Promote the use of public transport

1. EXECUTIVE SUMMARY

1.1. The challenge this report seeks to address is to reduce the volume of emissions from transport, specifically travel by private vehicle, through the promotion of public transport.

1.2. On the Isle of Man the primary form of public transport is a whole island bus service (Bus Vannin), provided by the Transport Services Division of the Isle of Man Government Department of Infrastructure (DOI).

1.3. A heritage railway does operate but journey times, cost and frequency make them unviable as regular public transport options as they exist today. A further piece of work to understand the operating costs and options available to develop the Isle of Man Railway network into a valuable public transport system should be undertaken.

1.4. The UK Parliamentary Report into bus services in England outside London, published in May 2019, reported that people's choice of transport is influenced by convenience, frequency, reliability, journey length and cost.

1.5. A sample research exercise undertaken in the Isle of Man provided an indication that residents identified with those same issues.

1.6. This report considers further exploration and action that may need to be taken to address these issues and any other barriers identified.

1.7. The improvement of real time customer information through personal digital devices and public digital screens at key bus stops would increase the level of information available for customers, complementing the existing telephone information line.

1.8. Ticketing information needs to be simplified and payment methods easier. Feedback has shown that it is not always clear how a passenger can pay their fare, and if they can use cash on a bus whether they must provide correct change.

1.9. Consideration should be given to how a simple and reduced pricing structure could encourage people to use public transport. Retaining the requirement to pay, but overcoming the barriers of a complex pricing structure and multiple methods of payment would reduce confusion for customers. Options include the introduction of a single travel card and the continued development of contactless card payments.

1.10. It may also be valuable to consider a trial or a campaign to measure the true impact of implementing free travel.

1.11. Timetable improvements could bring the greatest increase in passenger numbers, with feedback on the complexity and inconvenience of the current timetable

indicating these are significant barriers.

1.12.   The operational model currently being progressed for Bus Vannin and the Heritage Railways by the DOI was established as part of the Government's SAVE (Securing Added Value and Efficiencies) Programme. The consequences of this could be a timetable created on the basis of cost.

1.13.   If timetables were developed from a place of customer demand rather than cost, providing a simplified timetable, with more direct services, specifically at commuting times, and considering new business developments, then this could lead to increased passenger numbers. If numbers were to increase there would be a requirement for the purchase of additional fleet vehicles.

1.14.   It is recommended that Bus Vannin consider this new operating model, and provide costs and opportunities that would be associated with this change. In addition, more detailed customer surveying should be undertaken to understand the specific customer demand that exists today and may exist in the future.

1.15.   Improvement to the facilities found on board buses could improve the quality of travel time and bring benefits for the commuter. Currently the ability to work is hindered by the configuration and facilities on board the buses. The introduction of tables, or tray tables, additional power points and drinks holders could significantly increase comfort and practical use of space for commuters.

1.16.   Any changes to the fleet would come at a cost and investigations into the practical ability to reconfigure spaces on board and the cost of doing so should take place.

1.17.   As well as encouraging travel by public transport through addressing these barriers, it is valuable to consider what might discourage private travel and what deterrents could be introduced.

2. INTRODUCTION

2.1.   Transport accounts for 19% of the total Greenhouse Gas (GHG) emissions for the Isle of Man and the largest emissions source in 2017 in this sector was passenger cars (Figure 1).
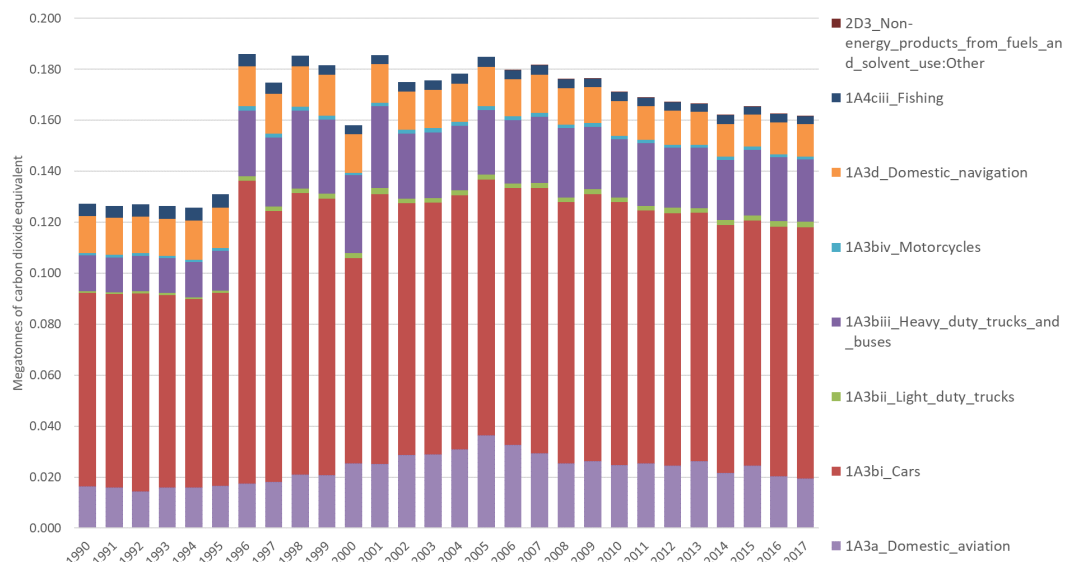

Figure 1 Emissions from the transport sector between 1990-2017, extract from:

2.2.   Between 1990 and 2017, emissions in the transport sector increased by 27% from 0.127 to 0.162 megatonnes of carbon dioxide equivalent. This trend is dominated by emissions from passenger cars; passenger car emissions have increased by 30% between 1990 and 2017 and 1% between 2016 and 2017.

2.3.   Between 2016 and 2017, emissions from all sources have decreased, except for emissions from passenger cars and fishing, which have both increased by 1%. (Aether, 2019)

2.4.   The challenge this report seeks to address is to reduce the volume of emissions from transport, specifically travel by private vehicle, through the promotion of public transport.

2.5.   Green Journeys, a national campaign to encourage sustainable travel, reported in July 2018 in response to the UK Government's Road to Zero Strategy, that cars are the number one cause of roadside air pollution; a double decker bus can take 75 cars off the road, and a modern diesel bus emits 10 times fewer Nitrous Oxides (NOx) emissions per passenger than a modern diesel car.

2.6.   There are 64,726 cars and 6,514 motorcycles registered on the Isle of Man as at August 2019, and 28,840 people working in Douglas as reported in the 2016 census. It has been calculated that in excess of 42,777 return commuter journeys are taken across the Island every day. This report suggests that a good starting point to significantly increase travel by public transport is to focus promotion on

travel to and from work. This is based also upon an aspiration that if travel behaviour to work is changed, then this may influence modes of leisure travel.

3. OPTIONS TO REDUCE EMISSIONS FROM PRIVATE VEHICLE TRAVEL

3.1.   The emissions hierarchy in the climate challenge mitigation strategy for the Isle of Man 2016-2020 "Greater efficiency, Cleaner energy, resilient economy," reported that the most cost effective means to reduce emissions was to first eliminate the energy demand itself where possible.

3.2.   The remaining demand should then be met with low emission sources of energy. This emissions reduction hierarchy can be seen below (Figure 2).
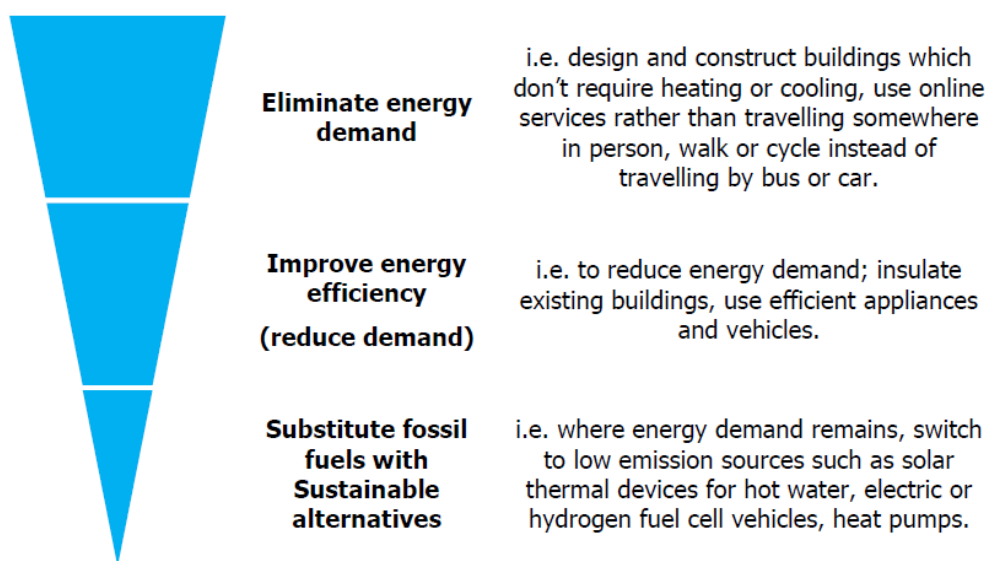

Eliminate energy demand	i.e. design and construct buildings which don't require heating or cooling, use online services rather than travelling somewhere in person, walk or cycle instead of travelling by bus or car.
Improve energy efficiency (reduce demand)	i.e. to reduce energy demand; insulate existing buildings, use efficient appliances and vehicles.
Substitute fossil fuels with Sustainable alternatives	i.e. where energy demand remains, switch to low emission sources such as solar thermal devices for hot water, electric or hydrogen fuel cell vehicles, heat pumps.

Figure 2 Emissions reduction hierarchy, extract from:

3.3.   Application of the emissions hierarchy to transport, is as follows:

Eliminate Demand

3.4.   Reducing the need to travel is the most effective method to reduce emissions. The development of policies which encourage working from home, as incorporated in WP36 "*Embed zero carbon concepts into the Isle of Man Government and Wider Community*", working from community hubs, Additional Work Package E '*Create business hubs and reviews working hours to reduce commuting*' and shopping locally WP24 "*Create and Efficient, low-cost marketing vehicle for local produce*" will all assist in eliminating travel demands.

3.5.   The following projects and policies already being developed by Government departments also have the potential to diminish the need to reduce the number of journeys taken. These include:

- The exploration of the development of Regional Service Centres for government services, as underway within the Cabinet Office
- The review of Library services, by the 'Tynwald Select Committee on Library Provision', due to return to Tynwald December 2019
- The work underway within the Department of Health to develop community based services.

3.6.   Whilst eliminating demand for travel would be the most effective way to reduce emissions, it is recognised that this is not always achievable, perhaps particularly in a rural 'dominated' setting such as the Isle of Man.

Reducing Emissions

3.7.   Should a journey be necessary, then the next preferable option to reduce emissions is for the journey to be by the most efficient mode of travel. These transport modes include both Active Travel and Public Transport.

Active Travel

3.8.   The Government's Active Travel Strategy 2018 – 2021 (Isle of Man Government, 2018), was published by the Department of Infrastructure in May 2018 and defines active travel as "walking or cycling (including the use of electric bicycles) as an alternative to motorised transport (cars, buses, motorcycles etc.) for the purpose of making everyday journeys".

3.9.   Further recommendations regarding active travel is reported within Work Package 25: "Establish active travel connectivity and target development along routes, building on DOI active travel project."

3.10.   The report for work package 25 considers active travel connectivity and the relationship between settlement patterns and growth direction as impacting on active travel and assisting a move from cars to alternative methods of transport, namely walking and cycling.

3.11.   It concludes that 'to facilitate this behaviour change, societal changes will be required, it will also be necessary to adapt planning to minimise distances and maximise opportunities for walking, cycling and public transport'.

Public Transport

3.12.   A second option to reducing energy demand and emissions is to increase the use of Public Transport. This report considers how the Isle of Man can promote and increase the use of Public Transport.

Sustainable forms of fossil-free fuels

3.13.   Third in line in the emissions hierarchy, is low emission energy sources. This is

addressed in WP 10 "*State future policy on fossil-fuelled vehicles."*

3.14. It is estimated that private cars lay idle for 90% of the time in the UK, fixed subscription 'Mobility as a Service' models that maximise the utility of vehicles, rather than leaving them parked, are growing in global popularity, e.g. the "Boris Bike" scheme in London which is now replicated in many other areas.

3.15. Mobility as a Service subscriptions which provide an on-demand, real-time platform to access a combination of transport methods such as car and bike sharing, taxis and car rentals/leases could be one way in which the Island's future transport needs are met.

3.16. Although not a current feature on the Isle of Man, there is the potential that such schemes could become popular in the future for residents and visitors.

The Challenge

3.17. The challenge to be addressed specifically in this report is the promotion of the use of Public Transport.

3.18. On the Isle of Man the primary form of public transport is a whole island bus service (Bus Vannin), provided by the Transport Services Division of the Isle of Man Government Department of Infrastructure. The services provided by Bus Vannin are comprehensive in terms of both geographical coverage and coverage by time of day.

3.19. The Transport Services Division also operate three heritage railways:

- The Isle of Man Steam Railway, dating from 1873, which operates along a 15.75 mile line between Douglas and Port Erin in the South of the Island;
- The Manx Electric Railway, opened in 1893, which carries people on electric trans along a 17.5 mile route taking in the spectacular scenery between Douglas and Ramsey via Laxey; and
- The Snaefell Mountain Railway, built in 1895, which winds from Laxey village to the summit of Snaefell.

3.20. Time, cost and frequency of the Island's heritage transport as they exist today make them unviable as regular public transport options. However, a further piece of work to understand the operating costs and options available to develop the Isle of Man Railway network should be undertaken.

3.21. It is recommended that an integrated transport strategy should be developed beyond this report to consider how bus and rail service can together maximise the options available, and enhance the offering of Public Transport on the Isle of Man.

3.22. This strategy should explore all available options to enhance the use of the Rail Network as a commuter service. The focus for the purpose of this report for 'public transport' is placed on Bus Vannin services.

3.23.   Bus Vannin is in its own operating context a lower emissions choice; for 20 years the UK bus industry has been driving innovation in the quest for lower emissions and greater efficiency. In the Isle of Man, the current bus fleet complies with Euro VI emissions standards, which qualifies as a low emissions bus which produces 15% less Well-to-Wheel Greenhouse Gas emissions than an equivalent Euro V equivalent diesel bus of the same passenger capacity.

3.24.   Buses play a vital role in decarbonising road transport by significantly reducing their own emissions and through modal shift, replacing car journeys.

3.25.   In addressing this challenge it is important to understand the barriers faced by customers when considering or using the bus. Research shows that consumers place bus journey times and reliability high up on their agenda when considering whether to convert a car (or other) journey to one by bus (Low Carbon Vehicle Partnership, Accessed 2019).

3.26.   While operators have embraced information technology to show exactly where buses are, evidence clearly shows the speed and reliability of services can be improved through bus priority measures and that bus use can dramatically increase when such measures are implemented.

3.27.   The UK Parliamentary Report into bus services in England outside London, published in May 2019, reported that people's choice of transport is influenced by convenience, frequency, reliability, journey length and cost.

3.28.   A sample research exercise undertaken in the Isle of Man provided an indication that Isle of Man residents identified with those same issues.

3.29.   Nine people highlighted the bus route as an issue, and that a requirement to change buses increases the journey time length, with a further three people highlighting the bus stop as too far away, from either home or work.

3.30.   This survey was held at one business location (Cooil Business Park), and almost all suggestions as to what would encourage people to get the bus referred to the bus route; a direct service to the business park with a bus stop located closer by.

3.31.   This local research sample is supported by a survey undertaken within a Government Department (Department of Environment, Food and Agriculture, 2019) where bus routes, bus times, and other commitments influenced people's choice of transport.

3.32.   When asked what would encourage this group to use private transport less 41% indicated discounted public transport tickets, 19% indicated access to a company car or car sharing scheme and 33% indicated nothing would encourage them.

3.33.   It is recommended that further work is undertaken to build upon this sample research. Significant investment is also required to understand in more depth the

barriers, the enablers and the improvements that would lead to an increase in public transport passengers.

3.34. Research from Transport Focus in the UK parliamentary report, noted that the "embarrassment factor" of not knowing how to use a bus was a major issue stopping people using buses (an issue which was also raised at the Climate Change public stakeholder engagement event which took place in the Isle of Man in September 2019). The research also sets out what people need to be able to use a bus:

- access to tools for journey planning, such as timetables;
- access to Real Time Information so they know when their bus will arrive;
- know the cost of the journey and how they can pay for it; and
- know how many stops there are to their destination and where the bus stop is located.

Options to promote public transport and increase passenger numbers

Improve Information

3.35. Anecdotally, the Isle of Man bus timetable is known as being difficult to understand. A dedicated phone line is available for customers and during 2016/17 on average 2,015 phone calls were made to this number, during opening hours (please note information beyond this is not currently available).

3.36. It is known that websites and apps can help customers to understand the timetable and to access real time information and Bus Vannin are currently in the process of replacing its mapping tool to provide real time information and easy access to bus times, routes and bus stops.

3.37. In addition Bus Vannin is developing an enhanced and improved website. This is currently at testing stage.

3.38. It is important to consider however, that apps or websites may not always be accessible as not everyone can afford data connectivity. Therefore the option of providing Real Time Information (RTI) at bus stops, using digital screens should be considered.

3.39. Real time information of this nature provides confidence to customers in using the bus service, giving assurance the bus they are waiting for is scheduled and providing a specific time for that arrival. Provision of this information displayed at bus stops enables those whose access to the internet is limited to receive the same assurance.

Simplify ticketing and fare system

3.40. Bus passengers and potential passengers need to understand fare and ticket options if they are to make an informed choice. Ticketing information needs to be

simplified and payment methods easier.

3.41.   Bus users can find it difficult to understand ticketing and fares options. Feedback has shown that it is not always clear how a passenger is able to pay their fair, and if they can use cash on a bus whether they must provide correct change.

3.42.   Fares can be pre-paid using the Go Card system, although there are currently a large number of different Go Cards in operation on the Bus Vannin network. Simplifying fares and ticket structures would make it easier for people who do not currently use a bus to make informed decisions about the cost of a journey, and to pay their fare if they do choose to travel by bus.

3.43.   Bus Vannin has introduced contactless card payments and are looking to introduce 'capping' so the hop on and off option is less expensive.

3.44.   Whilst cost in itself hasn't been identified as an issue in the small survey sample, bus travel was sometimes thought of as an expensive option. Further anecdotal evidence through the online consultation hub 'Dialogue' suggests cost may be an issue, with eight comments suggesting public transport should be free or fares cheaper. A Facebook page set up to campaign for free bus travel supports these suggestions. The group 'fare free Campaign; IOM' are a single issue group within the IOM Climate Change Coalition. The Facebook page has approx. 500 followers and campaigns for public transport to be free for all users.

3.45.   Whilst the concept of free bus travel is appealing, and is often assumed to increase passenger travel, there is limited evidence for this. Free bus travel would come at a significant cost to the Government and would hinder the ability to respond to the issues identified as barriers.

3.46.   It may be valuable to consider a trial for free travel to measure the true impact of implementing free travel. A trial for leisure travel could be undertaken on Tynwald Day or in the lead up to Christmas. On both days leisure travel by bus could be beneficial to the customer due to challenges with parking. A campaign targeted to commuters could introduce a trial of Free Friday travel, on the last Friday of each month. A trial would provide information as to the cost and benefits of free travel.

3.47.   It is recommended that consideration is also given as to how a simple and reduced pricing structure could encourage people to use public transport. Retaining the requirement to pay, but overcoming the barriers of a complex pricing structure, multiple methods of payment and confusion for customers.

3.48.   It is also recommended that a single travel card is introduced upon which all tickets can be loaded, and that this single travel card can be topped up in an increased number of outlets. In addition to the travel card, the continued development of contactless card payments is recommended to provide choice to the customer in terms of payment.

Timetable improvements

3.49. Feedback on the complexity and inconvenience of the current timetable would indicate that changes in this area could bring an increase in passenger numbers.

3.50. A simplified timetable, with more direct services, specifically at commuting times, that considers new business developments could bring significant returns.

3.51. The operational model currently being progressed for Bus Vannin and the Heritage Railways by the Department of Infrastructure was established as part of the Government's SAVE (Securing Added Value and Efficiencies) Programme. This established the principle of subvention reduction from fare increases and reducing operating costs, with a savings target of a subvention reduction of £1M by 2021/22.

3.52. The consequences of this could be a timetable created on the basis of cost, rather than customer demand.

3.53. A key objective for Bus Vannin is to be commercially viable. However, a substantial shift in the timetable to offer the services required would potentially change the operating model for the division, and would increase the operating costs.

3.54. If timetables were developed from a place of customer demand rather than cost this could lead to increased passenger numbers. If numbers were to increase there will be a requirement for additional fleet to be purchased.

3.55. It is recommended that Bus Vannin consider this new operating model, and provide costs and opportunities that would be associated with this change. In addition more detailed customer surveying should be undertaken to understand the specific customer demand that exists today and may exist in the future.

Reduction in travel times

3.56. The length of journey times from other towns across the island into Douglas can range from 40 minutes to in excess of an hour. Whilst timetabling alone may reduce these travel times, it is likely travel times will remain greater than those by private vehicle and until bus travel is at least equal to private vehicle travel times, it will be difficult for it to be a preferred choice.

3.57. The Isle of Man highway network would benefit from being redesigned so that estates have bus stops all through and main roads into town have bus lanes.

3.58. Research about the integration of the bus into the urban environment to enable it to be a realistic and viable alternative to the car was carried out by the Chartered Institute of Highways and Transport (CIHT) and the findings published January 2018 state that "The layout of streets and paths in new developments should facilitate direct and efficient bus operation, with direct and pleasant walking routes to bus stops" and that "urban developments must be designed specifically to

encourage their use. This involves bringing together the planning of land uses, the access routes to bus stops, and the bus infrastructure" (Pharoah, 2018).

3.59.   A far wider more strategic approach to promoting the use of public transport and increasing passenger numbers would involve significant costs and changes in planning policies. A feasibility study into the costs and benefits of such measures should be undertaken to ascertain the viability of such significant changes.

3.60.   Train travel in the UK is marketed on the ability to make smart use of travelling time. Bus Vannin has free Wi-Fi for all customers which does provide the ability for customers to work or 'life plan' whilst on board. However the ability to work is hindered by the configuration and facilities on board the buses. The introduction of tables, or tray tables, power points and drinks holders could significantly increase comfort and practical use of space for commuters.

3.61.   Some fleet is being introduced into UK cities that give consideration to an on board working environment for commuters, and further research through 'ALBUM' would be beneficial to understand the costs and benefits of such investment. ALBUM is a UK bus operating forum that exists to provide an opportunity for bus operators to exchange best practice among its members and to influence policy, for the promotion of high quality services that encourage more people to travel by bus.

3.62.   Any changes to the fleet would come at a cost and investigations into the practical ability to reconfigure spaces on board and the cost of doing so should take place.

Introduction of deterrents

3.63.   As well as encouraging travel by public transport through addressing the barriers, it is valuable to consider what might discourage private travel.

3.64.   This report specifically considers the promotion of public transport so has not explored the deterrents that could feasibly be introduced, how and when these could be used and the unintended consequences of doing so.

3.65.   Consideration could be given to these in the future, possible deterrents could include;

- increased cost of fossil fuel;
- increased cost of parking;
- payment for all corporate parking.
- reduction in availability of parking (e.g. street parking in Douglas);
- increased cost of owning a private vehicle i.e. increase in car tax.

4. CONCLUSION

4.1. This report considers, at a high level, the actions that could be taken to promote public transport and to increase passenger numbers.

4.2. It identifies some areas for action, with further considerations, but also recognises that there is further research required.

4.3. Steps for delivery:

- Further more detailed customer marketing surveys;
- Continued development of the Bus Vannin Website;
- Introduction of a fit for purpose travel app;
- Introduction of Real Time Information (RTI) provided at bus stops;
- The continued development of contactless card payments and simplification of current Go Card system;
- The development of an integrated transport strategy that considers how the Isle of Man rail network, together with the bus infrastructure can be developed;
- An enhanced bus (and rail) timetable, with more direct services, specifically at commuting times, that considers new business developments, to be included in the integrated transport strategy.

4.4. Steps for accelerated delivery:

- Consideration given to the introduction of a simple and reduced pricing structure;
- Introduction of a single travel card;
- A simplified timetable, with more direct services, specifically at commuting times, that considers new business developments;
- Timetables developed from a place of customer demand rather than cost;
- Investigations into the practical ability to reconfigure spaces on board and the cost of doing so should take place.

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