minimum' scope – slightly expanded operation over the current to cover weekday peak times.**
- **Option 3 – the 'intermediate' scope – increased operational hours to include evenings and Saturdays (no Sunday service).**
- **Option 4 – the 'intermediate plus' scope – increased operation with evenings and weekends covered (shorter hours on Sundays).**

  Option 5 - 'maximum' scope – 24/7 operation.

The results of the options appraisal workshops are recorded in Appendix 2. A summary of the results is shown below.

Specifically, for each of the service aspects / option choices, that is:

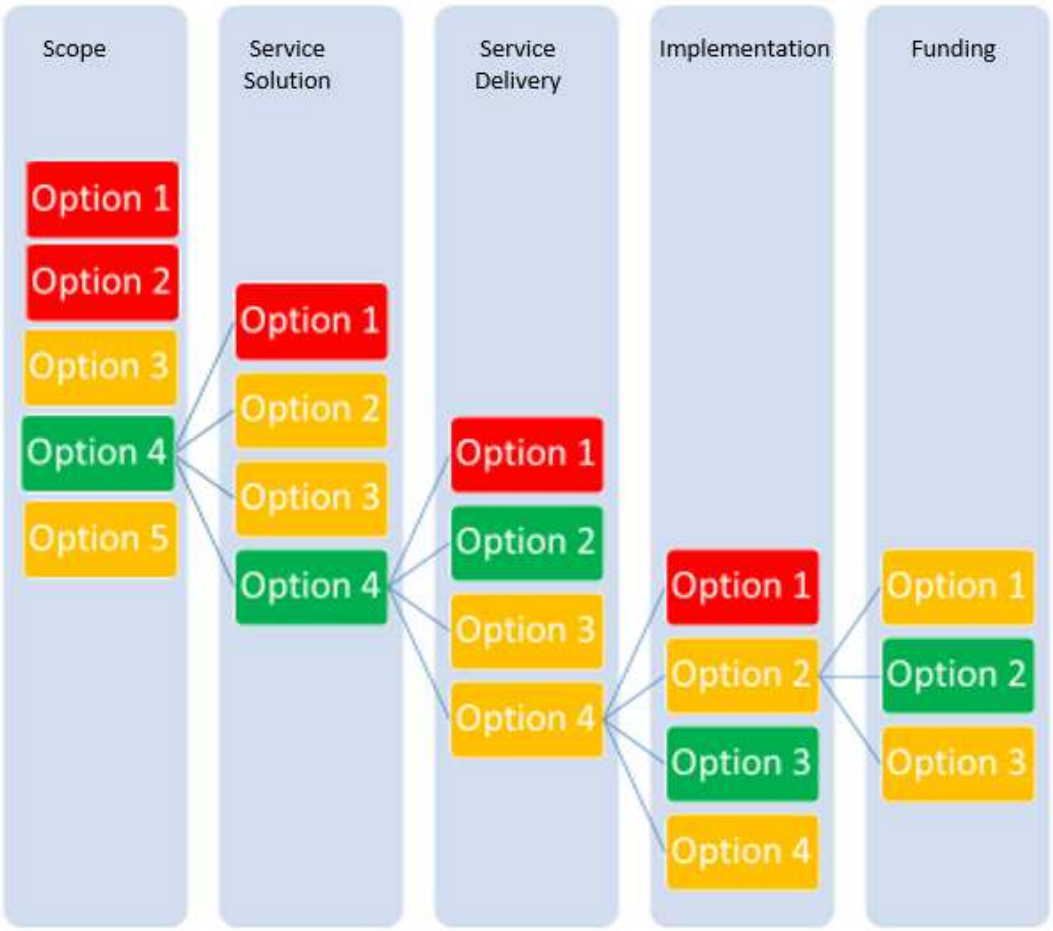
- Scope – coverage of the service to be delivered.
- Service solution – how this will be done.
- Service delivery – who is best placed to do this.
- Implementation – when and in what form this can be implemented.
- Funding – what the service will cost and who will pay for it.

Each option was fully considered in respect to the level of fit with the Transport Planning or Investment Objectives (TPOs) and with the Critical Success Factors (CSFs), as set out in earlier sections. This assessment was summarised in terms of the degree to which each option satisfied the objective or success factor on a scale of:

- N – fails to meet some aspects of CSFs / TPOs – consider **dropping**
- ? – possible satisfaction of CSFs / TPOs – **consider** carry forward
- Y – meets most aspects of CSFs / TPOs – **possible** carry forward
- YY - strong fit with CSFs / TPOs – **preferred** way forward.

From the workshop approach to this assessment, it was possible to consider the options taking into account the objectives, CSFs, known constraints and opportunities, dependencies, unmonetised and unquantifiable factors, as well as possible collateral effects and unintended consequences.

The full framework assessment summary of each option against the TPOs and CSF, which is set out in full in Appendix 2, was then qualitatively summated, as shown in the diagram below.



Key	Outcome
Option x	Discounted
Option x	Possible
Option x	Preferred

This then gives a preferred option package that comprises:

- Option 4 was selected as the preferred **scope** for the project and carried forward to the next stage of assessment. It was considered that this option provided the greatest impact in terms of the objectives and would address the significant amount of shift work requirements in the manufacturing sector.
- Option 4 was selected as the preferred **service solution** for the project and carried forward to the next stage of assessment along with the previous choice for scope.

This option was considered the most attractive in terms of the achievement of objectives and public expectation of a responsive service.

- Option 2 was selected as the preferred **service delivery** for the project and carried forward to the next stage of assessment along with the previous choices for scope and service solution. The option was chosen in view of its financial sustainability and achievability.
- Option 3 was selected as the preferred **implementation** for the project and carried forward to the next stage of assessment along with the previous choices for scope, service solution, and service delivery. It was considered important to phase the implementation but to implement the initial phase as soon as possible in order to start the transition away from private car use.
- Option 2 was selected as the preferred **funding** for the project. This option was considered the most viable in the short-term but if net zero carbon targets are to be met it was considered that option 3 might have to be considered at some point.

Hence, the preferred package at this stage of the development process based on this multi-factor workshop approach with key stakeholders comprises:

- **On-demand service 4am to midnight (Mon-Sat) and 7am to 10pm (Sun) for anyone travelling to or from the Moray area. Service integrated with commercial routes. Booking to service times as close to real-time as possible. Boundary is Moray area plus some key destination outside the area (airports, hospitals, tourist destinations etc.)**
- **Real-time booking technology, including scheduling, monitoring, customer interface etc. Brand marketing and promotion. Number and types of buses full low-emission (including existing) fleet. Charging points. Depot / bus storage. No. of drivers. Potential for dedicated tourism offering (e.g. whisky tours), journey to work arrangements with employers, delivery service. Max wait 1hr.**
- **Run internally with O Licence using direct operating powers under Transport (Scotland) Act. Option to link in with local CT providers. Establish Bus Partnership.**
- **Introduce technology and 5 additional vehicles (one per operational zone) in year one. Introduce further vehicles on phased basis integrated with fleet renewal programme.**
- **MGD capital funding for vehicle and technology purchases. Seek contract commitment from employers for workplace transport and / or tourism offering to provide additional Opex (revenue) income for operating costs.**

Short-listed Options

The initial pass through this options framework approach rejected option choices that do not meet the TPOs, or which are judged unacceptable by a failure to satisfy the CSFs to a satisfactory degree.

From the individual options appraisal exercises undertaken and detailed at Appendix 2, a range of option development scenarios were then developed to be considered for economic appraisal, and these were approved by the Bus Revolution Project Board on 27th

August 2020. These comprise the preferred way forward (as set out above), together with *less* and *more* ambitious developments of these aspects to assist with scenario testing.

The option development scenarios developed for economic appraisal are as follows:
(Note: Option 6 – Do Nothing, also evaluated as benchmark)

Bus Revolution element	Option Development Scenario 1 – Preferred	Option Development Scenario 2 – Less ambitious	Option Development Scenario 3 – Less ambitious	Option Development Scenario 4 – More ambitious	Option Development Scenario 5– More ambitious
Scope	On-demand service 4am to midnight (Mon-Sat) and 7am to 10pm (Sun) for anyone travelling to or from the Moray area. Service integrated with commercial routes. Booking to service time as close to real-time as possible. Boundary is Moray area plus some key destinations outside the area (airports, hospitals, tourist destinations etc.)	Expanded on-demand service from 7am to 5pm (Mon -Fri) for residents without access to other public transport. Gaps when current fleet current used for other purposes filled. Same day booking. Boundary is Moray area.	On-demand service 4am to midnight (Mon-Sat) and 7am to 10pm (Sun) for anyone travelling to or from the Moray area. Service integrated with commercial routes. Booking to service time as close to real-time as possible. Boundary is Moray area plus some key destinations outside the area (airports, hospitals, tourist destinations etc.)	On-demand service 4am to midnight (Mon-Sat) and 7am to 10pm (Sun) for anyone travelling to or from the Moray area. Service integrated with commercial routes. Booking to service time as close to real-time as possible. Boundary is Moray area plus some key destinations outside the area (airports, hospitals, tourist destinations etc.)	On-demand service 4am to midnight (Mon-Sat) and 7am to 10pm (Sun) for anyone travelling to or from the Moray area. Service integrated with commercial routes. Booking to service time as close to real-time as possible. Boundary is Moray area plus some key destinations outside the area (airports, hospitals, tourist destinations etc.)
Service Solution	Real-time booking technology, including scheduling, monitoring, customer interface etc. Brand marketing and promotion. Number and types of buses full low-emission (inc. existing) fleet. Charging points. Depot / bus storage. No. of drivers. Potential for dedicated tourism offering (e.g. whisky tours), journey to work arrangements with employers, delivery service. Max wait 1 hr	Real-time booking technology, including scheduling, monitoring, customer interface etc. Brand marketing and promotion. Number and types of buses low-emission only new fleet. Charging points. Depot / bus storage. No. of drivers. Potential for dedicated journey to work arrangements with employers. Max wait 3 hr	Real-time booking technology, including scheduling, monitoring, customer interface etc. Brand marketing and promotion. Number and types of buses full low-emission (inc. existing) fleet. Charging points. Depot / bus storage. No. of drivers. Potential for dedicated tourism offering (e.g. whisky tours), journey to work arrangements with employers, delivery service. Max wait 1 hr	Real-time booking technology, including scheduling, monitoring, customer interface etc. Brand marketing and promotion. Number and types of buses full low-emission (inc. existing) fleet. Charging points. Depot / bus storage. No. of drivers. Potential for dedicated tourism offering (e.g. whisky tours), journey to work arrangements with employers, delivery service. Max wait 1 hr	Real-time booking technology, including scheduling, monitoring, customer interface etc. Brand marketing and promotion. Number and types of buses full low-emission (inc. existing) fleet. Charging points. Depot / bus storage. No. of drivers. Potential for dedicated tourism offering (e.g. whisky tours), journey to work arrangements with employers, delivery service. Max wait 1 hr

Bus Revolution element	Option Development Scenario 1 – Preferred	Option Development Scenario 2 – Less ambitious	Option Development Scenario 3 – Less ambitious	Option Development Scenario 4 – More ambitious	Option Development Scenario 5– More ambitious
Service Delivery	Run internally under S19 or S22 permit legislation or direct operations powers/operator license regime under Transport (Scotland) Act. Option to link in with local CT providers. Establish Bus Partnership	Run internally under S19 or S22 permit legislation or direct operations powers/operator license regime under Transport (Scotland) Act. Option to link in with local CT providers. Establish Bus Partnership	Run internally under S19 or S22 permit legislation or direct operations powers/operator license regime under Transport (Scotland) Act. Option to link in with local CT providers. Establish Bus Partnership	Establish Moray-wide franchise – incorporating all commercial bus services to create single integrated transport service. Can either be tendered as a contract or run as an ALEO	Run internally under S19 or S22 permit legislation or direct operations powers/operator license regime under Transport (Scotland) Act. Option to link in with local CT providers. Establish Bus Partnership
Implementation	Introduce technology and 5 additional electric vehicles (one per operational zone) in year one. Introduce further vehicles on phased integrated with fleet renewal programme	Introduce technology and 5 additional electric vehicles (one per operational zone) in year one. Introduce further vehicles on phased integrated with fleet renewal programme	Introduce technology and 5 additional electric vehicles (one per operational zone) in year one. Introduce further vehicles on phased integrated with fleet renewal programme	Introduce technology and 5 additional electric vehicles (one per operational zone) in year one. Introduce further vehicles on phased integrated with fleet renewal programme	Introduce technology and 5 additional electric vehicles (one per operational zone) in year one. Introduce further vehicles on phased integrated with fleet renewal programme
Funding	MGD capital funding for vehicle and technology purchases. Seek contract commitment from employers for workplace transport and / or tourism offering to provide additional Opex (revenue) income for operating costs	MGD capital funding for vehicle and technology purchases. Operate as many vehicles as revenue from services will allow (revenue covering operating costs - fuel, maintenance and staff)	MGD capital funding for vehicle and technology purchases. Operate as many vehicles as revenue from services will allow (revenue covering operating costs - fuel, maintenance and staff)	MGD capital funding for vehicle and technology purchases. Seek contract commitment from employers for workplace transport and / or tourism offering to provide additional Opex (revenue) income for operating costs	Set out socio-economic case for operating expenditure (revenue) to be government subsidised with affordable fare structure to drive mode shift, use capital funding for vehicle and technologies.
Estimated Cost	**£3,240,000**	**£2,765,000**	**£3,240,000**	**£3,240,000**	**£3,240,000**

Economic Appraisal

3.1.1 Introduction

This section provides a detailed overview of the main costs and benefits associated with each of the selected option development scenarios, and the approach taken to determining the subsequent preferred option from within this framework of possible solutions for *Bus Revolution*.

3.1.2 Outline arrangements for benefits realisation

The strategy, framework and plan for dealing with the management and delivery of benefits is detailed as part of the overall programme governance, and can be provided separately.

A programme benefits register is maintained as part of the whole programme governance, and details the contributing benefits of all projects in the context of the Inclusive Growth categories of Productivity, Participation, Population, Place and People.

3.1.3 Estimated Benefits

The benefits associated with each option were identified during a workshop held on 28th May 2020 with the stakeholders of the project. The participants at this event were: Nicola Moss (Moray Council), Nicholas Sobey (Highlands and Islands Enterprise), Donald MacRae (Moray Council), Jill Armitt (Walkers Shortbread Ltd), Ranald Robertson (HITRANS), Mark Atherton (Moray Council), Sarah Medcraf (Moray Chamber of Commerce).

From the workshop the main benefits associated with the *Bus Revolution* that were identified and considered comprised:

- Unemployed people able to take up employment opportunities – reduction in social security payments; increase in taxation. The costs to the taxpayer of benefits paid to individual and high personal costs in areas like physical and mental health, higher crime rates and loss of skills. Bus Revolution will reduce unemployment by reducing transport barriers to work.
- Employed people able to take up higher skill level job opportunities – increase in taxation. Relates to those with skill levels higher than those required for the jobs they are employed in, thus representing an underutilisation of potential output from underemployed individuals, and therefore national GDP will not be maximised representing an opportunity cost. The same barriers exist with transport as a constraint for underemployed people as they do for unemployed; and women are disproportionately affected by underemployment.
- People able to travel to more and wider range of activities – increase in health and wellbeing; reduction in social isolation – reduction in NHS costs and sickness absence etc. through Bus Revolution as people have higher levels of wellness generally, and tax payer costs therefore decrease as more people are able to take up more opportunities.

- Mode shift from private car to bus travel – reduction in the environmental impacts. Environmental benefits from reduction in the number of fossil fuel journeys made through enabling more efficient commuting via public transport; people are not forced into car ownership, or second car ownership.
- Ticket sales from those travelling via Bus Revolution as a financial benefit associated with the Project.
- Creation of jobs – new posts directly associated with the project, at this stage of the project it is estimated that the project will create 21 FTE roles for drivers, based on the assumptions set out in the financial case.

3.1.4 Description, sources and assumptions

The benefits identified fell into the following main categories:

- Cash releasing benefits
- Non-cash releasing benefits
- Quantifiable benefits
- Non-quantifiable benefits

In each case, the sources and assumptions underlying their use are explained. A more detailed explanation for each benefit line is attached to the economic appraisals in Appendix 4.

The benefits include:

- 86 people[17] are enabled to take up employment who were previously unable to do so due to accessibility barriers. Anticipated that these will comprise a high proportion of younger people who are less likely to have a car / van available to them.
- 62 women[18] are able to take up higher paid employment through the use of the on-demand bus services, enabling them to take up employment at a comparable level to their male counterparts.
- Reduced emissions associated with an increased use of public transport and reduced environmental impact, with reduced emissions resulting in savings of 81,000 kg[19] of CO2 savings.

These benefits have been calculated based on source data and assumptions defined in Appendix 4, together with a full comprehension of the way in which *Bus Revolution* will address identified issues and barriers, and including through an understanding of how the

[17] See Appendix 4 for detailed break-down referencing Department for Work and Pensions Benefit Statistics, via Stat-Xplore data on the number of people unemployed and claiming universal credit

[18] See Appendix 4 for calculation of number of women underemployed in Moray and 5% of these being able to take up work comparable to their male counterparts

[19] Using UK Government carbon conversion factors and Green Book methodology for pricing carbon the carbon saving as illustrated in Appendix 4.

present demand responsive service operates, and validated further in discussion with the project's key stakeholders.

Carbon Assessment: A further carbon assessment has been carried out subsequent to the economic appraisal. The carbon emissions impact categories are Category 3 for Control and Category A for Influence. The carbon statement is Appendix 9 of this document. Incorporating the central monetised carbon value with the economic case would reduce the preferred option's NPV of costs by £4,847. This would result in a nominal increase to the BCR of 0.002. The BCR of the preferred option would therefore remain greater than or equal to the BCR of the other options considered.

3.1.5 Estimated Costs

Costs were estimated as follows:

Table 14: Estimated Costs

Cost item	Cost	Comments
Booking App and scheduling / tracking software	**£50k**	Application subscription has been procured via HITRANS. Capital Budget is for configuration of the App to Moray area and fares.
Vehicles – Initial vehicles (Year 0):		
3 x small (Mellor)	£170k	
1 x very small short range	£33k	
1 x very small long range	£60k	
1 x spare	£170k	
Subtotal	**£773k**	
Fit out costs	£30k	Estimated at £5k per vehicle for WiFi, charging points, branding etc.
Electric charging points	£175k	£35k each from current price
Project Manager	£60k pa	Including on costs

All costs were subject to 'optimism bias' in terms of the cost benefit analysis as detailed in Appendix 4.

3.1.6 Economic Appraisal

The economic appraisal was undertaken following the brief prepared at Appendix 3.

The results of the economic impact assessment undertaken are attached at Appendix 4. It should be noted that net impacts include adjustments for deadweight, displacement and leakage, and have been made at each geographical level.

The following table summarises the result of the assessment:

Table 15: Summary of Economic Appraisal

Appraisal Summary Table	Option 1 – Preferred option	Option 2/3 – Less-ambitious versions of the preferred option	Option 4/5 – More-ambitious versions of the preferred option	Option 6 – Business as usual (Do nothing)
Net Present Social Value	£75,626,812	Option 2 = £26,342,450 Option 3 = £75,626,812	£75,626,812	£0
Public sector cost	£14,749,810	Option 2 = £4,731,688 Option 3 = £ £14,749,810	£14,749,810	£0
Appropriate BCR	5.13:1	4.81:1 Option 2 5.13:1 Option 3	5.13:1	0
Significant unmonetizable costs/benefits	Health benefits from removing underemployment; women more likely to experience underemployment. *Bus Revolution* will enable all people to make an increased contribution to the economy. Removing underemployment will lift people and households out of poverty, which in turn will enable them to have improved physical and mental health and wellbeing, and will reduce costs to the NHS and other services through a reduced need to access services – those living in poverty are far more likely to need to access such services; and indeed people living in poverty have worse health outcomes[20].			N/A
Significant unquantifiable factors	N/A	N/A	N/A	N/A
Risk costs by type and residual optimism bias	Using an optimism bias of 51% if benefits were that amount less than forecast the cost benefit ratio would be 2.51			N/A
Switching values (for the preferred option only)				81% reduction in benefits.
Time horizon and reason	10 years – Life of Moray Growth deal funding at present.			

The costs provided by the project are for the preferred option and they have been assessed to have a cost benefit ratio of 5.13:1. As shown in the table above, it is important to note that options 4, 5 and 3 all have the same cost benefit ratio also, which is because the options, in terms of their level of *ambition* differ only in terms of:

[20] Child Poverty in Scotland: health impacts and health inequalities, NHS Health Scotland, 2018: Child Poverty in Scotland: health impact and health inequalities (healthscotland.scot)

- Service scope – option 2 has lesser operating hours, all other options operate on-demand service 4am to midnight (Mon-Sat) and 7am to 10pm (Sun) for anyone travelling to or from the Moray area.
- Service solution – option 2 has a maximum wait time of 3 hours whereas all other options have a maximum wait time of just 1 hour.
- Service delivery method – option 4 sees the establishment of a Moray-wide franchise, while other options run internally under S19 or S22 permit legislation or direct operations powers/operator license regime under Transport (Scotland) Act.
- Service funding – option 5 is funded on the basis of setting out the socio-economic case for operating expenditure to be Government subsidised with affordable fares to drive mode shift, which compares to the other scenarios with Moray Growth Deal capital funding.

Using an optimism bias of 51% the cost benefit ratio of these options would be 2.51:1.

The switching value for the preferred option to option 2 is difficult to predict accurately as any loss in benefits for the preferred option would likely be reflected in option 2 also. However, if benefits were to drop by 7% the preferred option would have the same cost benefit ratio as option 2, if its benefits remained constant.

The Preferred Option

The project board met on 5th October 2020 to consider the detailed output of the appraisal and following discussion the board approved Option 1 as the preferred option to take forward for detailed planning in the Commercial, Financial, and Management cases of the Outline Business case.

The preferred option was considered in full at this stage against the Investment Opportunities or Transport Planning Objectives, as well as the wider policy context that has been described in Section 2, the assessment of which evidenced for the project board that the preferred option continued to present the best fit to address the identified issues and to deliver against the recognised opportunities.

This option is detailed in full under Section 4.1 in The Commercial Case.

3.1.7 Key Assumptions

These are:

1 Life of the Bus Revolution is 20 years this being a period of time in order for the change in provision to take hold across the area, for people to change their behaviours and to achieve a positive return in respect to the benefits that have been set out.

2 Optimism bias applied to costs up to 51% - many costs are unstable at the present time due to global factors, both in manufacturing and engineering industries, with increases in steel prices for example, and as a consequence of the Covid-19 pandemic. Hence, at this stage a high level of optimism bias has been selected, which should be able to be retracted as the project progresses.

3 The appraiser has used own judgement from understanding of the area and community for increases and reductions for all investment objectives and economic appraisal evaluation criteria in the absence of information from the

project, this has been validated through the workshop sessions with stakeholder input.

4 Baselines have relied on publicly available information and calculations from the appraiser.

5 COVID-19 has at this stage not been brought into the appraisal and it should be assumed that by the time the project commences the economy will have returned to pre COVID conditions. The data from COVID impacts is not yet of the quality to apprise based on those impacts regardless. Furthermore, as significant parts of the Moray economy comprise manufacturing and other such industries that can not be undertaken remotely / worked from home, then COVID has had a lesser impact in terms of changes in travel patterns compared to other areas more reliant on the service industries. It is expected that demand for bus services will therefore return fairly expediently in parallel with the easing of COVID restrictions across the area.

4. The Commercial Case

Demand Pipeline

Following on from initial comments received during the initial community engagement exercises during late 2017, and workshops held with students at Moray College to identify issues influencing their decision to leave the area for further education or jobs, an online survey was launched in the autumn of 2020 to seek views of the Moray population regarding their attitudes to public transport and assess their views on the *Bus Revolution* itself.

It should be noted that the 316 survey respondents covered a wide range of age groups. The survey did however comprise 19% of respondents in the 16-29-year-old age bracket, a key target group for *Bus Revolution.* The 16-29-year-old age bracket currently make-up around 15% of the population in Moray. This is seen as a good indication of the level of interest in public transport and particularly environmental issues for this age group.

Highlights from the survey results are:

Modes of transport used regularly

- 67% car (driver);
- 35% car (passenger); and
- 27% bus.

Reasons for not using local bus services currently

- 58% Buses are not frequent enough/do not run when I need them;
- 49% It's easier/more convenient by car;
- 37% It's quicker by car; and
- 33% Bus fares are too high.

Factors that would encourage you to use a local on-demand bus service (top 4 rated)

1. Reasonable journey times;
2. Comfort/cleanliness;
3. Safety; and
4. Guaranteed response times.

40% of respondents who currently do not use local bus services indicated that they would use a service as described in the proposal on a regular basis and a further 29% said that they would use the service occasionally.

Comments received included:

“The current bus times mean I can’t get a bus home until 5pm every evening. Having a more frequent service would make the world of difference to me and my family.”

"Bus Services are desperately required in both rural and urban areas, nothing is easy reach for the elderly or mobility impaired. If you live out in the country - forget it - there are no buses and those that exist are infrequent."

"If the buses were more affordable and the services covered better where I live I would use them all the time"

Although this was a small and targeted survey, this supplements evidence from a variety of other sources to support the latent demand for *Bus Revolution.* For example, pre Covid visitor numbers to Moray were increasing, by as much as 17.3% between 2011 and 2017. There is growing interest in the 'green tourism' area, and the *Bus Revolution* will offer the potential to link up many sites of interest across Moray for visitors as well as locals.

Gross weekly pay in Moray is 10% lower than the Scottish average, suggesting levels of poverty across the area, and inevitably households that are 'forced' into car ownership who would prosper more favourably with an affordable public transport offer as would be presented through the *Bus Revolution.* There are low levels of present travel to work by local bus service, sitting at around five per cent of travel to work journeys compared to 10% for Scotland as a whole, representing significant growth potential, which combined with the socio-economic make-up of households across the area, suggests a positive outlook for the *Bus Revolution.* Furthermore, from the Scottish Household Survey, 81% of Moray respondents had not used a local bus service in the past month, compared to just 61.5% in Scotland as a whole, further suggesting the potential for local bus service growth with the right availability and accessibility of services to meet the communities' needs.

Levels of dissatisfaction with present local bus services in Moray is relatively high, with 17% and 11% of respondents fairly or very dissatisfied with services respectively. This equates to around 16,000 working age adults across the area that are dissatisfied with services, which it is assumed is heavily weighted towards that do not have availability of services in their area, to the locations and at the times that they need to travel. It is therefore concluded, that again there is much potential for the *Bus Revolution* to positively address these poor measures in respect to local bus services and translate these into notable increases in local bus service carryings, and in turn more people able to take up employment opportunities, challenging levels of underemployment and tackling the climate challenge.

Furthermore, passenger carryings on the existing services at c50k p.a. suggest that the targeted uplift in journey numbers are achievable over the life of the project

Required Services

Table 16 sets out an overview of the Bus Revolution foundations in respect to the scope of services, the service solution, service delivery, implementation and funding arrangements. Table 16: Bus Revolution Service Elements

Bus Revolution element	
Scope	

Bus Revolution element	
Service Solution	
Service Delivery	
Implementation	
Funding	

The approach to procurement will be:

On 30 June 2021 Moray Council approved capital expenditure in anticipation of approval of the business case for Bus Revolution, in order to expedite investment in the early delivery elements of this project. Procurement of vehicles, charging infrastructure and app technology is therefore underway. All procurement has been carried out in line with the overall procurement strategy and in line with Moray Council's procurement regulations. The 6 vehicles and associated charging infrastructure have been procured via ScotExel framework contract. The app is being called off from a shared framework contract procured under the open procedure by HITRANS as Regional Transport Partnership.

Future procurements are expected to follow the open procedure under which all those interested may respond to the advertisement in the OJEU by tendering for each contract, this includes use of framework contracts procured through open competition.

The current Dial M service is resourced from the authority's vehicles for school and social care transport, which provides an efficient use of resources but means that the service provision is limited to weekdays in between the school and social care transport times. The service operates utilising Section 19 and Section 22 permits for the Demand Responsive and timetabled elements of the service operation.

The approach to service delivery of the Bus Revolution will consider delivery options under the Transport (Scotland) Act 2019, specifically there is an anticipation of using the powers under the Transport (Scotland) Act once these have been developed and enacted (anticipated to be summer 2022). Overall, the operational strategy will be to do the right thing in the context of the service as it develops, to be responsive to demand and to be dynamic through the life of the Bus Revolution changing as opportunities present.

Potential for Risk Transfer

The general principle is that risks should be passed to ‘the party best able to manage them’, subject to value for money.

This section provides an assessment of how the associated risks might be apportioned for each of the elements.

Technology

Risk Category	Potential allocation		
	Public: Moray Council	Private: Software supplier	Shared
1. Design risk			✓
2. Construction and development risk			✓
3. Transition and implementation risk			✓
4. Availability and performance risk			✓
5. Operating risk	✓		
6. Variability of revenue risks	✓		
7. Termination risks			✓
8. Technology and obsolescence risks			✓
9. Control risks	✓		
10. Residual value risks	✓		
11. Financing risks	✓		
12. Legislative risks	✓		
13. Other project risks	✓		

Vehicles

Risk Category	Potential allocation		
	Public: Moray Council	Private: Vehicle supplier	Shared
1. Design risk		✓	
2. Construction and development risk		✓	
3. Transition and implementation risk		✓	
4. Availability and performance risk		✓	
5. Operating risk			✓
6. Variability of revenue risks		✓	
7. Termination risks		✓	
8. Technology and obsolescence risks			✓
9. Control risks			✓
10. Residual value risks	✓		

Risk Category	Potential allocation		
	Public: Moray Council	Private: Vehicle supplier	Shared
11. Financing risks	✓		
12. Legislative risks	✓		
13. Other project risks	✓		

Proposed Charging Mechanisms

Payment will be made on the delivery of agreed outputs for all contracts.

These payments may be staggered against the delivery of key stage outputs/milestones within the overall implementation plan for each facility.

Proposed Contract Lengths

The following contract lengths will be considered:

Technology:

- 18 months to 3 years to ensure technology remains current.

Vehicle:

- One-off batch procurement.

Regular review will determine whether contracts should be extended (for a fixed term) the options for which will be set out in the initial tender documentation or whether to retender following the initial period of 18 months to 3 years. Decisions will be taken so as to ensure the optimum quality of service / technology supplied whilst critically achieving best value.

Proposed Key Contractual Clauses

These are as follows:

- the duration of the contract and any break clauses;
- the service provider's and procuring authority's respective roles and responsibilities;
- the payment – or charging – mechanism, including prices, tariffs, incentive payments;
- detailed community benefit commitments;
- change control (for new requirements and updated services);
- the organisation's remedies in the event of failure on the part of the service provider to deliver the contracted services – on time, to specification and price;
- the treatment of intellectual property rights;
- compliance with appropriate regulations;
- advancing equality in the contract rather than simply being compliant. For example in terms of apprenticeships or traineeships which encourage greater diversity in the manufacturing of the fleet;

- the operational and contract administration elements of the terms and conditions of service;
- arrangements for the resolution of disputes and disagreements between the parties;
- fair work practices in procurement – to apply where relevant and proportionate to Fair Work First criteria as set out in relevant guidance (https://www.gov.scot/publications/fair-work-first-guidance-support-implementation/)[21]; and
- the agreed allocation of risk.

All contracts to take cognisance of the requirements of the Equality Act 2010 (Specific Duties) (Scotland) Regulations 2012 with specific equality outcomes with regard to the gender pay gap / equal pay / occupational segregation.

A review of the each contract should be carried out post award – normally this would be around six months from contract start date. This review will consider:

- Relationship with supplier;
- Order process;
- Payment process; and
- Standard of initial contract delivery.

Personnel implications

It is anticipated that the TUPE – Transfer of Undertakings (Protection of Employment) Regulations 1981 will not apply to the investments outlined above.

Procurement strategy

On 30 June 2021 Moray Council approved capital expenditure in anticipation of approval of the business case for Bus Revolution, in order to expedite investment in the early delivery elements of this project. Procurement of vehicles, charging infrastructure and app technology is therefore underway. All procurement has been carried out in line with the overall procurement strategy and in line with Moray Council's procurement regulations. The 6 vehicles and associated charging infrastructure have been procured via ScotExel framework contract. The app is being called off from a shared framework contract procured under the open procedure by HITRANS as Regional Transport Partnership.

Future procurements are expected to follow the open procedure under which all those interested may respond to the advertisement in the OJEU by tendering for each contract, this includes use of framework contracts procured through open competition.

[21] Fair work practices in procurement - including avoidance of forms of flexible working where the burden of risk falls disproportionately on workers, including exploitative zero hours contracts, which are therefore not Fair Work.to apply where relevant and proportionate Fair Work First criteria as set out in relevant guidance (https://www.gov.scot/publications/fair-work-first-guidance-support-implementation/)

5. The Financial Case

Impact on the organisation's income and expenditure account

The total capital funding requirement for the *Bus Revolution* project is £4 million over 10 financial years, with a revenue cost of £8m, funded by revenue income.

The anticipated financial profile for the project over its intended life span is set out in the following table:

	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	Total
						£	£	£	£	£	£	£
Booking App and scheduling/ tracking software												
Vehicles												
Fit out costs / on board equipment												
Electric charging points												
Depot facilities												
Brand Development												
Contingency												
Total												
Funded by:												
Additional												
Scottish Government												
Total												
Revenue Expenditure												
App licensing												
Staff costs (Drivers)												
Fuel												
Maintenance												
Marketing												
Project Manager												
Total												
Funded by:												
Additional												
Income from fares												
Network Support Grant												
Employer contracts												
Other - HiTrans (App Development)												
Moray Council												
Total												
Revenue Balance												
Cummulative												

All costs are exclusive of VAT within the financial profile.

5.1.1 Assumptions

Capital Expenditure

Vehicle purchase costs - **REDACTED**

Charging Infrastructure – **REDACTED**

App development – **REDACTED**

Fit Out – **REDACTED**

Revenue Expenditure

App Licensing

REDACTED

Staff Costs - **REDACTED**

Fuel - **REDACTED**

Maintenance - **REDACTED**

Marketing - **REDACTED**

Revenue Income

Fares Income - **REDACTED**

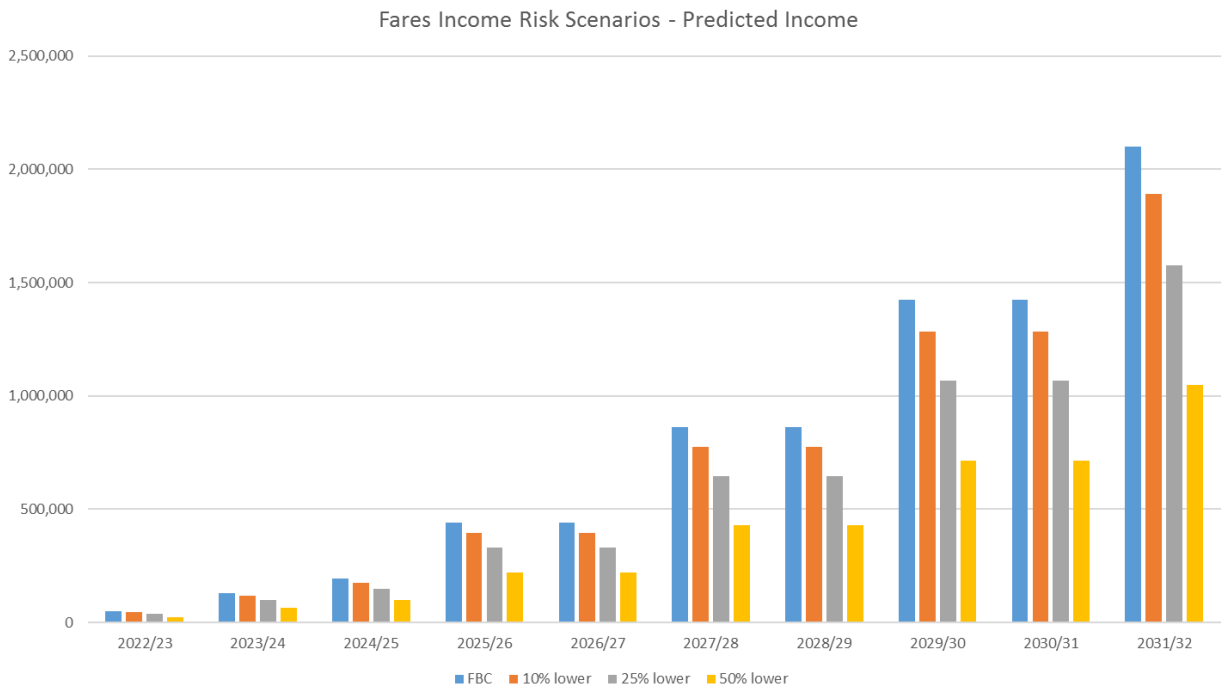
Passenger number / income assumptions: **REDACTED**

Network Support Grant- **REDACTED**

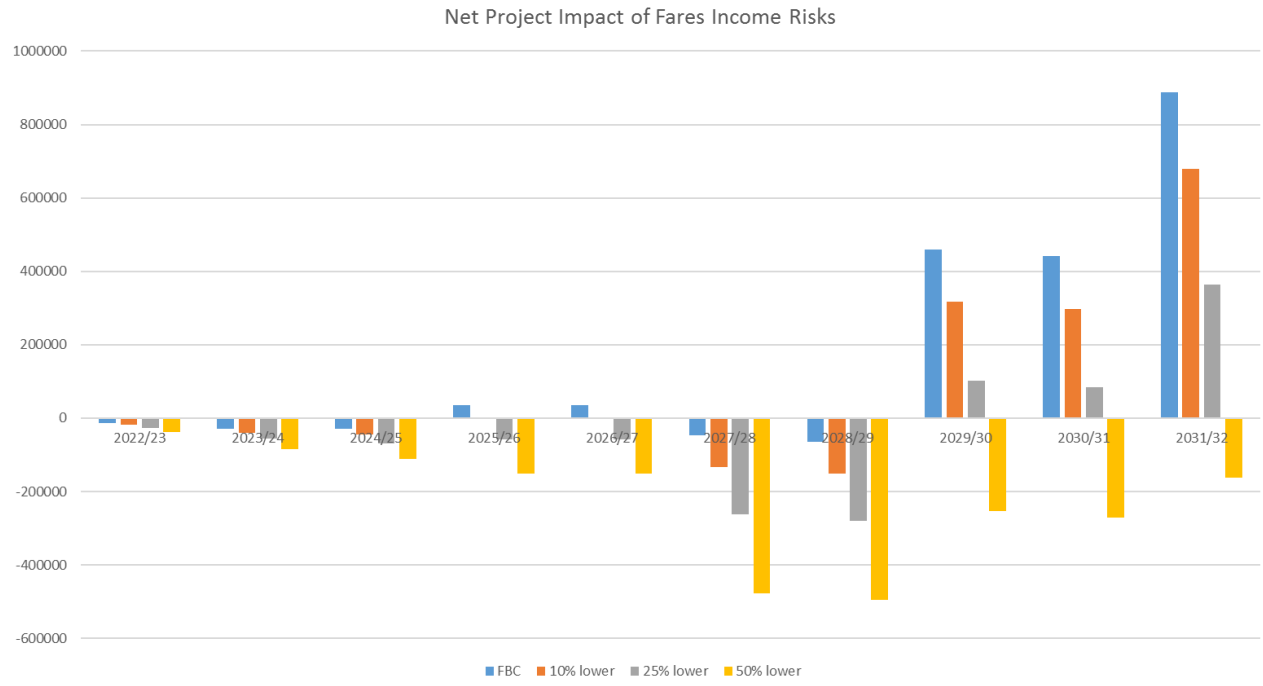
Employer Contracts - **REDACTED**

5.1.2 Risks & Sensitivity Assessment

REDACTED



The chart below sets out the net revenue impact on the project of the different levels of income suppression:



Capital spend as set out above has been cleared indicatively by Section 95 officer – the Accountable (Proper) Officer for the administration and governance of the financial affairs of the Council, and a member of the Programme Board.

There are no TUPE aspects and therefore costs associated with the *Bus Revolution.*

Overall affordability

The table in section 5.1 above demonstrates the financial sustainability of the proposal, although there are minor shortfalls in revenue income projected in the early years of the project. Given the known challenges of operating bus services commercially, especially in rural areas, this is not unexpected. This sets a modest level of revenue support requirement. In line with other policy conversations around the revenue burden of public transport, further funding options are still being explored but as a last resort budget would be found within the Council's budget.

At present the project has wide-ranging support from Moray Economic Partnership which includes: Moray Council, Highlands and Islands Enterprise, University of the Highlands and Islands, Skills Development Scotland, Scottish Council for Development & Industry, Moray Business Forum, Moray Chamber of Commerce, Community Planning Partnership, Moray Federation of Small Businesses.

Discussions are ongoing with some of the larger employers in the area regarding workplace transport partnerships and potential for season ticket employee benefits.

The financial profile carries inherent risks, which have been captured in the risk register in Section 2.9, which will be kept regularly under review. This includes a risk that the service does not generate the passenger carryings that have been projected, and therefore ticket sales are lesser, and which would present a hole in the income from fares and concessionary reimbursement. This risk will be mitigated through careful engagement with

the community in the detailed design and delivery of the services, together with a robust and comprehensive approach to marketing the *Bus Revolution.* Regular review, monitoring and evaluation will identify any changes that are required on an ongoing basis to meet and exceed projections. The people-centred detailed design is a vital tool in supporting a Community Wealth Building approach for Moray in terms of economic development.

The cost of battery replacement within the vehicle’s operating life has a cost risk, however, the current working assumption for maintenance costs has been based on manufacturer statements of a guaranteed 8 year battery life, indicating that the cost risk of battery replacement would fall late in average vehicle working life within the local authority, and at a point where the financial case indicates surplus income to offset either battery or vehicle replacement.

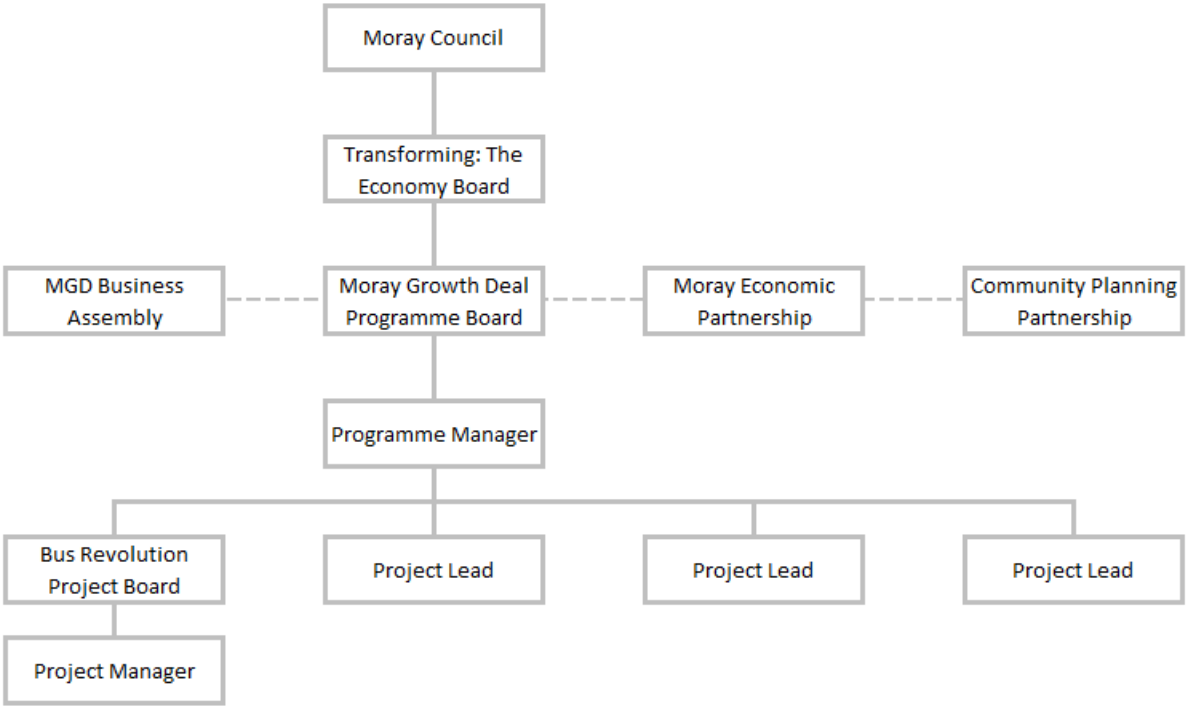
The indication is that this project will ultimately become self-funding and therefore generate a sufficient surplus to re-invest in recurring capital costs such as vehicle replacement.

6. The Management Case

Programme management arrangements

The project is an integral part of the Moray Growth Deal programme, which comprises a portfolio of projects for the delivery of economic growth to the Moray region.

The programme governance arrangements are as follows:

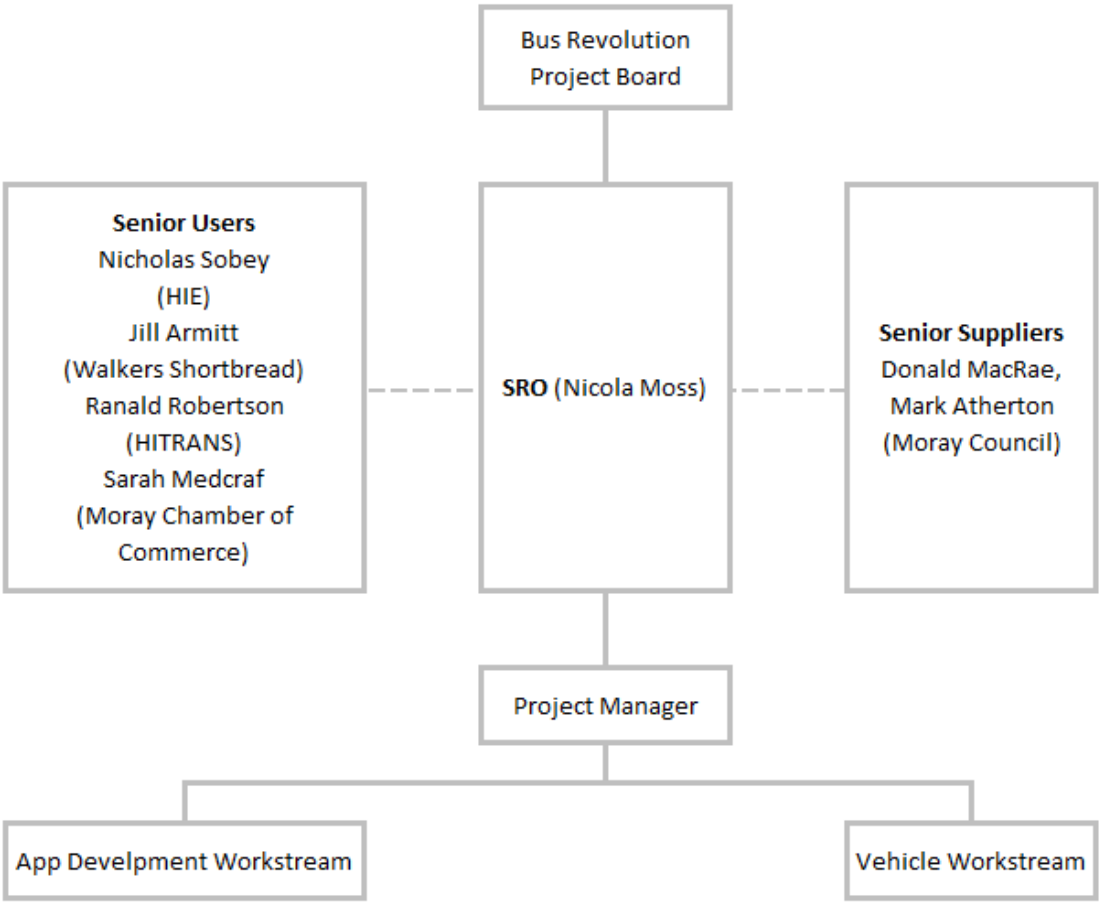


Project management arrangements

The project will be managed in accordance with PRINCE 2 methodology.

6.1.1 Project reporting structure

The reporting organisation and the reporting structure for the project are as follows:



6.1.2 Project plan

The project plan is summarised below:

% Complete	Task Name	Duration	Start	Finish
8%	Bus Revolution	2604 days?	Tue 04/05/21	Wed 25/06/31
0%	Definition Stage (FBC completion & approval)	172 days?	Mon 22/11/21	Mon 01/08/22
0%	FBC	172 days?	Mon 22/11/21	Mon 01/08/22
0%	Definition Stage Complete	0 days	Mon 01/08/22	Mon 01/08/22
0%	Initiation & Planning (PID inc Proj Plan)	1 day?	Tue 02/08/22	Tue 02/08/22
0%	PID	1 day?	Tue 02/08/22	Tue 02/08/22
9%	Delivery	2541 days?	Tue 04/05/21	Sun 30/03/31
13%	Brand & Marketing	311 days?	Thu 02/12/21	Fri 03/03/23
33%	App/Software	315 days?	Tue 04/05/21	Fri 29/07/22
38%	Engagement	131 days?	Thu 18/11/21	Wed 01/06/22
11%	Phase 1	2498 days?	Fri 02/07/21	Sun 30/03/31
19%	Fleet	2390 days?	Wed 01/12/21	Fri 28/03/31
14%	Vehicles	2353 days?	Tue 01/02/22	Fri 28/03/31
54%	Maintenance	81 days?	Wed 01/12/21	Fri 01/04/22
10%	Infrastructure	2498 days?	Fri 02/07/21	Sun 30/03/31
48%	Vehicle Stabling	100 days	Wed 01/12/21	Fri 29/04/22
9%	Charging Points	2498 days?	Fri 02/07/21	Sun 30/03/31
4%	Staff	2372 days?	Wed 05/01/22	Sun 30/03/31
46%	Management and support	72 days?	Wed 05/01/22	Thu 14/04/22
0%	Drivers	2372 days?	Wed 05/01/22	Sun 30/03/31
0%	Phase 2	2121 days?	Wed 04/01/23	Sun 30/03/31
0%	Phase 3	1617 days?	Fri 03/01/25	Sun 30/03/31
0%	Phase 4	1106 days?	Fri 01/01/27	Sun 30/03/31
0%	Phase 5	845 days?	Mon 03/01/28	Sun 30/03/31
0%	Project Closure	7 days?	Mon 31/03/31	Tue 08/04/31
0%	Post Project Review (dates tbc at project closure)	16 days?	Wed 04/06/31	Wed 25/06/31

Use of special advisers

Special advisers have been used in a timely and cost-effective manner in accordance with the Treasury Guidance.

Specialist Area	Adviser
Financial	Paul Connor, Principal Accountant, Financial Services
Technical	Peter Grant, Head of Bus Policy, Transport Scotland Ranald Robertson, HITRANS
Procurement and legal	Diane Beattie, Payments Manager Aileen Scott, Legal Services Manager
Business assurance	Jill Armitt, Head of Human Resources, Walkers Shortbread Ltd
Other	Don Toonen, Equal Opportunities Officer

Outline arrangements for risks, issues and change management

The strategy, framework and plan for dealing with change and associated contract management is contained in the council's Project Governance Policy which stipulates standard processes and governance requirements. It is based on the Prince2 Project management methodology, aligned with the Scottish Government Construction Procurement Manual and the Office of Government Commerce (OGC) Gateway

framework. Projects involving procurement will also follow the standards set out in TMC Financial Regulations (Procurement Procedures). It builds on existing processes and guidance in use within the Council and intends to re-use existing controls where they have been shown to be effective. A copy of the document can be provided.

Arrangements for risk management

The strategy, framework and plan for dealing with the management of risk is detailed at Section 0 and Section 0 above.

Monitoring and Evaluation

What will the Bus Revolution project measure?

Strategic governance of benefits realisation

During February 2023 a framework for the Moray Growth Deal's (MGD) Benefits Realisation and Monitoring Plan will be presented for approval by the MGD Board. The intention is that this sets out a process for developing targets each project is required to achieve, how different targets from across multiple projects will combine to achieve specific programme level outcomes and structure benefits activity by inclusive growth indicators rather than listing them on a project by project basis.

This plan will set out that:

- As each project secures approval for their Full Business Case during 2023 into early 2024, the Monitoring Plan will be updated to set out the specific targets to be achieved, by when, by whom, the data sets used to define the baseline, the frequency monitoring will take place over and what the monitoring will entail.
- The Governance Board will focus on benefits bi-annually – May and November. The intention is that the November session is used to feed information into each future iteration of the annual report.
-

It is, therefore, expected that Bus Revolution, once it secures approval for its Full Business Case, will submit a paper to the MGD Board setting out a populated Monitoring Plan table for approval.
That said, it is acknowledged that this FBC provides detail on how the project intends to measure performance against the three investment objectives:

- Increase public transport passenger journeys by 30,000 per annum by 2030
- To reduce the environmental impact of transport in the area by 30t CO2e p.a. by 2030.
- 20% reduction in number of people facing transport barriers to employment, education or recreation by 2030
-

Analysis of investment objective 1: Increase public transport passenger journeys by 30,000 per annum by 2030

Why choose this investment objective?

This target was chosen as the core purpose of the project is to expand demand responsive transport as a means to provide comprehensive public transport functionality over a highly dispersed rural population. As can be seen from the data above, prior to the pandemic, the demand responsive provision of Dial M was achieving c.30,000 journeys per annum. At the time of setting the objectives, the project board considered that an effective doubling of

journey numbers through the delivery of the project would demonstrate a successful implementation and provision of solution to public transport challenges in Moray.

What will be measured?

Once the new, rebranded m.connect services are established, passenger numbers will be measured as follows:

- Including all Passenger journeys on bus services operated by the Moray Council
- Excluding passenger journeys on bus services operated by other operators within the Moray Council area
- Excluding passenger journeys on Moray Council operated bus services that are not open to the public such as home-to-school transport or health and social care transport provision
- One public transport passenger journey will be counted as a single journey by a single passenger
    - Return journeys count as a second journey
    - A single journey starts and ends when the passenger joins and exist a bus, therefore a multi-stage journey across more than one service will count as more than one journey because TMC do not currently have a way to book or track multi-stage journey
- All passengers count equally including passengers aged 0-5, concessions of any kinds and passenger travelling on any discounted multi-journey ticket type or promotional offer
- Tourists and visitors will not be counted separately and under the current systems it is not be possible to identify and report on the number of journeys booked by non-residents separately
- If at any stage, the Moray Council allow the bus services such as the Demand Responsive Transport to include out-of-area destinations such as the airport or a place of employment outside of the boundary then these journeys would be included in the total number of public transport passenger journeys.

When will it be measured?

Using existing systems the Moray Council currently collect and report on public transport passenger journeys, as defined above, on a monthly and annual basis. This data is collated by service and can be summarised to provide a total number of passengers using DRT in Moray and a total number of passengers using scheduled services in Moray by month and by year.

What is the baseline against which the investment objective will be measured?

It is expected that the Bus Revolution Project Board will make a determination of the evidential baseline to be used as the project is developing it's monitoring plan post Full Business Case approval. The Board will be asked to choose one of 2 baselines:

- Option 1: Use Passenger numbers from 2019 as the baseline for additionally Baseline 48,441 equivalent to a monthly average of 4,037. Target for 2030: 78,441 equivalent to a monthly average of 6537 passengers and representing 92% growth from the current 2022 estimate.
- Option 2: Use passenger numbers from 2022 as the baseline for additionally. The baseline would be based on actual passenger data. With 7 months of data in 2022 to date we have a monthly average of 3,397 which equates to an annual total of

40,762. Target for 2030: 70,762 equivalent to a monthly average of 5896 passengers and representing 73% growth on top of the baseline.

Analysis of investment objective 2: To reduce the environmental impact of transport in the area by 30t CO2e p.a. by 2030.

Why choose this investment objective?
Achieving environment improvements and carbon reductions through the delivery of this project directly relates to 2 key drivers:

- Scottish Government environmental objective: We value, enjoy, protect and enhance our environment
- Moray Council target of achieving carbon neutrality by 2030 requiring projects to be operationally net zero by this date

Bus Revolution will seek to drive carbon reduction directly (emissions from the Council's delivery of public transport services) and indirectly (modal shift of residents from private car usage into public transport).
What will be measured?
The project team will seek to measure the following:

Direct emissions: Operation of Moray Council services	- Demonstrating how the use of technology has optimised vehicular movements to reduce the carbon footprint associated with delivering services: 1. Base line start point will be taken from 2019 mileage and passenger numbers: 124,263 miles on DRT managing 27846 journeys. 2. The current DRT booking system uses an algorithm not linked in any way to real time and geographic positioning of vehicles which limits effective scheduling, journey management, booking windows and impacts on the cost efficiency of route and resources selections to accommodate pre-booked journeys. 3. Smart scheduling technology that is being introduced includes the following functions: a. Offers a real time link from booking platform (Ops Portal and Passenger app) to the vehicles (driver app). b. The smart scheduling function ensures that customer experience is enhanced, additional journeys are created and managed within assigned resources allocated to specific areas of Moray. c. Smart scheduling set parameters which determine and manage bookings to ensure customers are not retained on the vehicle any longer than necessary – reducing mileage whilst maximising booking windows for customers. d. A deviation setting (usually set to 5mins but can be changed) ensures that real time on the day bookings can be accommodated without detrimental impact to pre-existing bookings / journeys being undertaken. e. Ops portal will determine the most appropriate vehicle ensuring that existing journeys or routes are not impacted any longer than 5mins f. Customers can indicate the critical element of their journey i.e is it the pickup time that needs to be

guaranteed or is it the drop off time. Using this feature at booking stage will inform the smart scheduling tool of the most effective booking window and the most appropriate vehicle to be tasked.

g. Journey pick up points and drop off points are created by using recognised landmarks pre populated on the system or by address On occasion, customers will be directed to the nearest landmark of their chosen pick up point or destination to maintain efficiency of routes, timings, bookings and mileage

4. All of the above functions are expected to yield changes in Mileage per journey stats baselined from 2019.
5. Detailed analysis tools will inform of forming patterns in routes / journeys taken. This will inform any changes to delivery model to improve better miles per journey efficiency.

- Qualitative and quantifiable evidence regarding the use of battery electric vehicles (BEV) in a fleet compared to traditional internal combustion engine (ICE) models

  Qualitative –

  1. Pulse surveys will be completed by Passengers, drivers, technicians, operational managers and coordinators to assess quality of EV impact on DRT services based on advantages and disadvantages from ICE models. Initial survey focus will be:
     a. Driving quality (Noise / air pollution / road condition impact)
     b. Operating environment changes (depot / workshop / fuel source points / internal & external vehicle standards)
     c. Maintenance impacts (Parts / batteries / Infrastructure / training impact and time of road)

  Quantitative –

  2. Fleet emissions will be used on an annual basis and demonstrate how BEV's are influencing the reduction of overall carbon footprint by evidencing less diesel consumption in comparison to 2019 baseline start point (calculated at 850t CO2e Full transport operation) and increased BEV and electricity use.
  3. Comparing BEV emissions vs. ICE emissions and road mapping further reductions by targeting areas where carbon emissions are greatest within the Operational landscape
  4. Cost benefit analysis will also be completed to inform financial sustainability model of ICE vs. BEV alternatives linked to reduced carbon figures.

- Calculation of the per mile carbon emissions associated with running the Bus Revolution Services

  5. Based on 2019, total diesel carbon emissions associated with DRT operations were 283t CO2e based on 124,263 miles ran, equalling 0.0023 carbon emission per mile.
  6. Calculations will be reviewed each year using UK government conversion factors and applied to miles

	completed associated to Bus revolution services. Similar calculations will be completed to capture the BEV emissions in a similar fashion. 7. Carrying this exercise out on an annual basis will (hopefully) evidence reduction in per mile carbon emissions. 8. Conversion factors can be found online here.
Indirect emissions: Moray Council area	- Change in number of car based journeys undertaken by residents, with reduction sought 1. Aim is to work with the Moray Council climate team and benchmark data sources. Current working assumptions are based on UK government (BEIS) from 2019. - Aim to demonstrate a reduction in the per mile carbon footprint of travel throughout Moray by increasing public transport passenger numbers and benchmarking the former footprint associated with private travel to that of public transport 1. From UK governments (BEIS) for 2019, it suggests that roads in Moray are responsible for 168,000 tCO2e of carbon emissions annually. Approx. 74m miles travelled in Moray to generate this. 2. Bench marking these figures with increased passenger use, mileage increases on bus revolution services and any decrease in overall Moray wide emissions will validate reduces private car use and per mile carbon footprint throughout the project life cycle. - With improved public bus services, aim is to reduce the aspiration need to own a car 1. Longer term benefit that can be mapped using developing data sources long with existing sources to build evidence portfolio.

When will it be measured?
Annual focus on:

- Use of Government issued emissions factors to determine the carbon footprint per mile of the Bus Revolution Service (Electric vehicles will be supported by diesel powered vehicles during the course of an operational year).
- Figure for the number of miles driven by the service in an operational year.

Annual to bi-annual focus on:

- Passenger insight into the modal shift generated through increased use of public transport.
- Extrapolation of passenger insight information to determine how the shift from private to public transport sources has changed the carbon footprint per mile of travel across Moray
- Qualitative evidence from surveys to determine how improved public transport services are changing perception amongst residents and affecting perception of the need for car ownership

What is the baseline against which the investment objective will be measured?

- Annual carbon emissions from Moray Council public transport as articulated in the bullet points above

- Passenger numbers and passenger miles travelled and journey patterns linked to short / long or linking journeys.
- Analysis of ticketing and journey information will help develop source data to evidence base approach.

What is the baseline figure against which the 30t reduction in emissions is based?

- Carbon emissions data calculated for 2019 as the baseline figure against which the 30t reduction in emissions will be based. This is 282t CO2e.
- Use of existing annual passenger numbers and journey mileage on DRT services

Analysis of investment objective 3: 20% reduction in number of people facing transport barriers to employment, education or recreation by 2030

Why choose this investment objective?

The Moray Growth Deal consists of a diverse set of projects. There is a focus on skills development and increasing the number of jobs in the region. However, these interventions will only be successful if enabling activity is delivered to increase the numbers of affordable homes (Housing Mix Delivery) and to make transportation across a rural area easier (Bus Revolution).

Aside from a train line that connects larger settlements in the Council area, public bus services are the only alternative to private car usage. This objective relates to an indicator target from the 2018 Scottish Household Survey outlining that 66% of employed adults could not utilise public transport.

Reducing barriers relating to the use of public transport for work, education or social purposes is central to the commitment of funding for the Bus Revolution project.

What will be measured?

The evidence for this investment objective will come from statistics generated from sample groups of residents, students, economically active residents of and residents currently seeking employment.

Consideration will be given during the first year of the project as to how these diverse surveys and data requests from partners can be defined, the target audience for each request for information and the associated timescales.

When will it be measured?

It is proposed that information is gathered on 2 different frequencies:

- Every 2 years: Evidence taken from the Scottish Household Survey
- Annually: Evidence gathered as education providers work with students in Moray (UHI and the Council), along with 'Developing the Young Workforce' who actively assist young people make the transition from school to work and potentially data from the Department for Work and Pensions on barriers to work that are being reported.

What is the baseline against which the investment objective will be measured?

The first 12-24 months will be critical to work with key partners to establish data sets that generate a baseline against which future performance can be measured. The baseline will be created by:

- Gathered information from post 2018 iterations of the Scottish Household survey
- Working with UHI and 'Developing the young Workforce' to gather evidence from students regarding barriers, perceived or actual, to the use of public transport for work and education.
- Working with the Department for Work and Pensions to determine what their historic data has shown regarding barriers to employment.

The evidence gathered should not solely focus on a statistical assessment of whether public transport is a limiting factor for work, education and social activity. The information

should also be used to generate a heat map, showing the areas affected the most by poor provision so that this evidence can be used to inform future phases of Bus Revolution activity.

This will be supplemented by intelligence on service usage from the service app.

Furthermore, follow up surveys will be undertaken with service users and prospective users to assess the finer detail of the project outputs, and as a follow up to the earlier survey that was undertaken in Autumn 2020. This will comprise a similar online survey, but also supplemented with more detailed on-board user surveys, for example, that will be able to follow the detailed usage and knock-on impacts of the services – addressing unemployment / underemployment etc.

Finally, as part of the evaluation, there will be further follow up with a number of employers to assess the degree to which the project has supported business.

Using this multifaceted approach to evaluation will enable a strong and robust understanding of the project to be established; the extent to which it has delivered on its objectives, and delivered for Moray and the wider economy. This will then be set in the context of the wider programme based evaluation framework for the Growth Deal.

Gateway review arrangements

The council's Project Governance Policy sets out project gateway review arrangements. It is based on the Prince2 Project management methodology, aligned with the Scottish Government Construction Procurement Manual and the Office of Government Commerce (OGC) Gateway framework. A copy of this document can be provided.

Contingency plans

Where Red-rated risks are starting to come to fruition and emerge as issues or Red- rated issues are escalated, it will be expected that a contingency or recovery plan is developed by the Project Manager. This will be submitted to the Bus Revolution Project Board and to the Moray Growth Deal Programme Board to provide a level of assurance from the Project Manager.

In addition, a contingency budget is worked into the capital budget for the project to ensure any unexpected activities and risks can be overcome, this is set at 11%.

As the procurement of project infrastructure has already commenced and is on track for delivery no later than Q3 22/23 (programmed commencement of project), this provides inherent contingency for the principal risks around availability of vehicles. Other headline contingency arrangements would be anticipated to include:

- Failure of app based technology: revert to phone based bookings on an interim basis
- Insufficient driver recruitment: utilise existing relief drivers from core DRT operation
- Failure of charging infrastructure: shared use of existing vehicle charging infrastructure

Any contingency plan will focus on mapping out the most valuable resources to the success of the Bus Revolution through the following aspects:

- Assess possible risks to resources. Possible threats that could be disruptive to delivery.
- Identify resources to address these risks.
- Manage resources to respect to specific scenarios that have been scoped.
- Develop plans and procedures to utilise these resources in specific events; sharing plans with stakeholders and the wider project team.
- Incorporate feedback and update the contingency plan arrangements regularly.

Low Carbon Assessment

The need to reduce greenhouse gas (GHG) emissions is enshrined in Scottish and UK law. The ultimate receptor of GHG emissions is the global climate system, and climate change caused by GHG emissions which will result in social, environmental and economic impacts felt globally. This is the case regardless of where the GHGs are emitted, whether they be released directly from the combustion of fossil fuels, or associated with the extraction, manufacture and transport of materials.

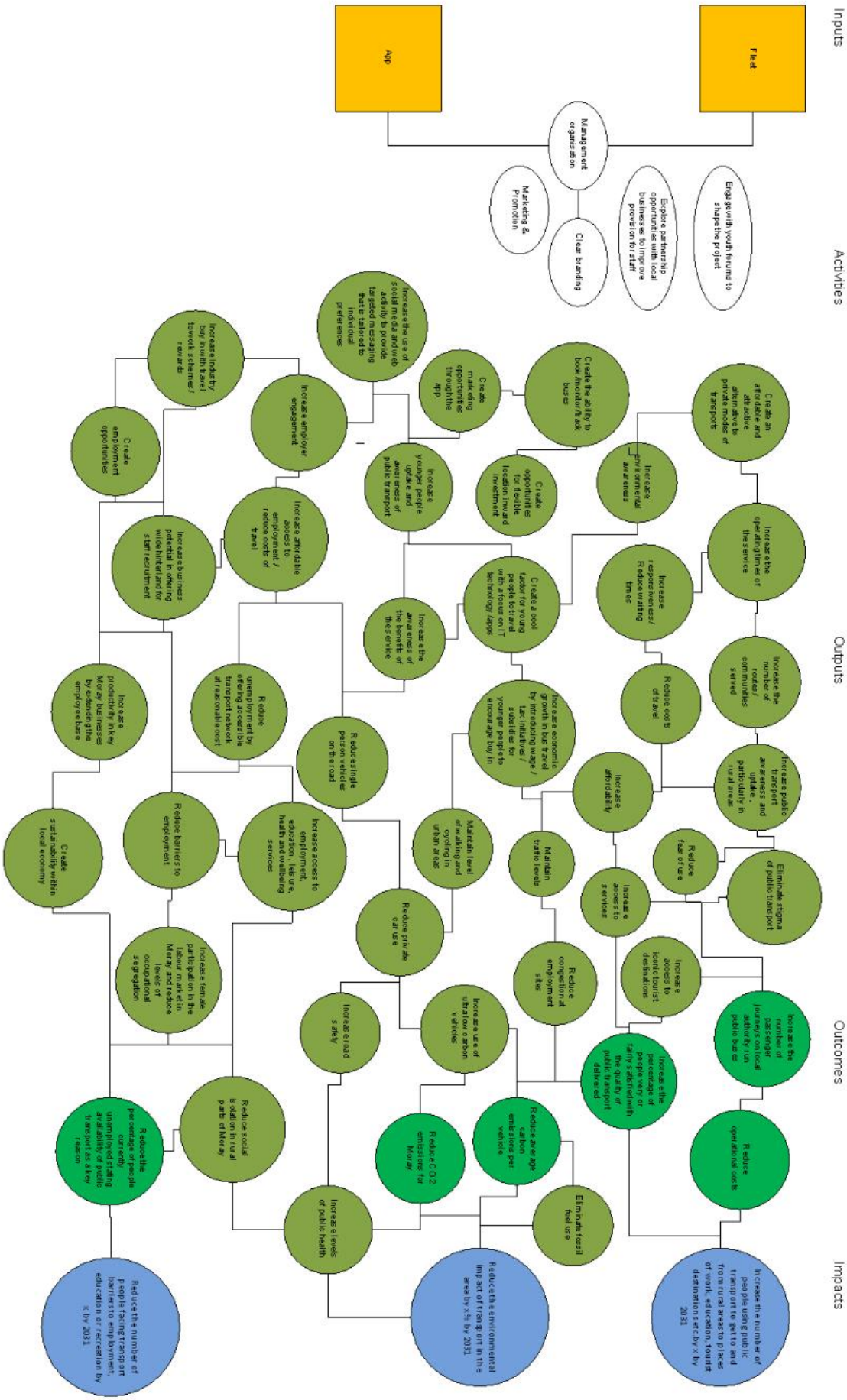
The initial step towards project carbon management will be to identify and map out the emissions sources that can be attributed to the project throughout the project's life cycle; management and reduction can only occur after this.

A Low Carbon Assessment is incorporated at Appendix 9, which considers the whole carbon life cycle for the project, including development, vehicle build and fit out, engineering measures, then the usage stage of the project over the initial 10 year period, and then the end of life period.

This approach supports the project to reduce carbon emissions from the sourcing, transportation, fabrication and installation of, for example, charging facilities, as well as the vehicle procurement process, and vehicle fit out.

Appendices

Appendix 1- Benefits Map



Appendix 2- Options Appraisal Workshops

Scope

An infinite number of options and permutations are possible; however, within the broad scope outlined in the strategic case, the following main options have been considered:

- option 1 – do nothing – current Dial M for Moray service
- option 2 – the 'minimum' scope – slightly expanded operation to cover weekday peak times
- option 3 – the 'intermediate' scope – increased operational hours to include evenings and Saturdays (no Sunday service)
- option 4 – the 'intermediate plus' scope – increased operation with evenings and weekends covered (shorter hours on Sundays)
- option 5 - 'maximum' scope – 24/7 operation

The following tables use a key as follows:

- N – fails to meet some aspects of CSFs / TPOs – consider **dropping**
- ? – possible satisfaction of CSFs / TPOs – **consider** carry forward
- Y – meets most aspects of CSFs / TPOs – **possible** carry forward
- YY - strong fit with CSFs / TPOs – **preferred** way forward.

The table below summarises the assessment of each option against the investment objectives and CSFs.

Reference to:	Option 1	Option 2	Option 3	Option 4	Option 5
	Do Nothing	Minimum	Intermediate	Intermediate	Maximum
	Do nothing (Existing Dial M service)	Expanded on-demand service from 7am to 5pm (Mon -Fri) for residents without access to other public transport. Gaps when current fleet current used for other purposes filled. Same day booking. Boundary is Moray area.	On-demand service 4am to midnight (Mon-Sat, no Sun service) for residents in higher level of demand areas only. Service not intergrated with commercial routes. Booking to service time as close to real-time as possible. Boundary is Moray area plus some key destinations outside the area (airports, hospitals, tourist destinations etc.)	On-demand service 4am to midnight (Mon-Sat) and 7am to 10pm (Sun) for anyone travelling to or from the Moray area. Service intergrated with commercial routes. Booking to service time as close to real-time as possible. Boundary is Moray area plus some key destinations outside the area (airports, hospitals, tourist destinations etc.)	24/7 on-demand service for anyone travelling to or from the Moray area. Service intergrated with commercial routes. Booking to service time as close to real-time as possible. Boundary is Moray area plus anywhere in a 30 mile radius of its boundary.
Objectives					
Increase the number of people using public transport to get to and from rural areas to places of work, education, tourist destinations etc.by x by 2031	N	Y	Y	Y	YY
Reduce the environmental impact of transport in the area by x% by 2031	N	Y	Y	Y	YY
Reduce the number of people facing transport barriers to employment, education or recreation by x by 2031	N	N	Y	YY	Y
CSF's					
Strategic Fit (Vision / Gov Policy)	N	?	Y	Y	YY
Potential VFM	Y	Y	Y	YY	?
Potential Achievability	Y	Y	YY	y	Y
Supply side capacity	y	Y	Y	YY	Y
Potential Affordability	Y	Y	Y	YY	?
Summary	Discounted	Discounted	Possible	Preferred	Possible

Option 4 was selected as the preferred scope for the project and carried forward to the next stage of assessment. It was considered that this option provided the greatest impact in terms of the objectives and would address the significant amount of shift work requirements in the manufacturing sector.

Service solution

Against the preferred scope from above; the table and narrative below summarises the assessment of each option for service solution against the investment objectives and CSFs.

Reference to:	Option 1	Option 2	Option 3	Option 4
Service Solution for On-demand service 4am to midnight (Mon-Sat) and 7am to 10pm (Sun) for anyone travelling to or from the Moray area. Service intergrated with commercial routes. Booking to service time as close to real-time as possible. Boundary is Moray area plus some key destinations outside the area (airports, hospitals, tourist destinations etc.)	Minimum Real-time booking technology, including scheduling, monitoring, customer interface etc. Brand marketing and promotion. Number and types of buses low-emission only new fleet. Charging points. Depot / bus storage. No. of drivers. Potential for dedicated journey to work arrangements with employers. Max wait 3 hr	Intermediate Real-time booking technology, including scheduling, monitoring, customer interface etc. Brand marketing and promotion. Number and types of buses full low-emission only new fleet. Charging points. Depot / bus storage. No. of drivers. Potential for dedicated tourism offering (e.g. whisky tours), journey to work arrangements with employers. Max wait 2.5 hr	Intermediate Real-time booking technology, including scheduling, monitoring, customer interface etc. Brand marketing and promotion. Number and types of buses full low-emission (inc. existing) fleet. Charging points. Depot / bus storage. No. of drivers. Potential for dedicated tourism offering (e.g. whisky tours), journey to work arrangements with employers. Max wait 2 hr	Maximum Real-time booking technology, including scheduling, monitoring, customer interface etc. Brand marketing and promotion. Number and types of buses full low-emission (inc. existing) fleet. Charging points. Depot / bus storage. No. of drivers. Potential for dedicated tourism offering (e.g. whisky tours), journey to work arrangements with employers, delivery service. Max wait 1 hr
Objectives				
Increase the number of people using public transport to get to and from rural areas to places of work, education, tourist destinations etc. by x by 2031	Y	Y	Y	YY
Reduce the environmental impact of transport in the area by x% by 2031	Y	Y	YY	Y
Reduce the number of people facing transport barriers to employment, education or recreation by x by 2031	Y	Y	Y	YY
CSF's				
Strategic Fit (Vision / Gov Policy)	Y	Y	YY	Y
Potential VFM	Y	YY	Y	Y
Potential Achievability	YY	Y	Y	Y
Supply side capacity	Y	Y	Y	YY
Potential Affordability	Y	YY	Y	Y
Summary	**Discounted**	Possible	Possible	**Preferred**

Option 4 was selected as the preferred service solution for the project and carried forward to the next stage of assessment along with the previous choice for scope. This option was considered the most attractive in terms of the achievement of objectives and public expectation of a responsive service.

Service delivery

This range of options considers the options for service delivery in relation to the preferred scope and potential solution. The table below summarises the assessment of each option against the investment objectives and CSFs.

Reference to:	Option 1	Option 2	Option 3	Option 4
Service Delivery for On-demand service 4am to midnight (Mon-Sat) and 7am to 10pm (Sun) for anyone travelling to or from the Moray area. Service intergrated with commercial routes. Booking to service time as close to real-time as possible. Boundary is Moray area plus some key destinations outside the area (airports, hospitals, tourist destinations etc.) Real-time booking technology, including scheduling, monitoring, customer interface etc. Brand marketing and promotion. Number and types of buses full low-emission (inc. existing) fleet. Charging points. Depot / bus storage. No. of drivers. Potential for dedicated tourism offering (e.g. whisky tours), journey to work arrangements with employers, delivery service. Max wait 1 hr	Minimum Run under current community transport based system, recruit additional drivers, fleet and PTU staff to resource. Option to link in with local CT providers	Intermediate Run internally with O License using direct operations powers under Transport (Scotland) Act. Option to link in with local CT providers. Establish Bus Partnership	Intermediate Tender as a subsidised contract. Establish Bus Partnership	Maximum Establish Moray-wide franchise – incorporating all commercial bus services internal to the LA area to create single integrated transport service. Can either be tendered as a contract or run as an ALEO
Objectives				
Increase the number of people using public transport to get to and from rural areas to places of work, education, tourist destinations etc.by x by 2031	?	YY	Y	Y
Reduce the environmental impact of transport in the area by x% by 2031	Y	Y	?	YY
Reduce the number of people facing transport barriers to employment, education or recreation by x by 2031	?	YY	Y	Y
CSF's				
Strategic Fit (Vision / Gov Policy)	?	Y	Y	YY
Potential VFM	N	Y	?	YY
Potential Achievability	Y	YY	Y	?
Supply side capacity	Y	Y	YY	Y
Potential Affordability	Y	YY	Y	Y
Summary	Discounted	Preferred	Possible	Possible

Option 2 was selected as the preferred service delivery for the project and carried forward to the next stage of assessment along with the previous choices for scope and service solution. The option was chosen in view of its financial sustainability and achievability.

Implementation options

This range of options considers the choices for implementation in relation to the preferred scope, solution and method of service delivery. The table below summarises the assessment of each option against the investment objectives and critical success factors.

Reference to:	Option 1	Option 2	Option 3	Option 4
Implementation for **On-demand service 4am to midnight (Mon-Sat) and 7am to 10pm (Sun) for anyone travelling to or from the Moray area. Service intergrated with commercial routes. Booking to service time as close to real-time as possible. Boundary is Moray area plus some key destinations outside the area (airports, hospitals, tourist destinations etc.)** **Real-time booking technology, including scheduling, monitoring, customer interface etc. Brand marketing and promotion.** **Number and types of buses full low-emission (inc. existing) fleet. Charging points. Depot / bus storage. No. of drivers.** **Potential for dedicated tourism offering (e.g. whisky tours), journey to work arrangements with employers, delivery service.** **Run internally with O License using direct operations powers under Transport (Scotland) Act. Option to link in with local CT providers. Establish Bus Partnership**	Minimum Introduce 1 new vehicle in one of the 5 operational areas to cover hours of no other vehicles available, add other operational areas once per annum. Replace existing fleet only when life expired. Introduce technology in year 1.	Intermediate Introduce technology in year one. Introduce 5 additional vehicles (one per operational zone) in year two. Introduce further vehicles on phased basis. Replace existing fleet only when life expired.	Intermediate Introduce technology and 5 additional vehicles (one per operational zone) in year one. Introduce further vehicles on phased integrated with fleet renewal programme	Maximum Introduce technology and maximum affordable number of vehicles in year one - integrating expenditure between additional vehicles and early replacement of existing vehicles with ULEVs (Ultra Low Emission Vehicles). Use resale of existing fleet to part fund.
Objectives				
Increase the number of people using public transport to get to and from rural areas to places of work, education, tourist destinations etc. by x by 2031	Y	Y	Y	YY
Reduce the environmental impact of transport in the area by x% by 2031	Y	Y	Y	YY
Reduce the number of people facing transport barriers to employment, education or recreation by x by 2031	Y	Y	Y	YY
CSF's				
Strategic Fit (Vision / Gov Policy)	Y	Y	Y	YY
Potential VFM	?	Y	YY	?
Potential Achievability	Y	Y	YY	Y
Supply side capacity	Y	Y	Y	YY
Potential Affordability	Y	Y	YY	?
Summary	**Discounted**	Possible	**Preferred**	Possible

Option 3 was selected as the preferred implementation for the project and carried forward to the next stage of assessment along with the previous choices for scope, service solution, and service delivery. It was considered important to phase the implementation but to implement the initial phase as soon as possible in order to start the transition away from private car use.

Funding options

This range of options considers the choices for funding and financing in relation to the preferred scope, solution, method of service delivery and implementation. The table below summarises the assessment of each option against the investment objectives and critical success factors.

Reference to:	Option 1	Option 2	Option 3
Funding for **On-demand service 4am to midnight (Mon-Sat) and 7am to 10pm (Sun) for anyone travelling to or from the Moray area. Service intergrated with commercial routes. Booking to service time as close to real-time as possible. Boundary is Moray area plus some key** **Real-time booking technology, including scheduling, monitoring, customer interface etc.** **Brand marketing and promotion.** **Number and types of buses full low-emission (inc. existing) fleet. Charging points. Depot / bus storage. No. of drivers.** **Potential for dedicated tourism offering (e.g. whisky tours), journey to work arrangements with employers, delivery service.** **Max wait 1 hr** **Run internally with O License using direct operations powers under Transport (Scotland) Act. Option to link in with local CT providers. Establish Bus Partnership** **Introduce technology and 5 additional vehicles (one per operational zone) in year one.** **Introduce further vehicles on phased integrated with fleet renewal programme**	Minimum MGD capital funding for vehicle and technology purchases. Operate as many vehicles as revenue from services will allow (revenue covering operating costs - fuel, maintenance and staff)	Intermediate MGD capital funding for vehicle and technology purchases. Seek contract commitment from employers for workplace transport and / or tourism offering to provide additional Opex (revenue) income for operating costs	Maximum Set out socio-economic case for operating expenditure (revenue) to be government subsidised with affordable fare structure to drive mode shift, use capital funding for vehicle and technologies.
Objectives			
Increase the number of people using public transport to get to and from rural areas to places of work, education, tourist destinations etc.by x by 2031	Y	YY	Y
Reduce the environmental impact of transport in the area by x% by 2031	Y	Y	YY
Reduce the number of people facing transport barriers to employment, education or recreation by x by 2031	Y	YY	Y
CSF's			
Strategic Fit (Vision / Gov Policy)	Y	Y	YY
Potential VFM	Y	YY	Y
Potential Achievability	Y	YY	Y
Supply side capacity	Y	Y	YY
Potential Affordability	Y	YY	Y
Summary	Possible	**Preferred**	Possible

Option 2 was selected as the preferred funding for the project. This option was considered the most viable in the short-term but if local and national net zero carbon targets are to be met it was considered that option 3 might have to be considered at some point.

Appendix 3 - Brief for Economic Impact Assessment

Specification of Requirements for the Economic and Social Impact Assessment for the Bus Revolution Project within the Moray Growth Deal

Objectives

Project

- Increase the number of people using public transport to get to and from rural areas to places of work, education, tourist destinations etc.by x by 2031
- Reduce the environmental impact of transport in the area by x% by 2031
- Reduce the number of people facing transport barriers to employment, education or recreation by x by 2031

Outline objectives of the exercise

To provide economic and social impact assessments on options provided in accordance with HM Treasury Green Book - Central Government Guidance on Appraisal and Evaluation

Scope

The scope of the commission will be provided by the Bus Revolution project manager in the form of 6 options to be considered in the appraisal process. These options will be as detailed in Appendix 1.

The economic appraisal should evaluate these 6 options according to the following criteria:

Inclusive Growth Outcome	SCRIG definition	Economic Appraisal Evaluation Criteria
Productivity	Businesses are competitive and economic growth is resilient and sustainable	Increased no of passengers using on demand bus service
		Reduced operational costs
Participation	Inequality of opportunity to access work is addressed and jobs are fulfilling, secure and well-paid	Reduced unemployment by increased availability of public transport in rural areas
Population	Scotland has a sustainable working age population	Increased percentage of 16-29 year olds in Moray
Place	Communities across Scotland have the natural and physical resources to ensure they are strong and sustainable	Increased percentage of people very or fairly satisfied with the quality of public transport
		Reduced CO2 emissions for Moray by lower emission vehicles and reduced private car use
People	Scotland's population is healthy and skilled and economic benefits are spread more widely with lower levels of inequality	

The above criteria should be monetised for each option and workings should be shown.

These to include social elements. These values should then be included in the cost benefit analysis and net present value calculations.

Methodology

Stage 1 - revisit the options with wider stakeholder groups to ensure that visions are aligned. (Bus Revolution Project Board)
Stage 2 –amalgamate these options to create a preferred option plus less ambitious and more ambitious options. (Bus Revolution Project Board))
Stage 3 –appraise economic impact of the options with reference to requirements of revised Green Book guidance issued in Jan 2018. (M O'Donnell)
Stage 4 – identify and approve best option using output from EIA together with engagement activity. (Bus Revolution Project Board)
Stage 5 – perform sensitivity analysis on chosen option. (M O'Donnell)

Outputs

- Commission outputs including any datasets in Microsoft Excel format.
- Executive summary highlighting the key findings
- Description of work performed and amalgamation of data supplied by the project board
- Examples of similar projects elsewhere for comparison purposes
- Report of output with appraisal summary table as outlined below:

Appraisal Summary Table	Option 1 – Preferred option	Option 2/3 – Less-ambitious versions of the preferred option	Option 4/5 – More-ambitious versions of the preferred option	Option 6 – Business as usual (Do nothing)
Net Present Social Value	£39,912,803	Option 2 = £26,342,450 Option 3 = £39,912,803	£39,912,803	£0
Public sector cost	£6,470,821	Option 2 = £4,731,688 Option 3 = £6,470,821	£6,470,821	£0
Appropriate BCR	6.16:1	£5.57:1	6.16:1	0
Significant unmonetizable costs/benefits	Health benefits from removing underemployment	Health benefits from removing underemployment	Health benefits from removing underemployment	N/A
Significant unquantifiable factors	N/A	N/A	N/A	N/A
Risk costs by type and residual optimism bias	TBC	TBC	TBC	N/A
Switching values (for the preferred option only)				10% reduction in benefits.
Time horizon and reason				

Delivery Timescales

Date of commission	7th September 2020
Last Date to request clarifications	11th September 2020
Deadline for draft report	25th September 2020
Project Board consideration	29th September 2020

Appendix 4 – Economic and Social Impact Assessment

- Increase the number of people using public transport to get to and from rural areas to places of work, education, tourist destinations etc.by x by 2031
- Reduce the environmental impact of transport in the area by x% by 2031
- Reduce the number of people facing transport barriers to employment, education or recreation by x by 2031

Inclusive Growth Outcome	**SCRIG definition**	**Economic Appraisal Evaluation Criteria**
Productivity	Businesses are competitive and economic growth is resilient and sustainable	Increased no of passengers using on demand bus service
		Reduced operational costs
Participation	Inequality of opportunity to access work is addressed and jobs are fulfilling, secure and well-paid	Reduced unemployment by increased availability of public transport in rural areas
Population	Scotland has a sustainable working age population	Increased percentage of 16-29 year olds in Moray
Place	Communities across Scotland have the natural and physical resources to ensure they are strong and sustainable	Increased percentage of people very or fairly satisfied with the quality of public transport
		Reduced CO2 emissions for Moray by lower emission vehicles and reduced private car use
People	Scotland's population is healthy and skilled and economic benefits are spread more widely with lower levels of inequality	

SUMMARY OF ASSESSMENT

Appraisal Summary Table	Option 1 – Preferred option	Option 2/3 – Less-ambitious versions of the preferred option	Option 4/5 – More-ambitious versions of the preferred option	Option 6 – Business as usual (Do nothing)
Net Present Social Value	£75,626,812	Option 2 = £26,342,450 Option 3 = £75,626,812	£75,626,812	£0
Public sector cost	£14,749,810	Option 2 = £4,731,688 Option 3 = £ £14,749,810.52	£14,749,810.52	£0
Appropriate BCR	5.13:1	4.81:1 Option 2 5.13:1 Option 3	5.13:1	0
Significant unmonetizable costs/benefits	Health benefits from removing underemployment; women more likely to experience underemployment. *Bus Revolution* will enable all people to make an increased contribution to the economy. Removing underemployment will lift people and households out of poverty, which in turn will enable them to have improved physical and mental health and wellbeing, and will reduce costs to the NHS and other services through a reduced need to access services – those living in poverty are far more likely to need to access such services; and indeed people living in poverty have worse health outcomes[22].			N/A
Significant unquantifiable factors	N/A	N/A	N/A	N/A
Risk costs by type and residual optimism bias	Using an optimism bias of 51% if benefits were that amount less than forecast the cost benefit ratio would be 2.51			N/A
Switching values (for the preferred option only)				81% reduction in benefits.
Time horizon and reason	15 years – Life of Moray Growth deal funding at present.			

Only one option has different economic value (option 2). The differences between the other options is in operating model or funder, neither of which change the actual cost involved.

[22] Child Poverty in Scotland: health impacts and health inequalities, NHS Health Scotland, 2018: Child Poverty in Scotland: health impact and health inequalities (healthscotland.scot)

Risk need identified by project on demand side for risk cost to be included.

LIMITATIONS AND ASSUMPTIONS OF APPRAISAL.

This appraisal is limited in analysis by the following factors.

1. No local data has been provided for the current environmental impact of transport in Moray nor for the number of people facing transport as a barrier to employment.

This appraisal makes the following assumptions.

1. The appraiser has used own judgement for increases and reductions for all investment objectives and economic appraisal evaluation criteria in the absence of information from the project.
2. Baselines have relied on publically available information and calculations from the appraiser.
3. COVID-19 has at this stage not been brought into the appraisal and it should be assumed that by the time the project commences the economy will have returned to pre COVID conditions. The data from COVID impacts is not yet of the quality to apprise based on those impacts regardless.

STRUCTURE

This Economic Impact assessment will focus on three main themes for appraisal of the benefits. Unemployment, Underemployment and Environmental benefits of the proposal. Income from ticket sales will be include however that will be based on historic data.

The costs included in the appraisal will be both capital and revenue.

1. UNEMPLOYMENT

1.1 In normal economic conditions Moray can expect to have around 3% of economically active people unemployed at any one time. This equates to around 1400 people.

1.2 With unemployment there is a tendency to focus on the fiscal cost, i.e. the cost to the taxpayer of the benefits paid to the individual. There are also high personal costs in areas like physical and mental health, higher crime rates and loss of skills

1.3 There is also the economic cost to society and the country. When an individual is not working they are not producing output which means lower GDP and as demonstrated by the COVID crisis this leads to higher government borrowing. That lost GDP is the opportunity cost of unemployment.

1.4 To capture the full impact of unemployment and the benefits of reducing it requires a multi-faceted approach based on financial and social factors. To achieve this a key appraisal metric can be used called Quality of Life Years (QALY). This is used by the Department for Health and Public Health England. The premises is that an intervention that benefits health can be measured in the additional life it provides in year terms. It is monetised using a willingness to pay technique which put the value of one year of life in full health at £60,000.

1.5 The Bus revolution aims to reduce unemployment by reducing transport barriers to work. Moray is a rural local authority with long travel times between some of the main settlements. The table at 1.6 shows the return journey from different destinations.

1.6

Journey	Return Journey (Miles)
Elgin > Aberlour	30
Elgin > Forres	25
Elgin > Buckie	35
Elgin > Keith	35

Elgin > Tomintoul	62
Elgin > Fochabers	19
Forres > Buckie	58
Forres > Aberlour	53
Forres > Keith	58
Aberlour > Keith	27
Aberlour > Buckie	44
Keith > Buckie	25
Buckie > Fochabers	16
Aberlour > Fochabers	28

1.7 As the tables shows any unemployed individual faces lengthy journeys if they were to take up employment elsewhere in the region. As with other rural areas Moray is disadvantaged by insufficient public transport links, especially from the rural satellite towns that surround the main settlements into those settlements, where the private sector provision will begin.

1.8 As will be discussed in more detail in the section on environmental impacts with the exception of Elgin it can be assumed that 25% of employment is based out with the main settlements. This implies that in a competitive jobs market those unemployed may have to find employment out with their local region.

1.9 In non COVID economic conditions there are around 1700 unemployed people in Moray who are claiming Universal credit[23]. From that 1700 there are 1400 who are classed as economically active looking for employment, as stated in 1.1, the remainder of claimants will comprise those who cannot work. An investment objective of this project is to reduce transport as a barrier to unemployment and therefore to reduce unemployment itself. As stated in the limitations to the analysis section no direct data on the number of unemployed people for whom transport is a, or the main, barrier to employment was provided nor therefore was a target for the objective.

1.10 For the purpose of this analysis a target of reducing transport as a barrier to employment, and therefore unemployment, of 5% has been chosen. This represents 86 people currently claiming Universal Credit for unemployment, a sizeable number of people, and people and households / families that could achieve significant personal benefits if they can be supported through enhanced accessibility into employment.

1.11 In order to appraise the benefit of returning these 86 people to the workplace over the 15 year timeframe of the Moray Growth Deal the Department for Health methodology on measuring the benefit of moving an individual from unemployment to sustainable employment will be used. This methodology is publically available through the UK Government.

1.12 There are key assumptions that will be used for this model.

1. Each worker will find work within one year of the doubling of the service and expansion of timetables.

2. The employment will persist for the full term 15 year term of the project and unemployment will permanently be reduced by 5% during normal economic conditions. For clarification, the reduction of 5% would have a negligible effect on the headline unemployment rate as a % of the working age population.

[23] Department for Work and Pensions Benefit Statistics, via Stat-Xplore.

3. Moray is comparable to the UK in terms of the fiscal, social and personal cost of unemployment.

4. An individual would be willing to pay £60,000 for one year of life in full health versus death. The technique is called stated preference and the value used by the Department for Health through sampling the population through questionnaires.

5. Approximately 1/6 of the population Moray suffer from a common mental health disorder with around half of those caused by unemployment. This in line with the national average.

6. Transport is the only barrier to employment faced.

1.13 Using the Department for health methodology it can be concluded that the Net Present Value (NPV) of 86 people returning to the workplace is 6.616 million to the individual £29.413 million to society and £13.201 million to the Government. Detailed results are summarised in the following table with full workings available as an appendix.

The Quality of life gains are £4.412 million. For a detailed explanation this measure please see the appendix.

	Per person returning to work	Total
Financial benefits to the individual(s)	£77,300.00	£6,616,400.00
Financial benefit to society as a whole	£331,100.00	£29,413,500.00
Financial benefits to the exchequer, of which accrue to:	£154,300.00	£13,201,000.00
National Government	£146,600.00	£12,543,300.00
Local Authority	£6,600.00	£565,600.00
National health services	£1,100.00	£92,100.00

QALY gains	
QALY gains per person returning to work	0.8596
Value, per person, of these QALY gains	£51,600
Total QALY gains	74
Total value of these QALY gains	£4,412,200

2. UNDEREMPLOYMENT

2.1 Separate from unemployment analysed in section 1 underemployment relates to those with skill levels higher than those required for the job they are employed in. This represents an underutilisation of potential output from underemployed individuals and therefore national GDP will not be maximised representing an opportunity cost

2.2 As stated in the limitations to this analysis no information was provided on what proportion of the workforce in Moray is underemployed or the locations that they are in therefore assumptions have been made. These assumptions are as follows.

1. That women are disproportionately affected by underemployment. Women earn 13% less than the Scottish average however at degree level and above are only 2% less qualified. At no point per level of qualification do women in Moray deviate to a significant degree from their Scottish counterparts.

2. The same barriers exist with transport as a barrier to employment for under employed women as they do for the unemployed.

3. Men in Moray earn more than their Sottish counterparts and therefore do not face the same barriers as women. This implies that jobs of a wage level comparable to Scotland exist in Moray and that if women are earning 13% less than Scottish women then 13% are suffering from underemployment. There are 9640 women in Moray with level 4 or above qualifications. At 13% this is 1253

4. 2011 census data for qualification levels are still accurate as the same priority has been put on female attainment at the Scotland level as has been done at the Moray level.

2.3 Based on the assumptions in 2.2 (3) 1253 women are underemployed in Moray. The same target of 5% will be used for transport being a barrier to taking up higher value employment as was used for unemployment. This equates to the potential for 62 women to take up higher paid employment through the use of on demand bus services.

2.4 Based on the difference between male and female pay in Moray (£6130) if these 62 women were able to take up work comparable to their male counterparts then the annual income benefit would be £380,060. It is unlikely however that this will happen all in year zero so it has been assumed that the benefit will accrue at 4 women per year.

2.5 Assuming that when in improved employment this remains the case for the full life of the project this element has a NPV of £3.325 million when indirect and induced effects are included.

2.6 The overall benefits from the reduction of underemployment are as follows.

Income effect	£2,942,400
Income Multiplier	£4,707,840
NPV of income effect including Multiplier	£3,325,933

3. Environmental

3.1 The Environmental gains from this project will initially be from reducing the number of fossil fuel journeys made through enabling more efficient commuting via public transport. The table below estimates the number of journey made out with each ward every day for work by car

3.2

Jouneys by car by ward	**Number**
Buckie	572
Fochabers	809
Forres	984
Heldon and Laich	1072
Keith and Cullen	710
Speyside Glenlivet	678
Total	**4822**

3.3 These distances are based on 2011 census data and TTWA definitions. No data was provided by the project on current transport patterns within Moray or the target for reduction in journeys made by car. A target of 1% has therefore been used, reflecting capacity at peak times. This equates to 48 journeys per day and based on 48 working weeks in a year 11,520 journeys. While 1% may appear a modest target basis, given the dominance of car, this represents a sizable uplift in public transport usage, with somewhere in the region of a 10-14% increase in bus passengers for the journey to work. Table 1.6 listed the journey distances between major settlements in Moray and as Elgin is the

only travel to work area (TTWA) in Moray the average return journey distance for Elgin has been used, excluding Tomintoul, which is 29 miles.

3.4 Based on this journey distance and the 1% target the total mileage that would be saved is 334080. Using UK Government carbon conversion factors and Green Book methodology for pricing carbon the carbon saving for this can be calculated and monetised. First the total kgCO2e this amount of mileage would generate needs to be calculated. Assuming a fuel type split of 70% diesel and 30% petrol this equates to 81408.28 kgCO2e.

3.5 This full amount will not be realised in year zero and will be dependent on the roll out of vehicles. It is estimated that during the life of the project 914,148 kgC02e will be saved.

3.5 This savings for each year are then multiplied by the Green Book carbon price for these fuel types which equates to a NPV saving of £57,886 over a 15 year appraisal period.

4. Income from Ticket Sales

4.1 Based on projections provided by the project tickets sales and other income streams from sales have a total NPV of £18.599 million

5. BENEFITS CONCLUSION

5.1

Benefit	**Benefit NPV (£)**
Financial benefits to the individual(s)	£6,616,400
Financial benefit to society as a whole	£29,413,500
Financial benefits to the exchequer, of which accrue to:	£13,201,000
QALY Gains	£4,412,200
Environmental	£57,886
Ticket Sales	£18,599,893
Underemployment	£3,325,933
Total	

6. COSTS

6.1 Using the cost projections provided by the project the total of these has a NPV of **£14,749,811**

7. COST BENEFIT ANALYSIS.

7.1 The costs provided by the project are for the preferred option and they have been assessed to have a cost benefit ratio of **5.13**

7.2 Only one option (option 2) would provide a different service and would have different capital and revenue costs. This option would reduce the service by 30%. The benefits when reduced accordingly give a cost benefit ratio of **4.81**

8. SENSITIVITY ANALYSIS AND OPTIMISIM BIAS

8.1 Using an optimism bias of 51% the cost benefit ratio would be 2.51

8.2 The switching value for the preferred option to option 2 is difficult to predict accurately as any loss in benefits for the preferred option would likely be reflected in option 2 also. However, if benefits were to drop by 7% the preferred option would have the same cost benefit ratio as option 2, if its benefits remained constant.

Appendix 5 – Equality Impact Assessment

SECTION 1 - DO I NEED AN EIA?

DO I NEED AN EIA?

Name of policy/activity: Moray Growth Deal – Bus Revolution Project
Please choose one of the following: Is this a: • ~~New policy/activity?~~ • ~~Existing policy/activity?~~ • ~~Budget proposal/change for this policy/activity?~~ • Pilot programme or project? Y

Decision Set out the rationale for deciding whether or not to proceed to an Equality Impact Assessment (EIA) It has been agreed with the Policy Manager – Equality & Investment in the Cities Team, Scottish Government, that all outline business cases developed as part of the Moray Growth Deal will include an EIA to identify significant impacts on protected groups. It is considered that identifying the positive impacts on these protected groups will also demonstrate success for the projects in the deal and link to some of the key outcomes and objectives stated. **Date of Decision:** 02/12/2019

If undertaking an EIA please continue onto the Section 2. If not, pass this signed form to the Equalities Officer.
Assessment undertaken by *(please complete as appropriate)*

Director or Head of Service	
Lead Officer for developing the policy/activity	D Moreton Moray Growth Deal Programme Manager
Other people involved in the screening (this may be council staff, partners or others i.e contractor or community)	Equal Opportunities Officer

SECTION 2: EQUALITY IMPACT ASSESSMENT

Brief description of the affected service

1. Describe what the service does:

The proposal is looking to build on the existing innovative on-demand bus services to provide comprehensive and cohesive public transport links tailored to the region's largely rural economy.
The purpose is not to compete with scheduled services but to fill the gaps in provision in rural areas and to encourage more people to use public transport rather than use private cars in line with the Scottish Government priority to reduce carbon emissions.

2. Who are your main stakeholders?

Moray Council, Highlands and Islands Enterprise, Moray Chamber of Commerce, Highlands and Islands Transport Partnership (HITRANS), Walkers Shortbread Ltd, 16-29 year olds, General Public/Moray Residents.

3. What changes as a result of the proposals? Is the service reduced or removed?

The proposal is to:
Extend the on-demand service to 4am to midnight (Mon-Sat) and 7am to 10pm (Sun) for anyone travelling within the Moray area. Service integrated with commercial routes. Booking to service time as close to real-time as possible (max 1 hr) using an "uber-style" app to enable customers to track the position of buses and book journeys within a reasonable response time. (Note current arrangements to telephone will remain for those not confident with mobile phone app technology)

The fleet will be managed by Moray Council under Section 19 and/or Section 22 permit legislation or direct operations powers/operator license regime under Transport (Scotland) Act. Following an investment in quality green fleet (electric buses), to increase the flexibility and hours of operation of on-demand bus provision across Moray, with additional facilities such as on board Wi-Fi, charging facilities etc. (all buses of more than 15 seats will include disabled access provision and a proportion of smaller vehicles will have specific adaptions to accommodate disabled passengers).

4. How will this affect your customers?

The project will provide the following benefits:

- Increasing the number of people using public transport to get to and from rural areas to places of work, education, etc.
- Reduce the environmental impact of transport in the area.
- Remove significant barriers to labour market access and education by providing more efficient and accessible local bus services.
- Potential to engage with larger employers in the area regarding employee workplace transport.

5. **Please indicate if these apply to any of the protected characteristics**		
Protected groups	**Positive impact**	**Negative impact/risks**
Race	No impacts have been identified. Moray has a relatively small proportion of minority ethnic groups (4%, compared with 8% nationally) and a relatively high proportion of white (other British(18%, compared with 8% nationally). The proportion of white – other in Moray is 3%, of which 1% is Polish. (source: Scotland's census, https://www.scotlandscensus.gov.uk/ods-visualiser/#view=ethnicityChart&selectedWafers=0&selectedRows=0,12,16,20	
Disability	The on-demand service will include specific adaptions for disabled access and staff will be trained to help and support different disabilities appropriately	The development/ implementation phase needs to consider accessibility for a range of disabilities, bearing in mind that these can vary considerably depending on the type of disability
Carers (for elderly, disabled or minors)	The on-demand service will include specific adaptions for disabled access and staff will be trained to help and support different disabilities appropriately.	The development/ implementation phase needs to consider accessibility for a range of disabilities, bearing in mind that these can vary considerably depending on the type of disability
Sex	One of the key drivers for the project is to help with occupational segregation and barriers to employment for women in rural areas	.
Age (include children, young people, midlife and older people)	It is a key objective of the project to attract and retain more young people in Moray.	
Religion, and or belief	No impacts have been identified	
Sexual orientation / Gender reassignment	There are LGBT groups meeting in Elgin and Forres on an informal basis. Young people in the rural areas are unable to attend these unless they ask their parents for a lift. Not all young LGBT people are out to their parents and therefore can't go.	

Inequalities arising from socio-economic differences	An options appraisal was carried out which combined a cost/ benefit ration with a separate appraisal on socio-economic impacts. This is described in Appendix 4 of the business case.	
Human Rights	The removal of transport barriers for people to enable them to get to employment education and recreational activities. Article 14 of the human rights act (protection from discrimination) is engaged in considering accessibility for various protected groups as well as groups disadvantaged due to rural isolation.	

6. Evidence. What information have you used to make your assessment?

Performance data	Inclusive growth diagnostic
Internal consultation	A programme board meeting was held on 11th May 2017 to determine the CSF's for projects within the Moray Growth Deal. The attendees included relevant stakeholders from Moray Economic Partnership, Highlands and Islands Enterprise, University of the Highlands and Islands, Skills Development Scotland, and Moray Council
Consultation with affected groups	The options were generated by holding a series of workshops with key stakeholders, at which evaluation was undertaken to assess how well each option met the investment objectives and CSFs at each stage. In light of the different stakeholder groups involved the options appraisal workshops were held separately for each element of the Cultural Quarter and are recorded in Appendix 2 of the business case
Local statistics	http://smi.moray.gov.uk/MPG/PRO1/16-0008/01%20Project%20Information/20170809AmendedMorayDiagnostic4.0.xlsx
National statistics	
Other	Treasury Green Book and capital investment manual.

7. Evidence gaps

Do you need additional information in order to complete the information in the previous questions? No

The project was developed from comparison of Inclusive Growth Diagnostic data which compared Moray statistics against National averages. As the business case has developed benefits have been identified and key measures will be implemented prior to the delivery phase in order that they can be baselined and performance improvements demonstrated.

8. Mitigating action

Can the impact of the proposed policy/activity be mitigated? Yes

Please explain

In relation to the positive impacts identified in the protected groups detailed at section 5 above:

Disability	All new vehicles with more than 15 seat will be compliant with disabled access regulations. Some of the smaller vehicles proposed will be adapted in order to ensure that there is always provision for the on demand service. Staff will be trained to help and support different disabilities appropriately.
Carers (for elderly, disabled or minors)	Per above but with consideration for the need for companions.
Age (include children, young people, midlife and older people)	It is a key objective of the project to attract and retain more young people in Moray.
Sexual orientation / Gender reassignment	Access to affordable transport will improve inclusivity for groups of young people who would previously had to rely on a lift from parents.
Inequalities arising from socio-economic differences	Inclusive growth is a key aim of the Growth Deal and key social impacts have been identified within the project relating to health and well-being for all groups.
Human Rights	The removal of transport barriers for people to enable them to get to employment education and recreational activities. Article 14 of the human rights act (protection from discrimination) is engaged in considering accessibility for various protected groups as well as groups disadvantaged due to rural isolation.

9. Justification

If nothing can be done to reduce the negative impact(s) but the proposed policy/activity must go ahead, what justification is there to continue with the change?

There are no negative impacts as the project will increase and enhance facilities and is not reducing anything.

What is the aim of the proposal?

1. Increase the number of people using public transport to get to and from rural areas to places of work, education, etc.
2. Reduce the environmental impact of transport in the area
3. Reduce the number of people facing transport barriers to employment, education or recreation.

Have you considered alternatives?

An option appraisal exercise was undertaken with key stakeholders to identify the preferred solution which was then verified by independent economic and social impact assessment, as outlined in Appendix 4 of the business case.

SECTION 3 CONCLUDING THE EIA

Concluding the EIA

1. No negative impacts on any of the protected groups were found.	
2. Some negative impacts have been identified but these can be mitigated as outlined in question 8.	✓
3. Negative impacts cannot be fully mitigated the proposals are thought to be justified as outlined in question 9.	
4. It is advised not to go ahead with the proposals.	

Decision
Set out the rationale for deciding whether or not to proceed with the proposed actions:

The project will proceed as it has significant positive impacts for all residents and visitors to the area.

Date of Decision: 12/11/2020

Sign off and authorisation:

Service	Economy, Environment & Finance
Department	Economic Growth and Development
Policy/activity subject to EIA	Moray Growth Deal Cultural Quarter Project
We have completed the equality impact assessment for this policy/activity.	Name: Dave Moreton Position: MGD Programme Manager Date: 12/11/20
Authorisation by head of service or director.	Name: Nicola Moss Position: Transportation Manager Date: 12/11/20
Please return this form to the Equal Opportunities Officer, Chief Executive's Office.	

Appendix 6 – Extract of risk register

This is a snapshot of the risk register which is maintained as a live document.

Risk Category	RISK *Threat to achievement of business objective*	Scope/potential consequences of risk (If, then, results in)	Assessment of Risk (likelihood x impact) *Assume No Controls in*			Risk Control Actions	Target Date for Completion	Risk Status	Risk Owner	Responsible Officer	Date of Last Review
			Likelihood	Impact	Risk Score						
People	**Marketing** Without a sucessful marketing strategy and appealing brand identity uptake may be limited.	If the investment is only in an app and new fleet then the step change required to deliver the objectives of the project will not be achieved resulting in wasted investment	3	4	12	Implementation plan and financial case to ensure that adequate marketing / branding resource is available. Phase 1 to test marketing budget impact	31/01/2024	Open	Nicola Moss	Nicola Moss	23/06/2022
Financial	**Revenue Funding** Ongoing funding to be identified to ensure finacial sustainability of the project	If a sustainabile operational model cannot be identified then the financial case for the project will be unviable resulting in the project being potentailly delayed	3	4	12	Viable operational model to be determined in the financial case.	31/01/2024	Open	Nicola Moss	Nicola Moss	23/06/2022
Operational continuity and performance	**Delivery evidence requires assumptions in the finacial model to be revised** Actual annual passenger numbers, fare income, income from employers and the Council subsidy level may vary from assumptions built into FBC model.	Any variance between actual and projected data used in the FBC financial model may impact the Council's revenue commitment required to support the service.	4	4	16	Regular scrutiny and review of the finanical model, with a view to ensuring assumptions that underpin further phases of activity are based on evidence gathered from phase 1. - Annual in-life reviews of the project finanical model by the MGD PMO. - Annual discussions with Transport Scotland regarding data and the financial model.	End of phase 1	Open	Nicola Moss	Nicola Moss	20/10/2022
Reputation	**Covid 19** Impact on public transport has been significant and public confidence needs to be restored	If the project cannot demonstrate that buses are a safe form of travel post Covid then people will not use the facility resulting in reputational damage and wasted investment	2	4	8	Risk that COVID will be the barrier to public transport uptake has reduced in line with reduced restrictions and restored public activity however the risk of future outbreaks and public response continues. Project should continue to monitor and respond to the situation	31/01/2024	Open	Nicola Moss	Nicola Moss	23/06/2022
Regulatory	**Net Zero Carbon** Is a major government priority that must be taken account of in the business case	If the project cannot demonstrate clear measurable changes in carbon emissions then it will be seen as failing in meeting the stategic objectives resulting in potential action from the government	3	3	9	Benefit measurement should be developed to demonstrate the impact.	31/01/2024	Open	Nicola Moss	Nicola Moss	23/06/2022
Benefits realisation	**Accuracy of outcome targets:** TPO1 and 3 take quite a narrow view on the positive impacts that can be generated from the project and there is an opportunity to set more granular targets.	As the project enters delivery, the project will work to: - Determine if a higher increase in passenger numbers is possible and if targets can be set for individual socio-economic groups. - Whether different targets for reducing transport barriers to accessing education and work can be set.	4	2	8	Use app insight on customers using the service to determine if marketing activity needs to be enhanced for specific socio-economic groups. Work with partners such as Education, UHI-Moray and the Department for Work and Pensions to gather evidence on barriers to transport that can be contrasted with survey information from service users and residents.	End of phase 1	Open	Nicola Moss	Nicola Moss	20/10/2022
Operational continuity and performance	**Vehicle availability** Impact of Covid-19 on the economy may affect supplies of suitable electric vehicles	If suitable vehicles are not available then alternatives may be forced on the project resulting in the project aims either being compromised or if refused being delayed	3	4	12	Monitor the situation with regards to future orders. Select and procure EVs for phase 2 well before they are required.	01/01/2030	Open	Nicola Moss	Nicola Moss	19/10/2022
Operational continuity and performance	**Charging Infrastructure** Ability of timely civils work and installation of appropriate infrastructure	If electrical consultants are not comissioned by the end of Feb22 then this will materiallly impacty the ability of the project to deliver to time some of the Phase 1 plans.	4	4	16	Infrastructure actively commissioned.	17/08/2022	No	Nicola Moss	Nicola Moss	19/10/2022
Regulatory	**Operator Licence** Without a clear route to "O" Licence timescales, staffing and vehicle stabling impacts are difficult to manage.	If there is no clear route to O Licence or decision to stay on permits for a defiened period then the actions required to facilitate the different elements will lead to time delays in registering and operating services, compliance issues with vehilce stabling and uncertaintly over staffing provision and contracts.	3	3	9	Route to O Licence developed and all impacts considered as part of project plan evolution. Monitor progress against this at Project Board Meetings.	17/08/2022	Ongoing	Nicola Moss	Nicola Moss	23/06/2022
People	**Staffing** Scaling up of driver/maintenance and administrative staffing to support increased operational hours/footprint	Phase 1 Detailed Options need to be signed off in order to ensure the apprpriate staffing is in place to support increased operational tempo across the board.	2	3	6	Ensure that time & budget is allocated in the Project Plan to resource and recruit appropriately	17/08/2022	Ongoing	Nicola Moss	Nicola Moss	19/10/2022
Financial	**Shift to NSG from BSOG** Impact of TS change in policy from BSOG to NSG payments	Sudden shift in TS policy around payments for BSOG moving to NSG. Issue with NSG + (which was legacy EZEB payments for 1st 5 yrs) is that it is not for new vehilces and as such leaves a hole in revenue after year 22/23.	5	2	10	Engage with TS on this policy and try and build in more revenue through fares and or increased patronage to offset some of the revenue loss. Financial Case as issued with FBC v1.0 takes account of this.	17/08/2022	Ongoing	Nicola Moss	Nicola Moss	23/06/2022
Operational continuity and performance	**Fleet Services SLA** Current SLA for fleet management is outdated and requires updating to reflect changing operational footprint that project brings.	Legacy SLA is not curently maximinsing financial and operational efficiencies for furture Dial M Ops. This has impacts on operational resillience and financial operating costs. Needs reviewed and drawn into a monthly compliance review piece so project can effectively monitor costs of EV scaled deployment.	3	2	6	Engage and develop with Fleet Services partners a new SLA that supports the increased operational footprint and demands as a result of Bus Revolution.	31/01/2023	Ongoing	Nicola Moss	Nicola Moss	23/06/2022

Appendix 7 – Fit with National, Regional and Local Plans and Policies: Salient Points

Plan/strategy	Salient points
Programme for Government	The clear priority for this period through to the end of this Parliament in May is dealing with the economic, health, and social crisis that the coronavirus has brought. The Scottish Government has made commitments to tackle child poverty, deliver a net zero society, improve our public services, end homelessness, and make clean, green long-term investments that will transform our society and build a wellbeing economy. Central to that recovery is a **new national mission to help create new jobs, good jobs and green jobs**. The actions within the programme includes: • Lock in the positive changes in active travel by committing £500 million for transformational infrastructure • Take forward our ambitions for **20 minute neighbourhoods** - the creation of liveable, accessible places, with thriving local economies, where people can meet their daily needs within a 20 minute walk
National Strategy for Economic Transformation	Our vision for Scotland in 2032 is a wellbeing economy: thriving across economic, social and environmental dimensions, one that delivers economic prosperity for all Scotland's people and places. When we achieve the vision, Scotland will be recognised at home and throughout the world as: • an international benchmark for how an economy can de-carbonise • the best place to start and grow a business or social enterprise • a magnet for inward investment • a great place to live and work with high living standards • a nation where people and businesses can continually upgrade their skills • a leader in research and development • a country where economic power and opportunity is distributed fairly • an outward looking nation exerting a meaningful influence
National Transport Strategy 2 (NTS2)	The vision is for a sustainable, inclusive, safe and accessible transport system helping deliver a healthier, fairer and more prosperous Scotland for communities, businesses and visitors. The National Transport Strategy (NTS2) sets out the vision for Scotland's transport system for the next 20 years. There are four priorities to support that vision. • reduces inequalities

Plan/strategy	Salient points
	• takes climate action • helps deliver inclusive economic growth • improves our health and wellbeing
Strategic Transport Projects Review 2	The draft second Strategic Transport Projects Review (STPR2) for Scotland will inform Scottish Ministers' decisions on transport investment in Scotland for the next 20 years (2022-2042). STPR2 is one of the mechanisms for delivering the Vision, Priorities and Outcomes of the second National Transport Strategy (NTS2). It is an important tool for achieving the Government's commitment to 20% reduction in vehicle kilometres by 2030 and contributing to Scotland's net zero greenhouse gas emissions target by 2045 - also addressing inequalities, improving health and wellbeing and contributing to inclusive economic growth A 12 week public consultation was undertaken on the draft STPR2 documents in early 2022. Transport Scotland will be analysing and evaluating all feedback from this consultation and will work towards publishing the final STPR2 Report and the basis for development of the Delivery Plan in Autumn 2022. .
Scotland's Climate Change Update and 20% Reduction in Car KM Route map	Published in February 2022, Scottish Government and COSLA have set out Scotland's draft **route map** to achieve a *'national reduction in car kilometres, in order to enable healthier, fairer and more sustainable lives.'* The route map is published in response to the Scottish Government's Climate Change Plan update commitment to reduce car kilometres by 20 per cent by 2030, to meet Scotland's statutory obligations for greenhouse gas emissions reduction by 2045.
UK Industrial Strategy	The aim of the UKs Industrial Strategy was to boost productivity by backing businesses to create good jobs and increase the earning power of people throughout the UK with investment in skills, industries and infrastructure. The Industrial Strategy sets out Grand Challenges to put the UK at the forefront of the industries of the future, ensuring that the UK takes advantage of major global changes, improving people's lives and the country's productivity. The first 4 Grand Challenges are focused on the global trends which will transform our future: • Artificial Intelligence and data • ageing society • clean growth • future of mobility
Transport Scotland Bus Policy	Transport Scotland sets the national policy framework on buses which is delivered by bus operators, local authorities, Regional Transport Partnerships and the regulatory authorities. Bus policy aims are:

Plan/strategy	Salient points
	To provide the environment for bus to act as an effective economic enabler by providing competitive, high quality public transport To enable bus to provide an effective alternative to the car by improving reliability, average bus speed and encouraging improvements to the quality of services and infrastructure To encourage investment in more efficient vehicles that produce less greenhouse gases and contribute to the targets in the Climate Change (Scotland) Act 2009 To link communities, people, places of business and employment and essential services through encouraging the maintenance and development of the bus network in Scotland
Highlands and Islands Enterprise Strategy	HIE's three priorities are to: grow successful, productive and resilient businesses; create the conditions for growth; and build strong, capable and resourceful communities. The approach importantly highlights the fundamental differences in a rural economy stating that 'the way services and policies are delivered needs to be tailored to the local situation'. HIE sets out that this is critical to delivering inclusive growth in remote areas, highlighting that activity needs to be flexible and adaptable according to place, business and community need. HIE's 2019-2022 Strategy has a number of priority areas to which the Project would contribute, for example: Enabling Infrastructure Investment would generate transformational opportunities to create a prosperous and attractive area. Community Assets The Project would secure the investment required to deliver economic, environmental and social outcomes.
HITRANS Regional Transport Strategy	The RTS vision is, *"To deliver connectivity across the Highlands and Islands which enables sustainable economic growth and helps communities to actively participate in economic and social activities."* HITRANS activities should contribute to these high-level objectives by supporting, making the case for, and delivering the following transport objectives: • Reducing journey times and improving journey reliability and resilience. • Improving/maintaining the safety of transport and travel. • Tackling capacity constraints across the network. • Improving the quality, accessibility, affordability and integration of travel. • Protecting the environment and mitigating the adverse impacts of travel/transport. • Improve health and well-being.

Plan/strategy	Salient points
Moray Local Outcomes Improvement Plan	Moray's Local Outcome Improvement Plan recognises the issue of Moray's rurality and identifies the development of transport, digital infrastructure and community empowerment as the means to address this deprivation. The Vision for Moray – Raising Aspirations through Expanded Choices, Improved Livelihoods and Wellbeing. In other words, the vision as a Community Planning Partnership is raising aspirations which will be done by creating an enabling environment where residents can achieve expanded choices, improved livelihoods and wellbeing. As a Partnership the CPP have identified four main priority areas to guide this work and deliver the vision: 1. Growing, diverse and sustainable economy; 2. Building a better future for our children and young people in Moray; 3. Empowering and connecting communities; 4. Changing our relationship with alcohol.
Moray Economic Strategy 2019-2029	In 2012 the Moray Economic Strategy was produced by the Moray Community Planning Partnership to provide a long term economic strategy for Moray. The strategy was reviewed and in December 2018 a refreshed strategy was published. The strategy takes account of changes in the economic landscape since 2012 not least cuts to public funding; it also reflects the work undertaken for the emerging Moray Growth Deal. The strategy maintains the overall objective to grow and diversify the economy and focuses on achieving four outcomes: Outcome 1**:** Qualification Levels - An increase across all ages and genders in qualifications relevant to growth sectors. Outcome 2**:** Small Business Growth - More small and medium-sized businesses employing between 10 and 100 people. Outcome 3**:** Talent Attraction, Retention and Return - More skilled, higher paid jobs that deliver net in-migration in the 16-29 age range. Outcome 4**:** Business Competitiveness - An increase in capital investment and focused workforce development to strengthen competitiveness.

Appendix 8 – Moray Overview

On 30 June 2019, the population of Moray was 95,820. This is an increase of 0.3% from 95,520 in 2018. Over the same period, the population of Scotland increased by 0.5%.

Between 1998 and 2019, the population of Moray has increased by 10.4%. This is the 11th highest percentage change out of the 32 council areas in Scotland. Over the same period, Scotland's population rose by 7.6%.

In 2019, the number of households in Moray was 42,932. This is a 0.9% increase from 42,554 households in 2018. In comparison, the number of households in Scotland overall increased by 0.7%.

Economic context in Moray

- 73.8% – employment level was 73.8% in 2017 very close to the Scottish average.
- 91.2% – of 16-19 year olds in education, training or employment – close to the Scottish average.
- 27.3% – visitor numbers in Moray increased by 27.3% between 2011 and 2017.
- £129m – generated within Moray through visitor and tourism business expenditure in 2017.
- 10% – gross weekly pay in Moray is 10% below the Scottish average.
- 10% – of the population in Moray aged 16-64 have no qualifications.
- 9% – total regional earnings decreased by 9% since 2009.
- 33% – of jobs in Moray are in higher-level occupations – the Scottish average is 43%.
- 10% – proportion of local businesses that are new businesses – Scottish average is 14.6%.
- 81.5% – of local businesses employ less that nine people.

Travel in Moray

In terms of journey making, a high proportion of journeys which commence in the Grampian area (Moray, Aberdeenshire and Aberdeen) also complete within the Grampian area – 97.2% of journeys 2015-2019 – this being the second highest rate in Scotland as a whole, only with the Highlands and Islands having a higher rate of 96.8%.

From the 2019 Transport and Travel in Scotland (TATIS) publication, Moray can be profiled as follows in terms of transport and travel:

In terms of usual method of travel to work, there is a high proportion of people travelling as the driver of a car/van – 69% compared to just 63% in Scotland as a whole. A further 10% travel as a car/van passenger, showing a higher level of car sharing, compared to the Scotland rate of 5%. There are similar levels of walking to work in Moray as is the case in the whole of Scotland, which sits at 12%, while only 1% report cycling to work in Moray, compared to nearly 3% in Scotland as a whole. Finally, 5% of people in Moray report taking the bus to work, which compares to a much higher rate of nearly 10% for Scotland as a whole.

When employed adults were asked if they could use public transport for the journey to work, 34% reported that they could in the Moray area, which compares to a little over 44% for Scotland as a whole. Moray's rate here sits well below the average across all Local Authority rates, which is 42% and the median, which is 41%. The highest rate for those stating that they could use public transport for the journey to work was 78% for the Midlothian Local Authority area.

Considering the journey to school, in Moray a high proportion of children walk to school, 62% compared to the Scottish rate of a little under 52%. In fact, the Moray rate is the highest Local Authority rate across all those presented in 2019. Consequently, Moray displays a much lower travel to school by car rate, at just 16% compared to the Scottish level of 25%, and travel by bus is also a little lower at 16% compared to the Scottish rate of a little over 18%. Travel by bicycle for the journey to school also fares well in Moray, with 6% of journeys by bike, which is three times the national rate of a little under 2%.

In terms of car availability, in Moray just 14% of households do not have a car/van available to them, which compares to the national level of just over 27%. But while car ownership in Moray is higher, this still means more than 6,000 households across the area do not have access to a car/van.

In terms of local bus services, a very high proportion of respondents had not used a local bus service in the past month. For Moray this sat at 81% of respondents, which compares to a national rate of just 61.5%. Neighbouring Aberdeenshire and Highland, had lower rates of 74% and 76% respectively that had not used a local bus service in the past month. Of those reporting that they used local bus services, most commonly this was about once a fortnight, or about once a month, with 12% of respondents reporting this frequency of use, while lower rates used local bus services more frequently. Specifically, four per cent of respondents reported using local bus services about once per week, two per cent reported using local bus services two or three times per week, and zero per cent respondents were using bus services every day, or almost every day. In terms of roughly daily usage, this compares to eight per cent across all Local Authority areas, and one per cent and two per cent in Aberdeenshire and Highland respectively.

In terms of satisfaction with public transport, only six per cent of Moray respondents reported being very satisfied, while a further 45% reported being fairly satisfied. These data compare to nearly 21% across Scotland as a whole being very satisfied and 47% being fairly satisfied. The Moray data therefore displaying significantly below the national satisfaction levels. Therefore, as expected those reporting that they were fairly dissatisfied or very dissatisfied with public transport in Moray was much higher, with 17% and 11% of respondents respectively, which compare to 9% and almost 7% nationally.

From the travel diary results in the Scottish Household Survey, bus was the main mode of travel for just three per cent of journeys, which compares to seven per cent nationally. There were similar levels of walking as the main mode in Moray as is the case nationally, with 22% of journeys made. Conversely, car/van driver is much higher in Moray with 58% of all journeys compared to a little under 53% nationally, while car/van passenger as the main mode is also higher in Moray with 15% of journeys compared to a little over 12% nationally.

Appendix 9 : Project Carbon Categorisation

Project Name: Bus Revolution

Deal Region: Moray

Brief Description of Project: Bus Revolution aims to increase the number of people using public transport in rural areas of Moray by introducing an 'uber' style demand responsive bus service. This will require capital investment for a new green fleet of electric buses, and associated charging infrastructure, operational systems and marketing.

The project will eventually operate at net zero as electricity from the national grid is decarbonised.

Carbon Emissions Impact Category:

- CONTROL Category (1-5): 3
- INFLUENCE Category (A-C): A

Justification of Expected Carbon Emissions Impact Category

The initial capital investment will involve embodied carbon emissions however the project will aim to be operationally net zero.

The embodied carbon is derived from the construction of the electric bus fleet, as well as the installation of new EV charging infrastructure. Whilst the project uses a significant amount of electricity in day-to-day operation, the planned decarbonisation of the national grid will enable the project to operate at net zero.

In calculating carbon emissions, the assumption is that each new electric bus will create a high level of embodied carbon of 88 tCO_2e. It has been assumed that charging infrastructure will require 1 x $1m^3$ concrete base per charging unit, each producing 0.27 tCO_2e. These figures include a +10% contingency.

By operating a flexible demand responsive service model using familiar smartphone technology, it is anticipated that there will be a considerable uptake of this new renewable travel option. This influence has been quantified pragmatically as a 1% shift from work-related car use in Moray. Over the project lifespan, this is estimated to represent a 2,114 tCO_2e offset.

In addition, the software systems proposed enable each vehicle to minimise energy use by calculating the most efficient route available to pick up/drop off passengers – vehicles will not be restricted to a pre-defined route. This will have a positive impact on the project's carbon footprint by lowering energy consumption and extending the life of consumables (e.g. tyres).

Could the Carbon Emissions Impact Category be improved?

The initial build of the new electric buses and charging infrastructure will result in embodied carbon being emitted. Therefore it is unlikely that the project could be improved from Category 3A to Category 2A.

Could the carbon performance of the project be improved?
The electric fleet and associated charging infrastructure could include additional measures to incorporate carbon savings during design and build if finances allow. If carbon conscious materials are mainstreamed and the price for such materials fall, then more carbon savings could be made from the fixed financial budget. However, such savings are unlikely to improve the carbon performance to a whole life carbon net zero status. This assessment is reflected in the chosen Category 3 status.

If it is deemed feasible that existing charging points are available to be used then the project could save an estimated 5.13 tCO_2e.

The new bus fleet will require electricity to operate. The carbon emissions of this will reduce over time as the electricity network is decarbonised. The main operational carbon emissions should therefore reach net zero at the same time as the national grid.

It should be noted that no provision in the above calculations has been made to absorb carbon emissions from the atmosphere or to produce renewable energy. Net zero might be achieved faster by considering the following, although funding for this is not included in this project:

- Charging stations designed to incorporate renewable energy production
- Roof mounted solar panels on all vehicles

The ability to subsidise travel on the proposed services to a level that is free at the point of use may encourage greater footfall, thereby increasing the influence of the project and delivering greater carbon savings.

How will carbon be managed?
Throughout the project, a monitoring process is proposed to consider the on-going influence of the project. This will include analysis of passenger numbers and travel trends, and counts of vehicular and active travel volumes around Moray.

A framework for capturing carbon performance in relation to the project is outlined in the Full Business Case. This will be based on the template provided as part of the Scottish City Region and Regional Growth Deals Carbon Management Guidance (11 August 2021).

What other carbon savings are expected to result from the project?
It is anticipated that the provision of a high quality, flexible demand responsive bus service will begin to bring about a modal shift in lifestyle choices towards public transport in Moray. Whilst this may be significant enough to influence wider carbon emission reductions, such a shift is difficult to quantify. A pragmatic approach has been taken towards the project's influence assumptions at this time, as previously discussed. The potential effects on the project's carbon performance of future climate-related travel/transport policies have therefore not been factored in.

Carbon Calculations and Monetisation
The whole life carbon at each stage of the project has been calculated and monetised according to the preferred project scenario.

The embodied carbon calculations have accounted for the introduction of:

- 3 x Vauxhall Vivaro electric buses and charging infrastructure in 2022
- 3 x Mellor Orion electric buses and charging infrastructure in 2022
- 1 x Optare Solo electric bus and charging infrastructure in 2024
- 1 x Optare Solo electric bus and charging infrastructure in 2026
- 1 x Optare Solo electric bus and charging infrastructure in 2027
- 10 x Vauxhall Vivaro electric buses and charging infrastructure in 2028

The operational carbon calculations comprise the emissions resulting from the estimated electricity use of the above vehicles by year of operation. Emissions factors per kWh of electricity were obtained from BEIS (2021a) for this purpose.
The project's influence is reflected in the calculations by the assumption that 1% of all work-related car journeys in Moray will shift to being made by electric bus. This results in a carbon offset throughout the project lifespan.

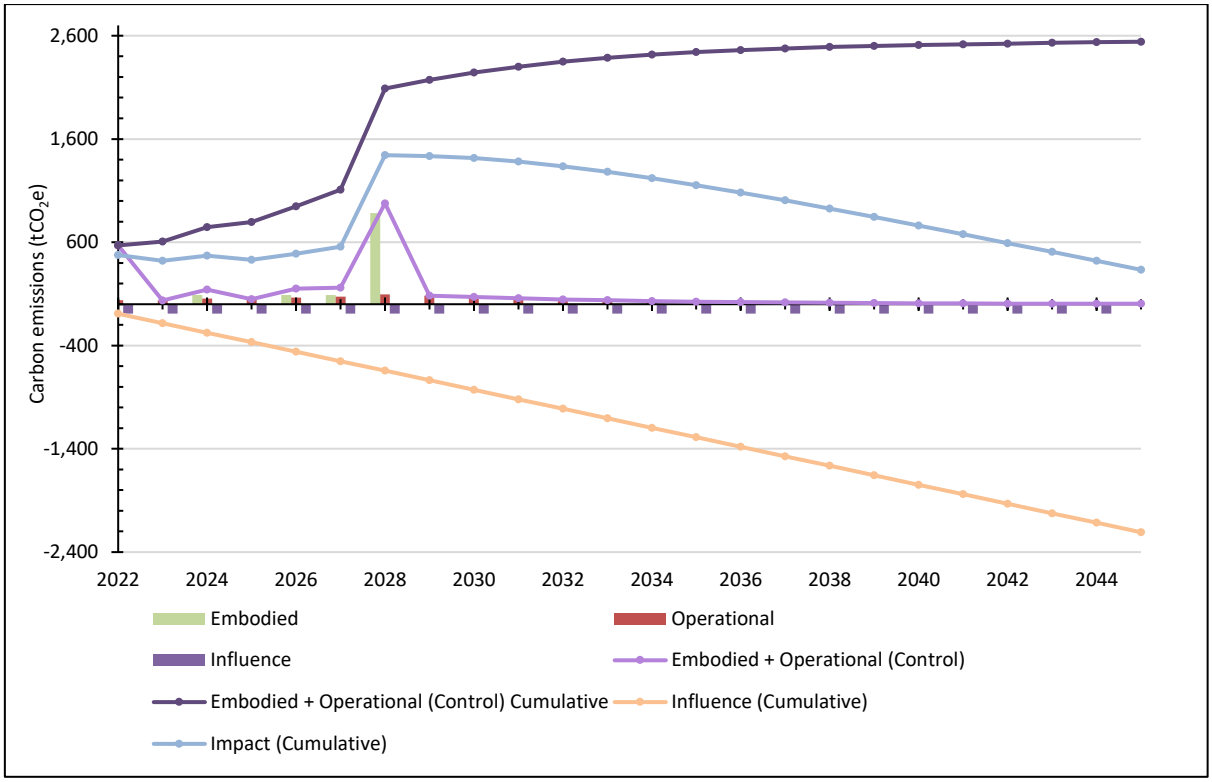


Figure 5. Estimated carbon emissions (tCO_2e) for Bus Revolution from 2022 to 2045. The project lifespan is 2022 to 2042.

The embodied, operational and offset carbon can be totalled and monetised. This economic value is determined from the *Valuation of greenhouse gas emissions: for policy appraisal and evaluation* (BEIS 2021b).
Carbon emissions are calculated for each year of the project and multiplied by the year's respective BEIS (2021b) carbon value.

Table 17. Total estimated carbon emissions (tCO_2e) and monetised carbon values (£2020 prices) for embodied, operational and offset carbon from 2022 to 2042. Calculated using carbon values from BEIS (2021b).

Carbon emissions	Total estimated carbon emissions (tCO_2e)	Total estimated monetised carbon values (£2020 prices)		
		LOW	CENTRAL	HIGH
Embodied	1,677	£220,503	£441,007	£662,039
Operational	1,187	£121,387	£242,858	£364,274
Offset	-2,114	-£344,264	-£688,712	-£1,033,068
TOTAL	**750**	**-£2,374**	**-£4,847**	**-£6,755**

Incorporating the central monetised carbon value in Table 1 with the economic case would reduce the preferred option's NPV of costs by £4,847. This would result in a nominal increase to the BCR of 0.002. The BCR of the preferred option would therefore remain greater than or equal to the BCR of the other options considered.

When the agreed vehicle implementation plan has been confirmed as part of the Full Business Case, it will be possible to give a more accurate monetised value for the estimated carbon emissions. It should be noted that the data accessed for operational annual electricity use does not account for the planned decarbonisation of the national grid.

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Appendix 10: Detailed break-down of passenger and revenue projections

Description of the services currently offered by the Moray Council

The Moray Council Public Transport Unit operates the following services:

- Home-to-school transport
- Health and Social Care Contracts
- Registered Services
    - Fixed route services
    - Dial-M Demand Responsive Services

The current Demand-Responsive-Transport (DRT) service from Moray Council is known as "Dial M for Moray". The Dial M service consists of:

- Utilising existing vehicles during the hours not required for school transport and HSC contracts
- Operates in 5 zones – Forres, Speyside, Buckie, Keith, Elgin
- Does not currently allow travel between zones.

During term time Dial M services operate Monday to Friday from 0915 to 1430. 9 vehicles are routinely used to provide these services.

The DRT service operates in Forres on a Saturday from 0900 until 1215 and 1300 until 1700

Journeys can be booked by calling the Contact Centre between 0845 and 1700 Mondays to Fridays.

Moray Council also operates 6 registered local services (fixed route services)

Service	Service description	Operates	Journeys
314	Forres Town circular. (effective from 24 February 2020)	Monday-Friday 08:40-17:00	8-9 times per day
334	Elgin - Kingston	Monday-Friday 07:04-19:14	5 journeys each way, 10 total
338	Aberlour - Carron	School days only	2 per day 07:55-08:45 15:10-16:05
364	Tomintoul - Grantown on Spey	Wednesdays only 09:10-13:50	4 per day
365	Tomintoul - Keith via Dufftown	Tues, Thurs and Friday	2 per day 7:55-09:50 Tomintoul to Keith 16:30-17:55 Keith to Tomintoul
366	Aberlour - Elgin	Monday and Wed	2 per day 09:05-10:20 Aberlour to Elgin 13:20-14:35 Elgin to Aberlour

Baseline passenger data

The table below shows a summary of passenger numbers across all bus services operated by the Moray Council.

Table: Passenger data from all bus services operated by the Moray Council

	Demand Responsive Transport (DRT)		Scheduled TMC Services		All TMC operated services	
Year	Total pa	Monthly Average	Total pa	Monthly Average	Total pa	Monthly Average
2016	32,746	2,729	13,802	1,150	46,548	3,879
2017	30,291	2,524	19,598	1,633	49,889	4,157
2018	27,793	2,316	20,634	1,720	48,427	4,036
2019	29,028	2,419	19,413	1,618	48,441	4,037
2020	13,510	1,126	14,930	1,244	28,440	2,370
2021	13,954	1,163	17,092	1,424	31,046	2,587
2022 (January-July)	9,895	1,414	13,883	1,983	23,778	3,397

The table above includes the monthly average passenger numbers.

Passenger numbers decreased at the time of pandemic restrictions, most notably March-July 2020 and again in January 2021. After both incidents, there was an improvement in passenger numbers.

Monthly passenger numbers peaked in January and February 2020, directly before the pandemic, exceeding 5,000 per month on both occasions. Passenger numbers exceeded 5,000 in a calendar month again this year, in June 2022. This is a positive indicator of post-pandemic recovery.

Passenger numbers from all bus services operated by the Moray Council in 2022 are 16% lower than in 2019 based on the monthly average number of passengers for the first 7 months of 2022 (3,397) compared to the full 12 months of 2019 (4,037).

Passenger numbers on demand responsive bus services operated by the Moray Council in 2022 are 43% lower than in 2019 based on the monthly average number of passengers for the first 7 months of 2022 (1,414) compared to the full 12 months of 2019 (2,419).

Passenger numbers on scheduled bus services in 2022 are 23% higher than in 2019 based on the monthly average number of passengers for the first 7 months of 2022 (1,983) compared to the full 12 months of 2019 (1,618). In 2022 a significant portion of the monthly passenger average is the passengers travelling on a new service, the Forres Town circular (the 314) which was launched in Feb 2020 and which served 865 passengers per month, on average, in 2022.

The existing DRT customer base, with a particularly high over-60 market, has been more significantly impacted in relation to the pandemic and regrowth in the market – and in comparing the figures between DRT and scheduled services there is also an imbalance because of the popular Forres Town service introduced in February 2020 accelerating recovery in scheduled bus service passenger numbers.

The figures do demonstrate a clear demand, even on a purely off-peak basis, for Demand Responsive Transport, which meets customer needs in areas where a timetabled service is not sustainable. Where repeat demand can be established there is the possibility that new timetabled

services can be introduced and sustained – this becoming a measure of success in growing the market rather than an indicator that DRT is not a valuable service.

Fares modelling, revenue projections and financial sustainability

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Appendix 11

Moray Transport Forum Workshop, Saturday 19th March 2022.

Moray's third sector Transport Forum hosted a Moray wide transport seminar on Saturday 19th March 2022. A wide range of community group representatives and interested parties participated in the two hour session. Working in groups, a number of themes were explored and the following bullet points highlight the delegates' aspirations and tie in with the aims of the Bus Revolution business case.

- Commercial bus services stop in rural areas after 6pm
- Commercial bus services do not operate in all areas on a Sunday
- Limited options if any for early morning travel other than into Elgin
- Little provision on commercial bus network for shift workers am and pm
- Connectivity from rural areas to access the commercial bus network or rail services
- Access to evening entertainment venues, socialising or hospital visiting impossible from many rural areas other than by taxi at high price
- Rail network only covers three communities
- Improved links within Moray to railway stations including Elgin.
- Young people in rural areas excluded from attending evening and weekend leisure or entertainment facilities due to no public transport
- Poor uptake of U22's free travel scheme as many young people in rural areas have little or no public transport access
- Several obvious geographical links not served, i.e. Keith – Buckie and Burghead/Hopeman - Lossiemouth
- Access to health and social care facilities difficult by existing public transport.
- On the day booked doctor appointments difficult on existing DRT booking platform; app based system will allow for on the day bookings.
- Residents in rural areas dependent on lifts from family and friends or taxis to access medical practices.
- Feeling of inequity in some rural areas versus the transport facilities provided commercially elsewhere