

Isle of Man Active Travel Investment Plan

For Isle of Man Government

March 2019



About Sustrans

Sustrans is the charity making it easier for people to walk and cycle.

We are engineers and educators, experts and advocates. We connect people and places, create liveable neighbourhoods, transform the school run and deliver a happier, healthier commute.

Sustrans works in partnership, bringing people together to find the right solutions. We make the case for walking and cycling by using robust evidence and showing what can be done.

We are grounded in communities and believe that grassroots support combined with political leadership drives real change, fast.

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Our vision



How we work



We make the case for walking and cycling by using robust evidence and showing what can be done.



We provide solutions. We capture imaginations with bold ideas that we can help make happen.



We're grounded in communities, involving local people in the design, delivery and maintenance of solutions.

What we do



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Executive Summary

The Isle of Man Active Travel Investment Plan (ATIP) looks at the potential for providing infrastructure and behaviour change measures as a way to encourage more cycling, walking and other methods of active travel.

The ATIP covered an area measured as 2.5 miles from the centre of Douglas and the focus is to encourage more “Journeys for a purpose” rather than leisure or tourist trips, although it is recognised that these can play an important part in developing an active travel culture.

A range of analysis and use of previous experience has led to a series of conclusions regarding where funding will be best focussed. From this analysis a series of clear priority interventions has emerged.

Emerging Themes for Walking:

There is already a strong culture of walking in the study area, however there are a significant number of trips that are still made by vehicle by people travelling within relatively short distances.

Topography, and the relatively dense street environment of the study area means that specific walking infrastructure interventions are difficult to identify by looking at data. There are many potential journeys in many potential directions. To overcome this, it will be essential to work within the communities to ensure that barriers to active travel are identified and removed. A series of “Local Walking and Cycling Zones” have been identified which encompass quieter roads and paths but are segregated from each other by busier roads. Residents should be able to travel safely within the zones for local journeys but also over the busier roads between the zones for longer journeys.

As with cycling, work with residents, local schools and businesses is needed to bring about a cultural change, to make active travel the obvious choice for the shorter journey. This needs to be done by engaging communities, creating a feeling of safety and ownership of an area and making the walking experience enjoyable and rewarding.

Emerging Themes for Cycling:

The challenging topography and available road widths in much of the study area, suggests that higher cost cycle infrastructure such as cycle tracks and junction treatments should be concentrated on the river valleys, sea front and the most gently sloping roads within Douglas centre, with links provided from surrounding communities.

A finer grained network of cycle routes, serving the remaining parts of the study area will best be achieved by providing a series of lower cost interventions such as Advanced Stop Lines and exempting cyclists from one-way streets (where width allows) but mainly

through engagement with local communities to ensure that the right infrastructure is provided that enables them to travel between the quieter residential streets to reach local destinations or to join one of the main proposed routes.

Previous studies and stakeholder engagement have shown that provision of “trip-end” facilities is vital to encourage cycling. Good cycle storage, lockers and shower facilities will need to be provided to enable cycling to become a habit.

Work with communities, businesses and schools will be essential to encourage residents who have never cycled before to give it a try. Training, support and encouragement will be needed to ensure that cultural change can take root.

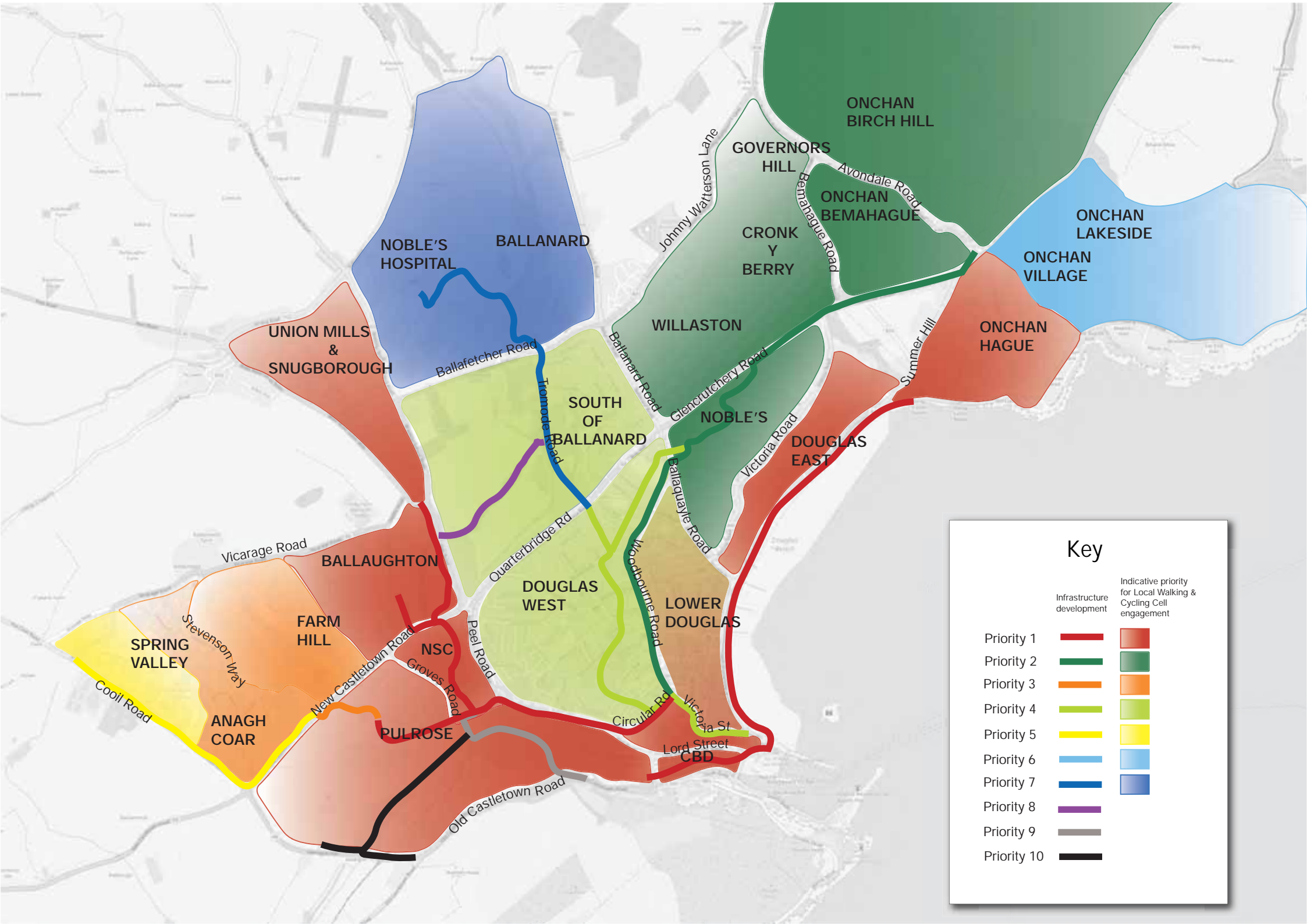
Specific interventions:

To address the above themes a long list of interventions has been prioritised and these can be summarised as:

- Development of walking and cycling routes along the river valleys linking Anagh Coar, Farm Hill, Pulrose, Ballaughton and the Heritage Trail with Douglas centre. Integrations of new and existing routes and links to surrounding communities is key.
- Continued development of cycling on the Promenade with improved links to joining side roads
- Development of a spinal route through Douglas West and Nobles, leading to Onchan
- Blanket application of short-term measures such as Advanced Stop Lines, one-way exemptions (where width allows) and pedestrian signage (inc. destination and timings) where appropriate
- Implementation of the findings of the SYSTRA PERS report which includes provision of dropped kerbs, new crossings etc
- Measures to encourage businesses to provide or improve access to lockers and secure cycle parking and to encourage staff members to travel actively to work through incentive and competition
- Major engagement exercises with the identified “Local Walking and Cycling Zones” to identify walking and cycling infrastructure that supports safe and enjoyable movement within and around them. This should be integrated and focussed on work being undertaken with local schools

These measures are summarised on the adjacent map and discussed in detail within this document. All measures should be implemented with health and safety in mind and adhere to the aims and vision of the Isle of Man Road Safety Strategy 2019-2029.





Key

Infrastructure development	Indicative priority for Local Walking & Cycling Cell engagement
Priority 1	Priority 1
Priority 2	Priority 2
Priority 3	Priority 3
Priority 4	Priority 4
Priority 5	Priority 5
Priority 6	Priority 6
Priority 7	Priority 7
Priority 8	Priority 8
Priority 9	Priority 9
Priority 10	Priority 10

1. Introduction

The Active Travel Strategy

The Active Travel Investment Plan forms a key part in the development of the overall Active Travel Strategy for the Isle of Man. The strategy's aim is to increase participation and see more than 20% of people travelling actively to work by the time information for the 2021 Census is gathered.

In early 2017 the Isle of Man Government determined what the priorities would be for the next five years and published them as the Programme for Government. One of these priorities was to increase the number of people using more active forms of travel on a regular basis.

It was identified that in order to achieve this there would need to be a coordinated approach across Government and beyond. It was therefore agreed that there was a need for an Active Travel Strategy and the Department of Infrastructure was requested to prepare this document in close collaboration with the Department of Health and Social Care, Department of Education, Sport and Culture, the Road Safety Partnership (Department of Home Affairs) as well as the Department of Environment, Food and Agriculture.

The long-term vision for the Isle of Man is: **to be an Island where cycling and walking are normal and realistic transport choices for people of all ages and abilities.** One of the main ways in which to achieve this vision will be to increase the number of people travelling actively.

The Active Travel Investment Plan (ATIP)

The ATIP's aim is to provide the evidence and rationale for how money is to be best spent to achieve the aims of the Active Travel Investment Strategy. Its approach is to match theoretical modelling data, topography, the features of the built environment and local knowledge to Sustrans' experience of active travel development to create a sensible plan of action with clear aims and priorities.

This document is based on the UK DfT's Local Cycling and Walking Infrastructure Plans (LCWIPs), and will enable a long-term approach to developing local cycling and walking networks.

Sustrans has adapted the LCWIP approach to be able to take into account cultural and behavioural change and to ensure that they are combined into a joined-up approach that serves the specific needs of the Isle of Man.

The key outputs of the Active Travel Investment Plan are:

- Network plans for walking and cycling which identifies preferred cycle routes and core walking zones and local cells for further development
- A prioritised and combined programme of infrastructure improvements and behaviour change to guide future investment
- This report which sets out the underlying analysis carried out and provides a narrative that supports the identified improvements and network

Maps throughout the report have been created with the use of Isle of Man Government Spatial Products.



Figure 2. The launch of the Active Travel Strategy at Ballakermeen High School

1	Determining Scope	Establish the geographical extent of the LCWIP, and arrangements for governing and preparing the plan.
2	Gathering Information	Identify existing patterns of walking and cycling and potential new journeys. Review existing conditions and identify barriers to cycling and walking. Review related transport and land use policies and programmes.
3	Network Planning for Cycling	Identify origin and destination points and cycle flows. Convert flows into a network of routes and determine the type of improvements required.
4	Network Planning for Walking	Identify key trip generators, core walking zones and routes, audit existing provision and determine the type of improvements required.
5	Prioritising Improvements	Prioritise improvements to develop a phased programme for future investment.

Figure 3. The LCWIP process which has been adapted to create the ATIP (LCWIP Technical Guidance 2017)

2. Determining Scope

The "Study Area" will roughly include an area within a 2.5 mile radius of Douglas Centre. This includes the urban area surrounding Douglas. It is recognised that active travel has an important part to play in the travel choices and health of the entire island but Douglas, its adjoining settlements and all schools, has been chosen as the key short-term priority.

The extent of the study area lends itself to distances that are known to be achievable by walking and cycling. In general people can be expected to comfortably cycle 5km and walk 2km, even if not experienced. The study area will contain many journeys that fall within these distances.

Active travel is defined 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. The terms "walking" or "walker" are used as generic terms to include running as well as non-motorised uses for instance wheelchairs, electric wheelchairs, mobility scooters and other mobility aids, scooters and other means of self-propulsion".

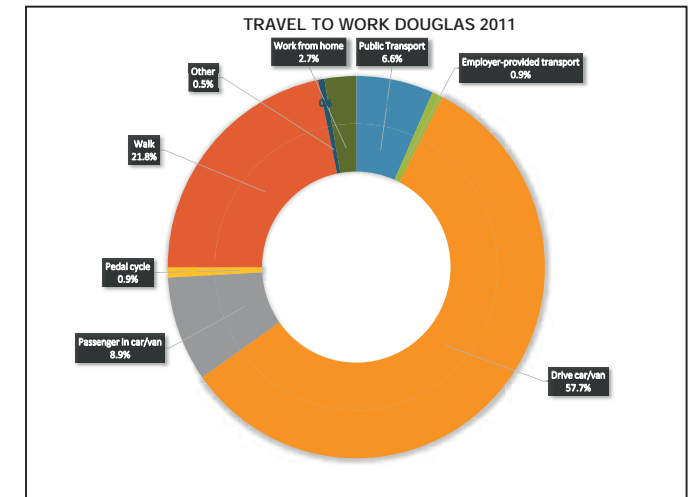


Figure 4. Census 2011 - transport data for Douglas



Figure 5. Scope of study

3. Information Layering

For the Active Travel Investment Plan to be successful it must take into account four main areas of information:

Key Strategic Information

As discussed in the Active Travel Strategy, in order to build a culture and a transport network conducive to walking and cycling, there must be a collective effort from across many strands of local and national Government. This document brings together key extracts from a range of policy documents so that proposals can be easily cross-checked against them. See **Appendix A**.

Existing and Planned Infrastructure

It is crucial to ensure that all proposals align and maximise the benefits of existing and planned infrastructure, particularly when considering cycling and walking infrastructure. A summary map is provided here with more details in **Appendix B**.

Modelling

This contains theoretical modelling outputs using census data and a range of other factors to create a map of where active travel trips are most likely to be made. Findings are summarised in the main report and detailed in **Appendix D**.

User Knowledge

Takes information from people who have an interest in walking and cycling now to provide local knowledge. A summary map is included here with further detail in **Appendix C**.

4. Key Strategy Information

The Active Travel Strategy and the Road Safety Strategy as the key strategies is summarised here, but other key document extracts are included in Appendix A and some discussed within the document. These include:

- Manual for Manx Roads
- Isle of Man Strategic Plan 2016
- Douglas Corporate Plan 2017
- Area Plan for the East
- Highways Forward programme
- Central Douglas Master Plan
- Public Rights of Way Policy and Strategy 2018 – 2028
- Health and Social Care in the next 5 years 2015
- Isle of Man Destination Management Plan 2016 - 2020
- Isle of Man Strategy for Sport 2014 - 2024



Active Travel Strategy 2018 - 2021

The Active Travel Strategy has been prepared by the Department of Infrastructure (DoI) with other departments, and aims to increase the number of people using active travel for everyday trips to work and school.

Vision - An island where cycling and walking are normal and realistic transport choices for people of all ages and abilities.

Targets - To increase people travelling actively to work to 20% by 2020 from a base of 14% in the 2011 Census and to 30% by 2025.

Principles

- To enable more active travel by creating a safe, convenient and effective network
- To encourage and promote a shift of choice to active travel for everyday trips

Key issues to be considered

Infrastructure improvements, behaviour change and improved education, a network of walking and cycling routes, partnership working and delivery.

Definition - the term 'active travel' relates to journeys made for a purpose of work and school trips. It excludes recreational cycling and walking, which will be covered in separate strategies.

The strategy makes a compelling case for increasing active travel, outlining the many benefits to people's health and wellbeing that regular physical activity such as walking and cycling bring.

Value for Money – Local sustainable transport schemes in England typically bring £5.50 in benefits for every £1 spent and can be implemented quickly in under two years.

Year	Total travelling to work (based on 2011 census)	Actual travelling actively	% travelling actively target
2011	43,134	6,143	14.24
2020		8,626	20 (estimate)
2021		9,489	22
2022		10,352	24
2023		11,214	26
2024		12,077	28
2025		12,940	30

Figure 6. Active travel targets, from the Active Travel Strategy

Objectives

- walking and cycling are normal and realistic transport for people of all ages and abilities
- increase participation of people travelling actively
- encourage more people to switch from motorised transport to active travel
- consider barriers to people travelling actively and aim to address them in the action plan (the ATIP)
- increase the number of people choosing active travel to work in Douglas
- encourage active travel choices for pupils and students in all of the island's schools and the University College, Isle of Man

Links with other strategies

Other strategies considered as part of the Active Travel Strategy include:

- Cycling for Leisure Strategy
- The National Infrastructure Strategy
- Isle of Man Strategic Plan 2016 and Area Plans
- A Climate Change Mitigation Strategy for the Isle of Man 2016-2020
- The Road Safety Strategy
- Any future relevant strategies produced by any Government Departments

Campaigns led by the Department of Health and Social Care where there is a role for active travel will also be taken into consideration.

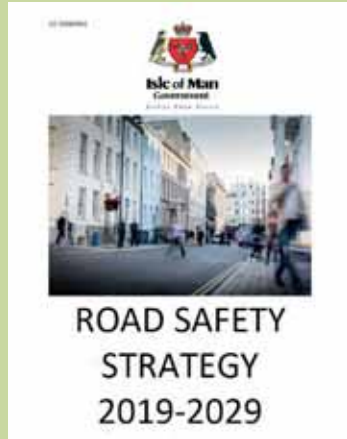
Monitoring

No major traffic surveys have been carried out to gauge levels of active travel. There is some travel data in the Census for 2011 and 2016 and Social Attitude Surveys 2016-2018. The Census of 2021 will be used to monitor the strategy targets.

"Early intervention and prevention is better than cure - more people - more active - more often."

"Obesity is estimated to cost the Isle of Man £5.6 million per year, rising to £56 million per year by 2050."

Quotes from the Strategy for Sport, p6



Road Safety Strategy 2019-2029

This Strategy has been developed by the Road Safety Partnership. The Partnership is a cross Government group consisting of members from the Isle of Man Constabulary, the Fire & Rescue Service and Ambulance Service, the Departments of Infrastructure, Health & Social Care and Education Sport & Culture. The Partnership works together to reduce the risk of harm for everyone who uses our Island's roads.

The vision of the Strategy is:

“A future where no-one is killed or sustains serious/life changing injuries on our roads”

The overall aims of the Strategy are:

- To reduce the numbers of road traffic collisions resulting in deaths and/or serious/life-changing injuries;
- To protect all vulnerable road users including cyclists, motorcyclists, pedestrians, horse riders and groups vulnerable by age or disability;
- Reduce inappropriate road-based anti-social behaviour including speeding, drink and drug driving, careless and dangerous driving, seatbelts and mobile phone use (the 'fatal four');
- To address high fatal and seriously injured casualty levels during motorcycle festival times;
- Develop a culture of respect for all road users by all road users;
- Encourage an understanding that road safety is everyone's responsibility;
- To improve our understanding of collisions on the Isle of Man to better inform this Strategy and road safety activity;
- To improve collation and analysis of data that better informs road safety activity;
- To ensure funding is targeted to support this Strategy and our ambitious Vision.

The Strategy will focus on four main areas:-

Safe Roads

Within with Safe System Approach, roads will be designed to reduce the risk of collisions occurring and the severity of injuries if a collision does occur. Safety features can be engineered into the road design from the outset, or when dealing with a historical road network, improvements can be made through engineering remedial measures, through the road maintenance programme and the planning process.

Safe Vehicles

As part of a Safe System Approach, general, government and commercial road users will be encouraged to choose the safest vehicles and ensure they are maintained to the highest standards.

Safe Speeds

Speed limits in a Safe System Approach are based on aiding collision avoidance and taking into account a human body's limit for physical trauma. As part of this Strategy we will use data from road traffic collisions to ensure speed limits are appropriate to individual sections of roads. Education of road users on the effects of speed will form part of the Strategy. Finally, enforcement will remain a key part of a Safe System Approach to road safety in the Isle of Man.

Safe People

The Safe System Approach encourages safer road use primarily through education, training, publicity and enforcement. We will explore opportunities to ensure our drivers are competent and fit to drive throughout their lives through our driving test and licensing processes.

Over the next ten years, our Strategy will aim to meet the following targets:-

- 40% reduction in the annual number of people killed or seriously injured in road traffic collisions
- 15% reduction in the annual number of road users sustaining slight injuries in road traffic collisions
- 30% reduction in the annual number of non-motorised vulnerable road users who are injured (all severities) in road traffic collisions
- 40% reduction in the annual number of powered-two-wheeler road users who are injured (all severities) in road traffic collisions
- 20% increase in the number of non-motorised vulnerable road users who say they feel safe using our roads

The recommendations within the Isle of Man Active Travel Investment Plan should compliment the Road Safety Strategy. In particular they should be designed /implemented in such a way as they help minimise non-motorised vulnerable road user injuries and increase the numbers of vulnerable road users feeling safe on the Isle of Man's Roads.

This can be achieved through careful planning and the right blend of infrastructure and behaviour change investment.

5. Existing and Planned Infrastructure

Further details of all identified elements of existing and planned infrastructure are included in Appendix B.

These interventions already show a significant investment in walking and cycling. Proposed infrastructure and behaviour change measures should seek to build on these and maximise the benefits gained.

1. Promenade - includes shared-use by walkers and cyclists.
2. Promenade Redevelopment - Major redevelopment including footway and overall streetscape.
3. Douglas Centre Regeneration - Pedestrianisation with high quality paving, tree planting, seating and public art.
4. Douglas Centre Regeneration Phase 2 - Includes repaving, carriageway narrowing, wider footways, outdoor seating etc
5. Sea Terminal Cycling Improvements - Converts footway between Promenade and North Quay to shared-use with pedestrians
6. North Quay - Has been extensively redesigned to improve the environment for walkers. Will also be signed to allow cycle use in both directions. (currently operates as one-way for vehicles)
7. Peel Road - Cycle lanes, shared-use footways and toucan crossing have been introduced to allow easier access by cycle.
8. Steam Heritage Trail - Parts of the disused railway have been surfaced to allow for walker and cyclists use. Further surfacing is planned for 2019.
9. NSC Perimeter raceway - The road around the sports tracks is used for cycle training and also acts as part of a commuter route.
10. Anagh Coar cycleways - There are a number of paths within this residential area that were intended to be cycle routes but never signed.
11. Isle of Man Business Park - Recent new developments have included 3m wide shared-use footways adjacent to Cooil Road.

The Pedestrians Environment Review System (PERS) has also indicated a number a number of improvements that will be included in short-term programmes. These include dropped kerbs, crossings, tactile paving etc

Walking infrastructure is widespread across Douglas and footways, crossings and paths have been developed over the years to create an extensive network. Proposals raised in this report will seek to gain maximum benefits to that network and build upon it.

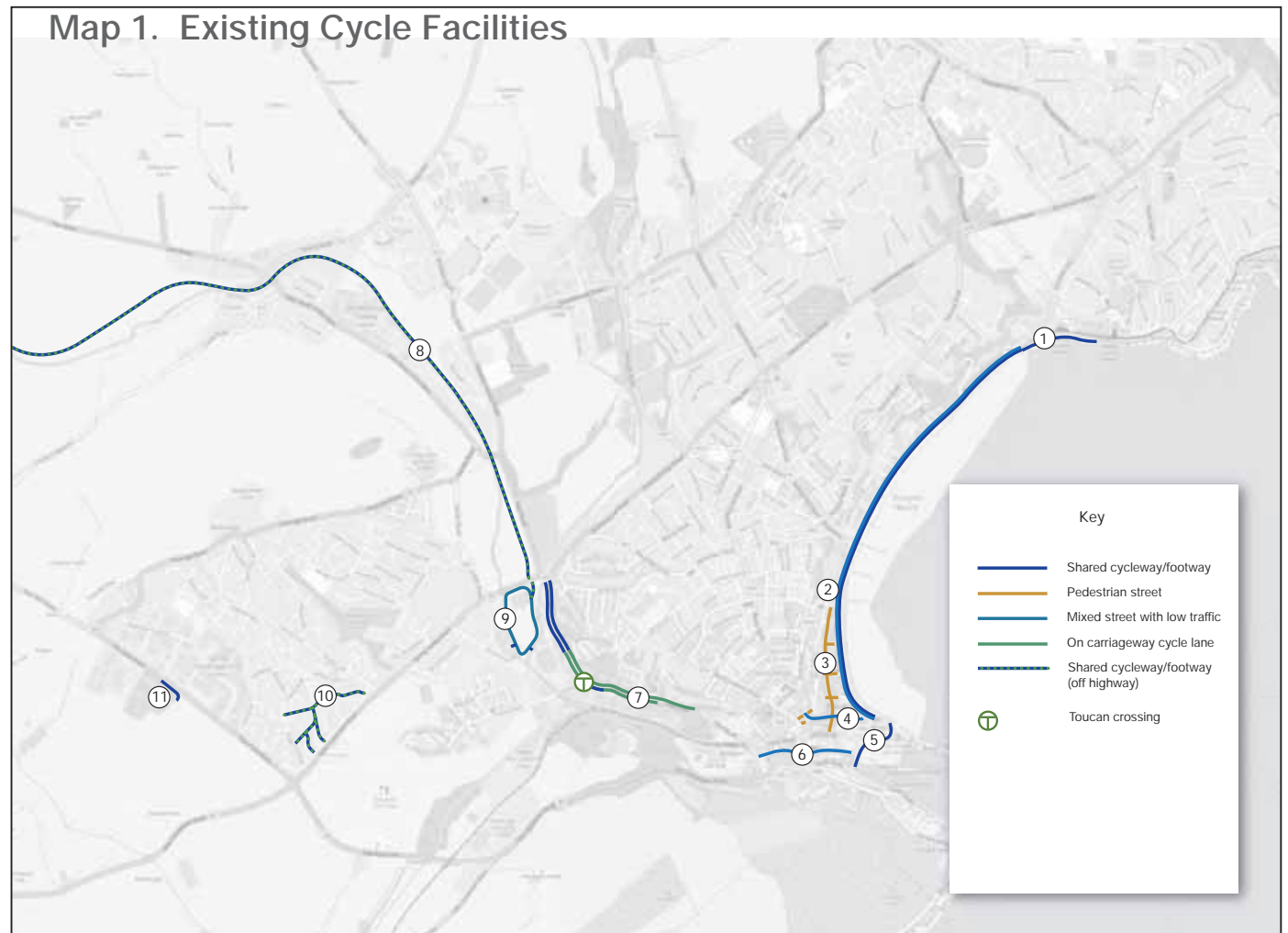


Figure 7. Peel Road cycle lane



Figure 8. End of the Promenade shared-use facility

6. User Knowledge

One of the key stages of information gathering is the gaining of local knowledge, both from the perspective of Government Officers and from interested members of the public.

To do this, workshops were held on the Isle of Man on the 14th November 2018. These workshops built on processes used by various consultants in developing Local Walking and Cycling Infrastructure Plans (LCWIPs) in the UK and centred on a large map of Douglas. This map had no information added beforehand and workshop attendees were encouraged to identify key:

- Barriers to walking and cycling
- Opportunities to provide active travel routes
- Existing active facilities that could be built on
- Missing links in the walking and cycling network

Through this conversational analysis and map work, potential networks emerged which can be used to provide a layer of evidence that can be added to theoretical modelling data, topographic data, and network analysis by Sustrans, to provide a justified list of infrastructure and behaviour change interventions that will enable the Isle of Man to achieve its active travel ambitions.

A map showing a summary of the combined ideas springing from the workshops are included opposite. Maps with original comments are included in Appendix C together with a list of attendees.

Isle of Man Government Officers Workshop

This was undertaken on the 14th November 2018 at the Department of Infrastructure offices at the Sea Terminal, Douglas.

Along with the outputs on the map overleaf, verbal issues raised included:

- “The Isle of Man Government is seeking to encourage businesses to ask their staff to cycle more, but as a major employer its own facilities need to be better. There are not enough showers, lockers or secured, covered bike parking to enable daily commuting. The Properties Department needs to be on board with the Active Travel Project.”
- “Weather can be a real deterrent on the Isle of Man.”
- “The attitudes of drivers and cyclists need to be less negative towards each other. There is aggression and animosity either way.”
- “E-bikes will be an opportunity to overcome the hilly topography.”
- “Route signing is an issue and needs to be improved.”

Interested Member of Public Workshop

This was undertaken on the 14th November 2018 at the Cycle360 cycle hub at the Isle of Man Enterprise Park.

Attendees were chosen because they had a known interest in walking and cycling and had expressed an interest in passing on their views. They were not representative of the population of Douglas as a whole, but their everyday experiences added considerable knowledge to this report.

Along with the outputs on the map overleaf, verbal issues raised included:

- “The Peel to Douglas Railway is a key opportunity and should be constructed to a high specification in the first phase of the project.”
- “20mph zones should be considered for central Douglas where no cycle-specific infrastructure is likely to be possible.”
- “Lots of traffic on the Promenade is just driving around looking for a parking space. Llandudno is a good example of how this issue has been dealt with.
- “Car-Bikeport style cycle parking would be useful for Douglas as it just fits into a parking space and can be moved around if use proves to be low and any one location.”
- “It takes a long time to cross over from the Promenade using the existing crossings, and this encourages pedestrians to cross on the red light.”
- “The lights at the New Castletown Road junction aren’t triggered by cyclists.”

Themes Emerging from the Map Work:

The workshops raised many of the same issues and there was very little conflict between the two. Both also came up with a number of potential projects that had not been identified through previous discussion and surveys.



Figure 9. Stakeholder group mapping output



Figure 10. Stakeholder group engagement at work

NOTE: Stakeholder sessions were aimed at gathering local knowledge only and did not form part of a general public consultation. Attendees were people who already cycle and were chosen to attend by the DoI or by local cycling enthusiasts. It is acknowledged that cycling had more representation than walking but key walking information was also gathered

Items raised:

1. Heritage Trail

In both workshops the development of the disused railway between Peel and Douglas was seen as imperative, as well as a link from it to the Promenade. It was stressed in the public workshop that it should have an all-weather surface and be suitable for commuters as well as leisure users and tourists. Various options for linking the railway to the Promenade were discussed.

2. Anagh Coar

Both workshops saw the provision of a route to the housing and employment sites in Anagh Coar as a key route. Again, this would use a route in the river valley for which there are a number of options. The Government Workshop questioned whether a route on Cooil Road would be much used and suggested ways through the back of the Industrial Estate could provide a quicker, flatter route and provide routes for residents and schools.

The Public Workshop thought that both routes would be used especially as industry develops on the south side of Cooil Road. They also raised the difficulties of pedestrians crossing Cooil Road and thought crossing points were needed near bus stops.

3. Access to Noble's Hospital

Both workshops recognised that the A23 was a difficult road to provide infrastructure on, but thought that a route to the rear of the Hospital from Ballafletcher Road would be of use to connect employees living in the Tromode, Willaston and North Onchan. A route through the tree plantation to the south-east of the Hospital was seen as a good likely route.

4. Onchan to Promenade

Onchan is in easy cycle distance of Douglas centre. However, cyclists must climb one of a number of steep roads to get up to Onchan. Summer Hill Road was seen as being particularly difficult for cycling, especially its junction with the Promenade. Both workshops suggested signing a route via the Harbour Road area.

5. Residential Road and cut-throughs

Whilst the narrowness, volume and speed of traffic were seen as preventing provision of infrastructure on many of the main roads, the opportunity to provide routes using back streets, linked with cut-throughs and crossing points over the main roads was discussed. In particular Willaston, Onchan (Birch Hill) and Anagh Coar were seen as having potential to have minor schemes carried out that would allow

better local journeys (including journeys to school) but also provide longer routes.

6. Quarter Bridge

A number of junctions were seen as difficult (see adjacent list) but Quarter Bridge was raised as being critical for improved walking and cycle access. Difficulties with providing a crossing point at the end of the Heritage Trail were raised in the Government workshop, while the Public Workshop raised a potential solution to bring a track closer to the river and to cross New Castletown Road nearer to the A6, and to then join the tracks around the National Sports Centre, thus bypassing the junction.

It was made clear though that improvements were needed at the junction itself for both pedestrians and cyclists.

7. 20mph zone in Douglas

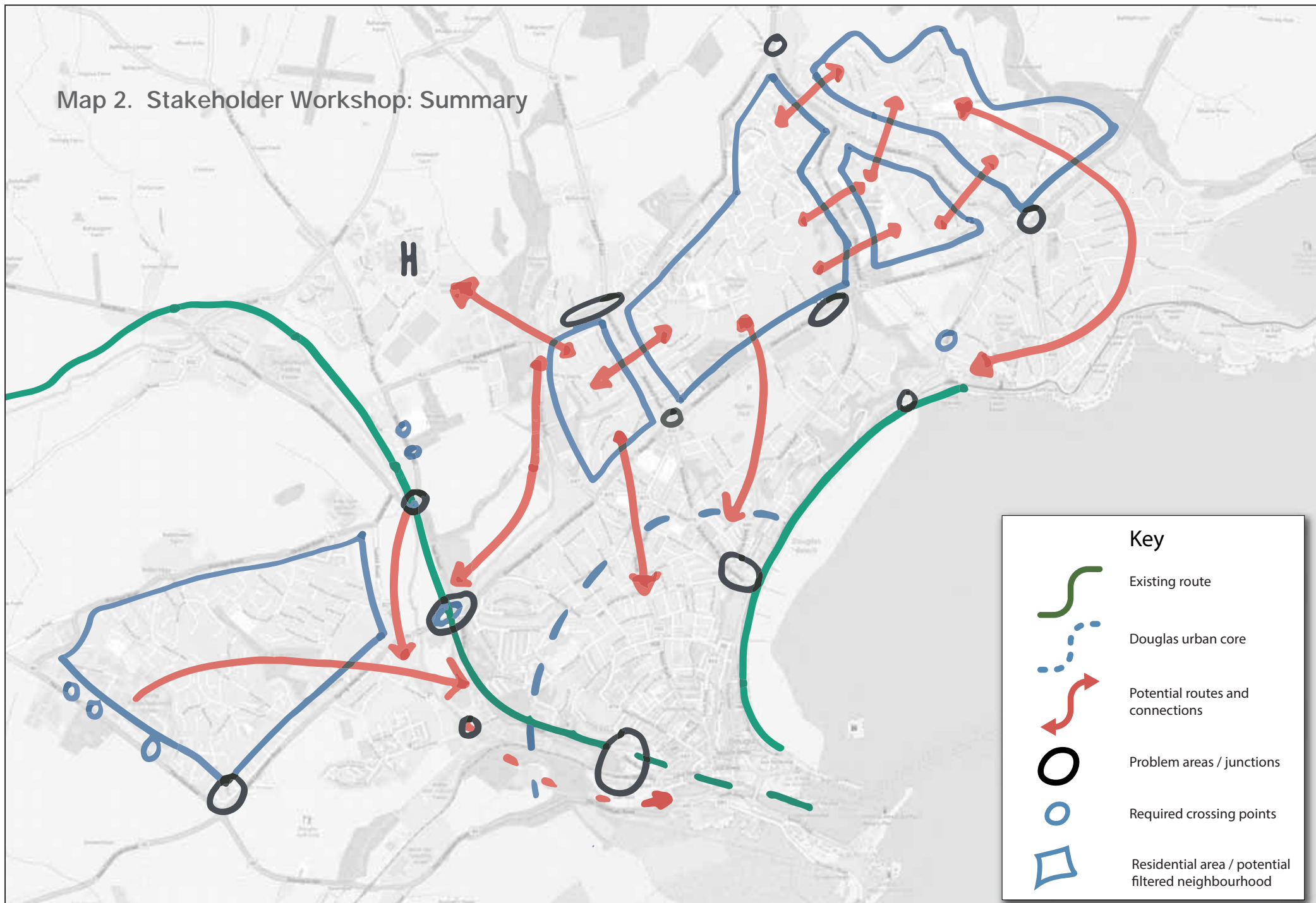
A key issue raised was how to link all the potential routes through green space and quieter roads with central Douglas and the Promenade when so many of the roads in the middle of Douglas were narrow, and where pedestrians and cyclists could choose a myriad of options for their journey. A solution raised by the Public Workshop was to make the whole centre a 20mph zone, although it was pointed out that this would not reduce the congestion or provide additional room for cyclists.

The Government Workshop marked Woodbourne Road and Bucks Road as black (dangerous) as they raised issues with parked cars, narrow lanes and side roads, but the Public Workshop marked it green, as they saw it as having potential for conversion to a low-speed environment and development as a "High Street".

Other issues:

8. Access to Promenade from side roads needs to improve.
9. Proposed Park and Ride sites should be connected by cycle routes.
10. Potential to provide a route alongside the River Glass to connect Tromode to Quarter Bridge.
11. Need for better cycle parking.
12. Potential to use routes through parks.
13. NSC circuit closes at night or when in use.
14. Potential to use pavements on Old Castletown Road.
15. Potential to provide a route through the Nunnery.

Map 2. Stakeholder Workshop: Summary



7. General Consultation

The Stakeholder Group Engagement exercise was intended to gain local knowledge about existing walking and cycling routes, barriers that they felt prevent more people from walking and cycling, and potential opportunities for future routes and facilities.

Attendees were by invite only and it is recognised that they were not representative of the population in general.

To understand the reasons why the wider residents who do not currently walk or cycle do not take it up, it is necessary to undertake much wider consultation than is within the scope of this document. Interventions that seek to work with communities to gain this knowledge are discussed later in this document, however the Social Attitudes Surveys in 2016 and 2017 can provide some evidence that can help when selecting potential infrastructure and behaviour change interventions.

Social Attitudes Survey 2017

This document presents the findings of the Isle of Man Government's annual survey, an initiative commencing in 2016 to collect information about social and political attitudes in order to provide feedback to government for performance evaluation, policy development and future planning. It included some questions on Transport and Travel and more data is included in the summary in Appendix A.

Important for this chapter, however, are the respondents' views on the barriers to walking and cycling.

Respondents who said they didn't walk or cycle to work were asked what their barriers to active travel were. A summary of responses is shown on the chart opposite. The most prevalent themes were 'distance' (30%) and 'weather' (23%).

Note that the survey was island-wide and that the responses specifically from Douglas residents are not indicated in the report.

Social Attitudes Survey 2018

Questions regarding barriers to active travel were asked again in the 2018 survey, with responses varying slightly from 2017. Safety, the availability of changing and/or storage facilities, lack of clear routes, and cost of equipment are reported less as being barriers than were indicated in 2017, suggesting possibly that recent policy initiatives addressing these issues have had an early effect. 'Distance' and 'weather' account for higher percentages of responses in 2018 than 2017 though.

Discussion

The Social Attitude Surveys are a simplified snapshot of views and further engagement work is required through businesses, schools and in communities to get to the bottom of why more people do not walk and cycle.

Distance is cited as the main reason why people do not walk and cycle more, but this may be skewed by the fact that the survey was island-wide. Census 2011 data shows that there are many people who both live and work in Douglas and the surrounding urban area, and many of these people will have journeys to work that fit within reasonable active travel distances.

In addition it is likely that many residents within the study area will need to make "Journeys for a Purpose" other than the commute, and many of these trips may fall within a distance that would not prove a barrier.

Weather is the second highest reason for people not walking and cycling. Key to overcoming this barrier, it will be necessary to provide shower, storage and drying facilities at destinations. There may also be an issue of perception. The Isle of Man see on average 197 days a year (this figure includes all rain over 0.1mm) with some precipitation leaving 167 days with no rain at all. There is a significant number of days in the year which see little or no rain or snow.

Safety makes the 3rd most cited barrier to walking and cycling at around 13 to 14% of respondents. In the UK a number of surveys shows this figure much higher. Again the Social Attitudes Survey may be skewed as it covers the whole of the Isle of Man and may not represent fully the views of the study area residents who are likely to be faced by more traffic and congestion than those in more rural parts of the island.

Changing facilities also comes high in the list of barriers and this echoes the views of the stakeholder groups.

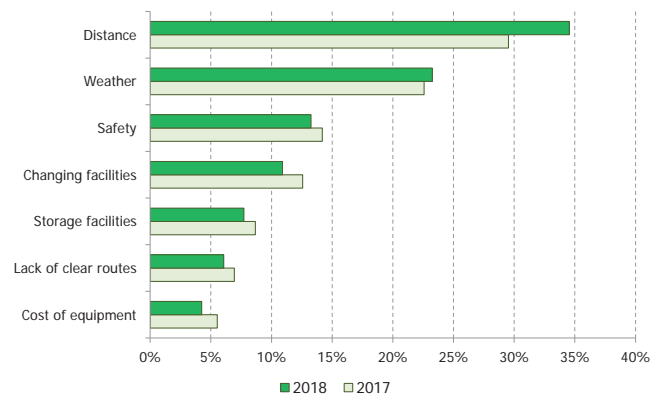


Figure 11. Barriers to active travel



Encouraging Active Travel on the Isle of Man - Consultation analysis December 2017

The Department of Infrastructure (DoI) carried out a consultation exercise between 31 July 2017 and 25 Sept 2017 entitled "Encouraging active travel for the Isle of Man" for which 379 responses were received.

The aim of the consultation was to collect information to help formulate an action plan working towards one of the objectives from the Isle of Man's Programme for Government:- to increase the number of people who choose active travel.

The document details the findings of the consultation. Some main points emerging are:

59% of respondents said they travelled actively. Of those who specified, 35% said they walked, 44% cycled and 21% did both. (This question was set to determine whether the participants of the consultation generally were already engaged in active travel.)

Of those responding, 82% agreed and 15% disagreed with the vision:

"The Isle of Man is to be an Island where cycling and walking are normal and realistic transport choices for people of all ages and abilities."

An action plan focusing on key issues including the following was proposed:

- infrastructure provision
- behaviour change and improved education
- a network of routes for people to walk and cycle on
- partnership working and delivery

More details of this consultation is available in Appendix A.

8. Theoretical Modelling

A core part of the UK DfT's Walking and Cycling Investment Plans is the theoretical modelling section. **This builds layers of data based on various factors that can be used to determine the most likely alignments where growth in walking and cycling can be expected if investment is made.** This adds to the Strategy, Existing Infrastructure and User Knowledge already gathered to enable a sensible system of prioritisation to be arrived at.

It must be noted that the DfT models use data that is unavailable to the Isle of Man. See later in the chapter.

The factors examined in creating the model included:

- Commuter home postcodes
- Trip Generators (work and educational)
- Trip Generators (retail and leisure)
- Road Gradients (See plan overleaf)
- Road widths
- Existing cyclist data (Strava derived)

All outputs of this modelling and relevant analysis is available in Appendix D.

By analysing the available data, a number of potential active travel corridors have been identified. These are shown on the adjacent map.

These strategic routes represent corridors along which interventions can be implemented that will facilitate movement along and between them by active travel and have the most chance of attracting new users. Each route or link may be created using different types of infrastructure, ranging from light-touch solutions such as improved signing on residential streets, to major reallocation of road space in favour of active modes. In all cases, however, they should be designed to create high quality environments that enable people of all ages and abilities to travel in safety, comfort and convenience for journeys of purpose.

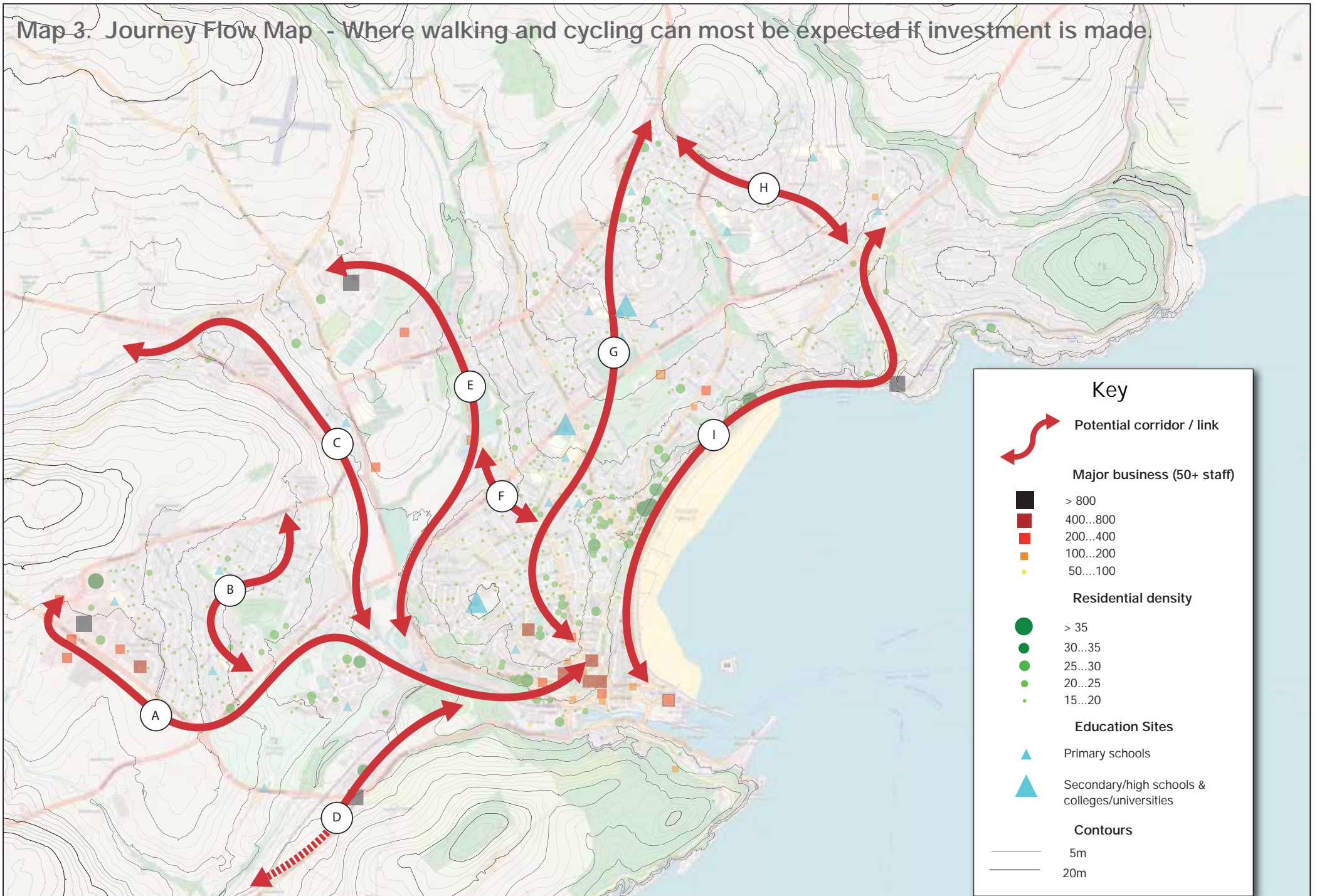
The identified theoretical corridors tend to be longer than the distance people could be expected to walk and so discussion is focused on cycling. However all routes should involve facilities that will help walkers make shorter trips. Shorter walking trips are more difficult to model as walking patterns are more dispersed, especially when the study area is a single town. The location of origins vs destinations can give a strong steer however and this, combined with strong community engagement, can also lead to clear strategy. This is discussed more later in the document.

Journey Flow Map - Identified Corridors

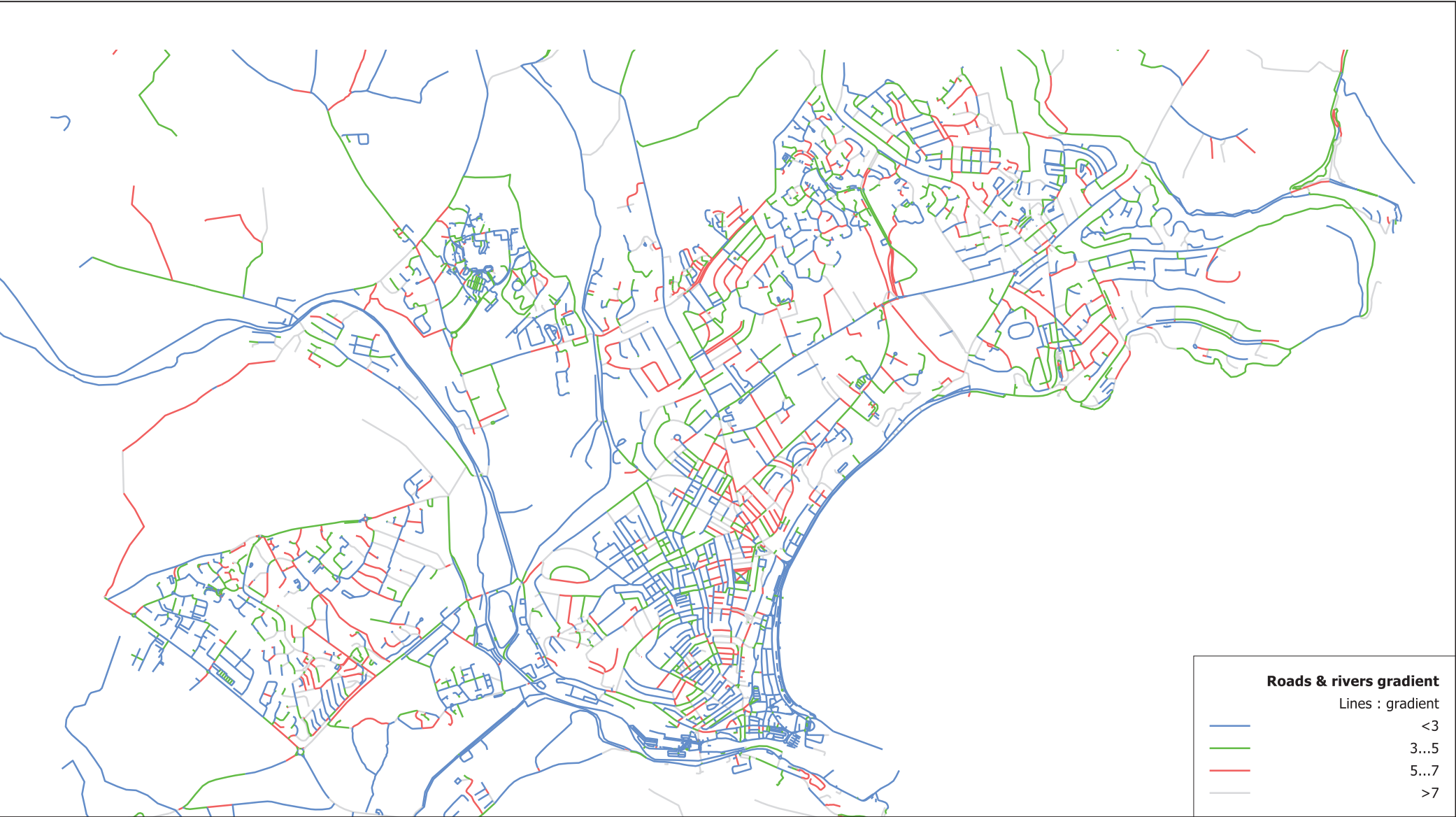
Note. These corridors of Journey Flow have been generated by the theoretical modelling. Discussion around their link to existing infrastructure, future growth zones, general strategy, practical application etc. is covered in later chapters. These are the corridors that modelling suggests have greatest propensity for active travel growth.

- **A.** A route along this corridor would connect the burgeoning enterprise zone at the Isle of Man Business Park, with residential communities in Anagh Coar and Pulrose, as well as linking to shops and services along Pulrose Road, connecting to existing facilities along the road. The gradient map overleaf, however, does indicate a significant gradient is required to reach Cooil Road, which may be off-putting for some.
- **B.** This would provide a useful link between residential areas of Anagh Coar, Manor Woods and beyond to Ballaughton, and would enable more people to travel actively and connect to new facilities. Many of these areas are already quiet residential streets, and therefore light-touch measures such as signing and removing through traffic should enable them to become suitable as part of the active travel network. Farmhill Lane already provides a high-quality environment due to the removal of through traffic. This can provide a useful link as part of the wider network. It is acknowledged that some of the roads in this area are steep which may suppress demand.
- **C.** The Steam Heritage Trail is already a high-quality route from Union Mills to Quarter Bridge, and work is being undertaken to improve the route beyond to enable people to travel to Peel. At Quarter Bridge, a safe and convenient crossing of New Castletown Road will be required to ensure people can continue their journeys and avoid Quarter Bridge.
- **D.** A short section of traffic-free greenway would link to other facilities, and enable people working at Heron and Brearley / Okell's to travel actively, connecting to the town centre. A number of options could be explored, such as using the golf course and linking to new facilities at the Nunnery, or Peel Road.
- **E.** The valley created by the River Glass provides an opportunity for an active travel route, avoiding the otherwise steep topography of the area. It would enable people to travel to Noble's Hospital, connecting this significant employer and vital health and community facility. Options include the use of land adjacent to the river running to Quarter Bridge and joining up with other facilities that help to cross this busy junction.
- **F.** It might also be possible to make changes to Tromode Road, making it suitable as part of the active travel network. This would then link to traffic-calmed filtered neighbourhoods that would form the heart of Douglas, enabling people to travel safely and conveniently on existing streets.
- **G.** A route along this alignment would ensure that people could traverse the entire length of the Douglas/Onchan urban area, connecting numerous communities along the way. A route through the residential area of Willaston could be achieved using the existing street network, with improvements to make walking and cycling safe and attractive, such as signage, modal filters and reducing corner radii. It will be necessary to ensure a safe and convenient crossing of the A2 can be achieved to reduce the severance currently created by the road. The route could then continue, potentially using Noble's Park, linking to other residential areas, ensuring these streets are suitable for on-carriageway cycling, with improvements where necessary, and ensuring adequate crossing points between areas where they cross busy roads. The indicative Journey Flow line shows a route through some hilly areas and specific infrastructure interventions will need to take account of topography to find the route of best gradient.
- **H.** A route could be created that connects the large residential areas in the north of Onchan, to the village centre. The existing network of residential streets could provide a suitable environment for cycling, subject to traffic volumes and speeds being sufficiently low. The route could connect to St Ninian's Lower School, Onchan School and Ashley Hill Primary School, enabling students to travel actively to school. Hillberry Road and Avondale Road are unlikely to be suitable for on-carriageway cycling, and therefore high-quality crossing points will be required to ensure people can walk and cycle between residential zones on either side. The route could then continue through the centre of Onchan to reach the Promenade walkway and cycleway.
- **I.** The Promenade provides a generally high quality walking and cycling route that runs along the entire length of Douglas Bay, connecting communities from across the town. At present, the connections between the traffic-free route and the residential and commercial areas inland are poor, particularly for people cycling. The redevelopment of the Promenade has the potential to address this. A link will be required from the northern end of the Promenade and a potential route from Onchan at Port Jack, to enable people to access the Promenade and major employers at King Edward Bay House.

Map 3. Journey Flow Map - Where walking and cycling can most be expected if investment is made.



Map 4. Road Gradient Map



Gradient of Road and Path Network

Douglas's topography presents a challenge for delivering active travel routes, but there are also significant opportunities.

The dramatic coastal landscape that characterises the town means that much of the built environment lies on undulating hillsides and in steep glens which can prove difficult to traverse, but create a varied landscape with wooded valleys and water courses immediately alongside people's homes and businesses.

Steep gradients will naturally deter many people from walking and cycling and for some people it could prevent them entirely. For cycle routes, a maximum gradient of 3 per cent is recommended but this can rise to 5 per cent over a distance of up to 100 metres. Where it is unavoidable, a gradient of up to 7 per cent over a distance of no more than 30 metres is acceptable (LCDS).

The gradients of all roads and paths in Douglas and Onchan have been mapped, left. Alongside the modelling of homes and trip generators, this helps to identify where routes and other cycling and walking interventions might be directed to best respond to the ability of people to move through the landscape. Many roads and paths in Douglas and Onchan are steep with gradients over 7 per cent (1 in 14) which requires more effort on cycles without electric assistance.

The map shows that there are a number of corridors and areas that benefit from relatively flat or shallow gradients that would be suitable for walking and cycling.

The valley formed of the River Glass also provides a crucial flat corridor which has the potential to link residential areas, employment sites and the town centre.

Similarly the Promenade will provide a key flat route.

The Journey Flow Corridor A is flat over much of its distance but sees some steep gradients. This might suggest that for such examples, although there may be demand for such a route, other routes without steep sections may be prioritised first. The issues of gradient can be overcome by use of ebikes and cycle training and so should not be ignored, but cycling uptake will always be easier where there is demand *and* where the topography is flat.

A note on data availability and monitoring

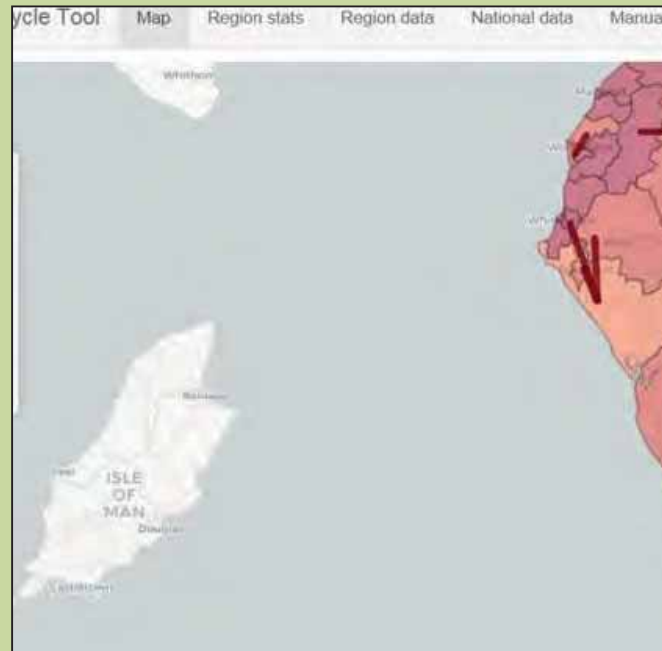
In the UK the government has asked each Local Authority or City Region to produce a Local Cycling and Walking Infrastructure Plan. This requires that each Authority produces a map of prioritised cycling routes. The basis for predicting cycle usage along routes being prioritised is a Propensity to Cycle Tool (PCT). A simple PCT is available for all to use online. It shows where the strongest desire lines are for walking and cycling and also where current short non-active journeys are most likely to be replaced by walking and cycling.

More up to date and complex models can be built that take into account future development sites, planned infrastructure improvements etc.

The basis for this modelling work is, however, the 2011 UK Census.

For example, the UK Department of Transport's sponsored Propensity to Cycle Tool (PCT) web site screenshot below right shows the coast of Cumbria and the Isle of Man

The red lines show cycle to work desire lines in coastal towns such as Whitehaven.



Unfortunately, as the screen shot shows, the Isle of Man is not covered by the public PCT web site.

In order to build a bespoke PCT model it is necessary to obtain postcode data pairings of origin (where people live) to destination (where they work, go to schools etc) and unfortunately this data was not captured by the Isle of Man 2011 census and the the Isle of Man does not have information on work trip origins, destinations and mode used in any one survey. This data either exists across various surveys or has been collected but not analysed.

Recommendation

That the IoM ask for home origin, mode used, and work destination in the Social Attitude Survey 2019 and in future census surveys in 2021.

For the ATIP we have blended home origin, mode for work trip used, and work destinations data from across these surveys to come up with some initial modelling.

Monitoring

To ensure future reporting and analysis of the effects of the interventions recommended in this report, data gathered from surveys and the census will need to be combined with more specific data relevant to specific interventions and investment.

A base-lining exercise and monitoring plan is to be produced which will ensure consistent data is gathered from both infrastructure and behaviour change interventions. This data could include:

- Automatic walking and cycling surveys
- Manual Route User Surveys
- Hands-up surveys in school
- Business Travel Plans
- Resident Satisfaction Surveys

The Active Travel Island project also includes funds for a series of monitoring reports that will track the success of the programme at the end of each year.

9. Network Planning - Cycling

The information gathering processes undertaken earlier in this document have enabled a picture of where people are most likely to cycle if infrastructure is provided. This has been combined with knowledge of what infrastructure currently exists, and what strategies are likely to create change to produce a theoretical map of Journey Flow. This theoretical map now needs to be grounded in reality and converted on to the actual streetscape to understand costs associated with provision of infrastructure and also barriers to delivery. This is required to undertake the prioritisation exercise later in the document.

The map opposite is a result of many hours surveying on the ground, which has determined which streets and paths could best be used to fit to the theoretical alignments. This takes into account all previous knowledge gathering. This list does not prioritise one route over another but lists all potential infrastructure interventions that could create the routes highlighted by the knowledge gathering so far.

Interventions are grouped into **Sections** which provide useful lengths of infrastructure. These sections are used to cost and analyse routes in later chapters.

This information is additional to that requested in the UK DfT's LCWIPS, which only requires identification of corridors and no discussion of the issues with actually delivering them.

Costing

Costs have been generated using a standard indicative list of costs generated by Sustrans over a number of years of delivery experience. They should be regarded as indicative only and thorough detailed design and costing should be undertaken to arrive at a true cost for any given section.

To provide guidance a list of costed items is provided here.

As the costing included here is very high level, an additional percentage has been added to reflect the fact that there may be many unknown factors that could increase costs. The percentage increase is larger depending on the complexity of the intervention.

High Complexity equals +40%, medium +20% and low risk +10%.

Encouraging Use and Uptake

It is discussed later in the document but needs to be highlighted that, although investment in infrastructure is vital, uptake by new cyclists also requires Behaviour Change measures such as training and support.

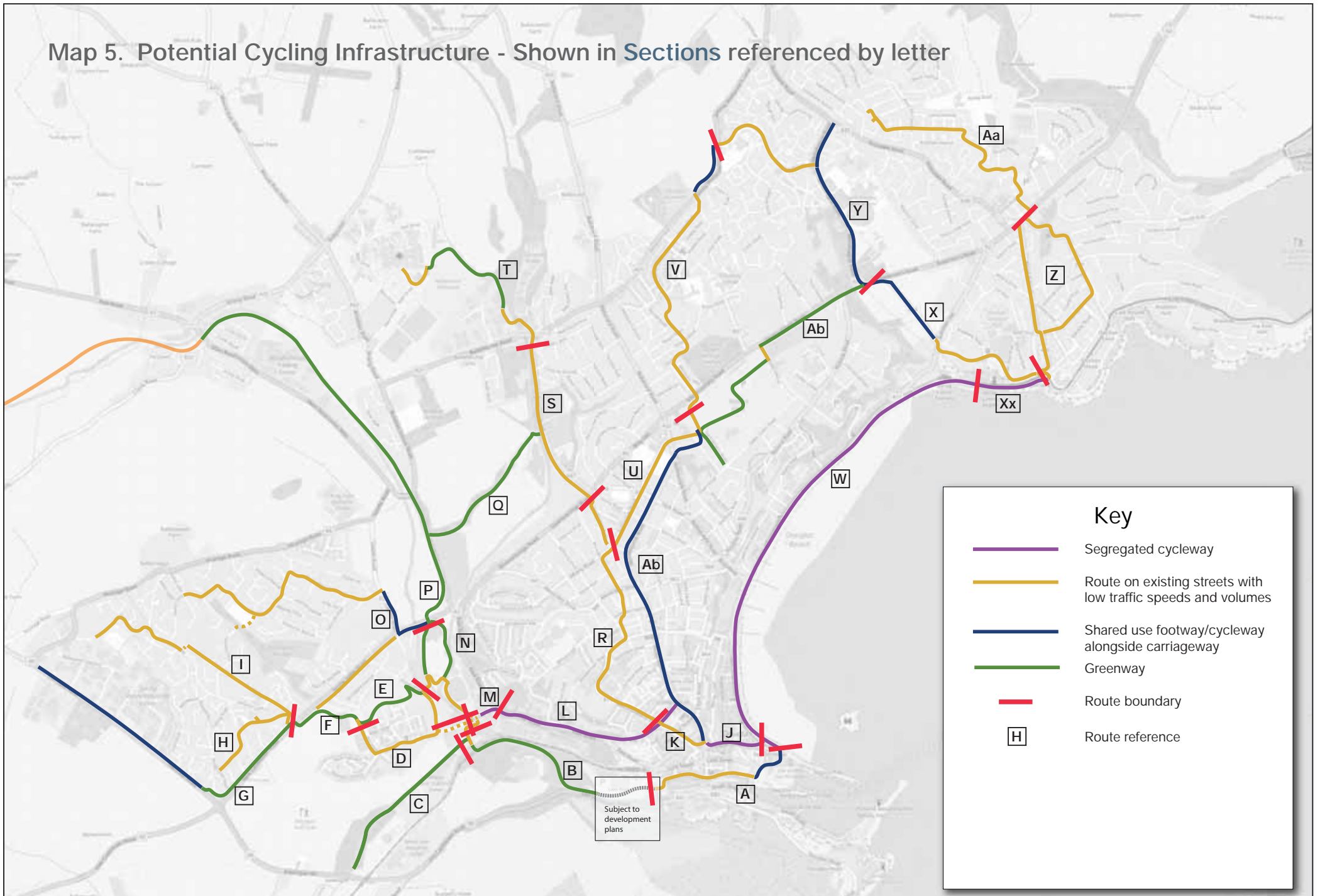
The number of new users required to make a route economically effective are discussed in the Outline Economic Appraisal Section later in the document.

It should also be noted that where new cycle tracks are created or upgraded, where no or poor infrastructure currently exists (for example a new or upgraded route through greenspace), it can be expected that walkers will be the most numerous users.

Element	Unit	Rate	
		Low	High
New traffic-free route (incl. path adjacent to road)	m	£125	£160
New separated on-road route (kerb separated or stepped)	m	£1,000	£1,500
Widen existing traffic-free route by 1m, full width resurface	m	£75	£100
Resurface existing traffic-free route	m	£50	£80
New toucan crossing (or similar)	item	£50,000	£75,000
New bridge (small, span < 5 m)	item	£20,000	£40,000
New bridge (large, span > 5 m)	m	£5,000	£7,500
Quiet road treatment	m	£5	£10
Ancillary items, fencing, drainage, signs	%		10%

Ref	Section Name	Provision Required	Cost (£k)	Deliverability Narrative
A	Sea Terminal and North Quay	Resigning and lining of footways around Bath Place and the Sea Terminal to allow use of footways by cycle between Promenade and North Quay by cycle Amendments to crossing on Bath Place to allow better access to North Quay, using spare lane previously used for left turners Reconfiguring North Quay to allow 2-way use by cycles.	11.2	The Promenade is currently being refurbished and will include provision for cycling. Footways around Bath Place and the Sea Terminal are also being developed as a cycle route. This should include an improved crossing onto North Quay. North Quay is a quiet one-way road and can already officially be used by cyclists in both directions. Lining and signing is currently being implemented to allow this. The route provides an important access from the south and west of Douglas to the Sea Terminal and Promenade. Needs to be incorporated into development plans around the Lord Street car park. This could provide higher-quality facilities than those currently proposed. This development should also provide cycle parking.
B	North Quay to Pulrose Road	Provision of route (inc. bridge) through development site off Lake Road Provision of shared-use cycle route on Castletown Road between bridge and Nunnery Provision of sympathetic sealed surface track through the Nunnery Widening of alley way between fences at approach to Pulrose Ind.Est.	500	Land to the south of Lake Road is earmarked for a development and past plans have included provision of a bridge over the River Glass to link to Old Castletown Road. If designed to cater for cyclists, the bridge would enable the narrower parts of Old Castletown Road and the narrow Bridge Road to be avoided. A route through the site would need to join Bridge Road at a point where North Quay could be accessed. The information gathering processes indicated that the Nunnery path could provide an off-road alternative to Peel Road and one that could create a better means to access North Quay. This would also provide an improved offer for tourists to reach the Heritage Rail Terminal from the Promenade. It would need to be done sympathetically, however, as it runs through tranquil green space and should not ruin the rural ambience. Access to the Nunnery track through the Pulrose Ind. Est. is narrow and ugly, and work with adjacent landowners is needed to widen it and make it more appealing.

Map 5. Potential Cycling Infrastructure - Shown in Sections referenced by letter



Ref	Section Name	Provision Required	Cost (£k)	Deliverability Narrative
C	Brewery Access	Provision of cycle track between Pulrose Ind. Est to Okell's Brewery Access from path to employers Access to Kewaigue Primary School	460	Data gathering has shown that the Brewery and surrounding employers and facilities counts as a major trip generator. (This would need to be verified before provision is planned) Provision of a cycle track along the lines of an existing footpath would link the site (and Ellenbrook Housing Estate) to Pulrose (for Peel Road) and the Nunnery path. Work is needed to identify and provide links from the existing footpath line to the actual employers. Currently cyclists would need to double back down Kewaigue Hill to reach the various sites, but an alternative access may be present from some of the existing railway crossings. We have received no data regarding school catchment areas. If pupils travel to the school from Pulrose, then a spur should be provided.
D	Pulrose Access	Link along Springfield Road Formalisation of cut-through on Pulrose Road Provision of facilities on Pulrose Road and Pulrose Bridge	485	The Pulrose area is of an ideal distance to access Douglas Centre by cycle. Depending on options taken, it can link to the Nunnery path or Peel Road and to the IoM Industrial Estate to the south west if reasonable provision is provided within it. Options include provision of an off-road track on the edge of the golf course adjacent to Springfield Road or use of Springfield itself as it is (if deemed to have sufficiently low vehicle volumes and speeds) or by providing traffic calming on Springfield Road.. There is an existing road closure on Pulrose Road that should be adapted and formalised for cycle use. Pulrose Road is to be amended shortly in order to strengthen the bridge over the River Glass. If possible, amendments to layout should be made to allow access from the closed section of Pulrose Road to existing facilities on Peel Road and to the Nunnery path if developed.
E	Access to NSC	Springfield Road to Groves Road track Access through NSC car park to bridge	71	A route across playing fields between Springfield Road and Groves Road would provide an off-road access to the National Sports Centre from parts of Pulrose and from Anagh Coar (if other facilities are progressed). Onward routes that could link this facility to the Heritage Railway and Peel Road could be accessed if internal NSC routes were usable by cycle, including the bridge to the rear of the main building over the River Dhoo.
F	Golf Course Track	Provision of crossing on New Castletown Road Provision of track over Golf Course Access onto/over Springfield Road	69	Provision of this short cut to Pulrose from Anagh Coar would enable walkers and cyclists to avoid the busy New Castletown Road. An existing pelican crossing near the junction with Annacur Lane could be modified to a toucan crossing. Douglas Borough Council has indicated a track across the golf course would be acceptable to them, but consultation with nearby houses is likely to be needed. Access onto Springfield Road will need a gap in the fence creating, and if the option to provide an onward track to Groves Road is taken, then a crossing suitable for walkers and cyclists will be needed. Ideally this would be a parallel crossing, which is an adapted version of a zebra crossing that allows cycle use.
G	Anagh Coar – Cooil Road Link	Provision of cycle track in verge adjacent to New Castletown Road Provision of shared-use footway adjacent to Cooil Road	256	Green space between New Castletown Road and Anagh Coar Road provides room for a cycle track. This should run from the proposed toucan on New Castletown Road and continue around the corner onto Cooil Road. The track should be extended along Cooil Road to reach the access roads of Springham Park, Barleyfield Road and Isle of Man Business Park. Work should be undertaken with developers of new sites to ensure that they provide linking tracks as new sites develop.
H	South East Anagh Coar Links	Conversion of existing paths to shared-use cycle tracks	12.6	This would link housing in Anagh Coar with onward routes as described above. In some cases this will involve provision of lining and signing to convert existing wide paths into cycle tracks. There is also huge potential to improve the area for walking and to create better spaces to live, move around and play in. This is covered further in the Network Planning – Walking and Local Cycling section.

Ref	Section Name	Provision Required	Cost (£k)	Deliverability Narrative
I	Central Anagh Coar	Signing Provision of track along Annacur Lane	53	<p>Much of this area of Anagh Coar is formed by quiet roads that feed the estate. However, the main spine road of Stevenson Way may become busy and provide a barrier at peak times.</p> <p>Farmhill Lane could provide a quieter alternative if it can be accessed. It can be accessed easily via Farmhill Lane but other sections are accessed by narrow alleys only, and these may need to be dealt with by "dismount" signs. Overall signing of routes will also be necessary to ensure residents are aware of onward links to facilities and employment sites.</p> <p>Farmhill Lane does not run all the way to the proposed toucan over New Castletown Road. It becomes Annacur Lane 200m before its junction with New Castletown Road and this section is likely to be busy. A crossing and provision of a cycle track would be possible in the southern verge.</p> <p>Like south east Anagh Coar, this area would benefit from placemaking through engagement activity with local residents.</p>
J	Victoria Street	Signing Traffic Calming?	4	<p>Victoria Road provides the main approach from central north Douglas towards the Sea Terminal. It is likely that it will need to form a part of any town-wide cycle network, but actual provision of cycle-specific infrastructure along it will be difficult. Surveys should be undertaken to see if speeds and volumes are such that cycling can be signed without intervention.</p>
K	Athol Street	Provision of cycle exemption to one-way restriction	12.6	<p>Athol Street could open up access to Upper Church Street, which could provide a quieter alternative to Bucks Road and Woodbourne Road or to Circular Road and Peel Road. It exists as a one-way street however.</p> <p>Initial surveys indicate there may be the width available, and traffic speeds and volumes may be low enough to provide a cycling exemption to the one-way system by provision of minor signing and lining.</p>
L	Circular Road and Peel Road	(info to be provided by Tim)		<p>These roads provide the most level route into central Douglas from the south west. Peel Road is relatively flat and has cycle lanes and tracks on it already.</p> <p>TC to provide info on current proposals.</p>
M	Peel Road Pulrose Road Junction	Signalled Junction Alteration	53	<p>Routes north of the river towards Douglas centre (and in the opposite direction) funnel into the junction of Pulrose Road and Peel Road. This intersection is therefore critical. Designs have been prepared that could make turning manoeuvres easier but are dependent on reducing turning manoeuvres from Pulrose Road. Modelling is required to see if this is possible.</p> <p>TC to provide more info on latest proposals.</p>
N	NSC internal links	Allowance of public cycling through NSC	12,6	<p>Key to connecting several of the main proposed routes into central Douglas from south and west Douglas is providing good quality, coherent links along the River Glass valley. Routes through NSC provide the straightest and flattest routes but agreement will be needed from site managers and minor alterations to the road layouts made to enable full-time access for cycling.</p>
O	East Anagh Coar links	Creation of shared-use footway between the A6 and access to the NSC Conversion of existing zebra on New Castletown Road to a parallel crossing. Conversion of path adjacent to A6 to cycle track as far as Ballaughton Lane (and potentially southwards to Groves Road) Crossing to allow access to A6 track from Ballaughton Lane	45	<p>Ballaughton Lane connects a large area of housing served by quiet roads, to the busier A6. The proposals here would connect those quieter streets to the NSC and cycle routes leading from it.</p> <p>Key to provision is converting the existing track parallel to the A6 to allow cycle use then bringing it to the existing zebra crossing over New Castletown Road. This does not seem overly ambitious, however widening would need to take place on the south side of New Castletown Road to link the crossing with the NSC access. The central hatching and reduction in length of the right-turn lane could provide the space for this but it would be costly. Additional connectivity benefits would arise if this widening were extended south as far as Groves Road where additional routes could be joined.</p>

Ref	Section Name	Provision Required	Cost (£k)	Deliverability Narrative
P	Heritage Trail	Improvements to surface, barriers and crossings on the Peel to Douglas Heritage Trail Provision of new track through woodland to meet New Castletown Road Provision of access point onto New Castletown Road at location where NSC can be reached (Does not include resurfacing on existing track alignment)	145	<p>The Heritage Trail is shown as an important route in all of the information gathering and modelling tasks. Although primary use will likely be as a leisure and tourism route, it does have a commuter function for a number of employment sites and settlements. Not only that but the route would act as the best introductory route to cycling that the Island has to offer and would be integral to any "first steps" behaviour change activity.</p> <p>The section of route to Union Mills already has a sealed surface but would benefit from maintenance and barrier improvement. The remainder of the route will be subject to surfacing (crushed stone), barrier improvement and crossing improvement in the coming year. Feedback from stakeholder engagement is that a sealed surface throughout its length would widen the scope of likely users and lead to a rideable surface over a longer period.</p> <p>A key problem for people accessing the route is its access at its eastern end. It currently emerges in a pit lane used by the TT races that emerges on New Castletown Road. This location has been deemed to be too close to the Quarterbridge roundabouts and to have too poor sight lines to be provided with a formal crossing that would link it with the NSC. In addition the route's use of the pit lane means that it is unavailable to the public at the busiest tourist times.</p> <p>Stakeholder engagement has led to the idea of a new route branching off from the railway to meet Castletown Road further to the west, where a better crossing point could be achieved and that leads directly to the NSC circuits. This will require additional survey work and works to the wall on the north side of New Castletown Road to ensure it is deliverable, but if so this would form a key part of a commuter and leisure network on the south-west side of Douglas.</p>
Q	River Glass Valley to Tromode	Provision of cycle track between Tromode XX and XX road Crossing of XXX Road Access on to tracks adjacent to Tromode CC	285	<p>Stakeholder engagement, topographic analysis and origin/destination data all led to the suggestion of a route along the River Glass to the north of Quarterbridge junction as a useful route. This would require the building of an entirely new track parallel to the river. A feasibility study would need to be undertaken that looked at effects on the water course and how land ownership could be affected. This would provide a flat route into central Douglas from the Tromode area, avoiding the hills.</p> <p>A key feature must be for the route to avoid Quarterbridge junction, as surveys have shown very few feasible options to improve walking and cycling facilities. Instead the route would need to cross XX Road and join the Heritage Railway and facilities to reach the NSC (there is also scope to modify a bridge to join facilities on Peel Road).</p>
R	Central Douglas Route	Signage Traffic Calming	30	<p>The central part of Douglas has proved very difficult to provide with cycling-specific infrastructure. The narrow streets, with extensive car parking and steep hills makes provision very difficult. This quiet road route would require minor changes to calm traffic and to sign the route. It uses backroads only and could provide a short-term alternative to the use of Woodbourne Road and Bucks Road, which are covered in section 5.</p>
S	Tromode link	Widening of footways Traffic calming Junction treatment at Quarterbridge Road	470	<p>A more direct link between Tromode and Douglas Centre (than Q, P, N, M, L, K, J) would be to provide links along Tromode Road to connect with R. This would also act as a link from local housing (See section 5 cell map) to Noble's Hospital. This would require adaptation of existing tracks, footway widening, plus junction treatment at the junction with Quarterbridge Road to allow the closed Thorny Road to be reached.</p> <p>MORE SURVEYING REQUIRED</p>
T	Noble's Hospital Link	Provision of crossing over Johnny Waterstone Way Provision of link between Ballafletcher Farm Lane and Ballfletcher Farm Road Widening track through plantation	186	<p>Proposals on Tromode Road need to be found feasible before the issues of crossing Johnny Waterstone Way can be examined. On the north side of JWW is a track leading to the rear of industrial units. A way will need to be found to link through this area to avoid cyclists having to use JWW itself. (needs checking from gradient and potential way through likely to be acceptable to landowners)</p> <p>Quieter access roads can then link to the plantation site. This has a number of paths linking through it, and the central one will need to be widened to allow cycle use. This will enable cycle access to Noble's Hospital from a large residential area of Douglas.</p>
U	Noble's Park links	Traffic calming on Somerset Road (if required) Widening of paths through Noble's Park	66	<p>This is another section of a potential route leading into Douglas. It is proposed to use Somerset Road as an alternative to Woodbourne Road, if no improvements can be made there (see Section 5). This road may need traffic calming if surveys show that speeds are high.</p> <p>Routes through Noble's Park will serve as useful link routes to Corridor G but also many of the local routes to be described in Section 5.</p>

Ref	Section Name	Provision Required	Cost (£k)	Deliverability Narrative
V	Willaston – Nobles Park	Adaptation of existing crossing on A2 to toucan Conversion of short section of alley to shared-use Linking track between Peveril Road and Barrule Road and Snaefell Road Provision of track on Johnny Waterstone Lane Crossing to be able to recross JWL to reach Hailwood Avenue	170	This route would serve the northern section of Willaston by providing a number of short links to join quieter roads. Use of Keppel Road is shown on the map but local engagement (See section 5) may well indicate the access road parallel to Waterston Lane is the better route to sign, although a myriad of routes are likely to be taken by local people. A track along Johnny Waterson's Lane is proposed, but its value may be determined by nearby planned development and the availability of more minor links within the quieter road network.
W	Promenade	Amendments to lining and signing only to designs to enable improved crossings onto Promenade	NA	The Promenade exists as a shared-use route and improvements will be made in the current year that should improve conditions further. However, current designs do not allow good access from the roads connecting with the west side of the carriageway to the walking and cycling section, particularly from main artery roads such as Broad Street. Works are progressing on site and major changes to design are not now possible. Designs should be examined, however, to see if minor changes could improve the situation. For example, the inclusion of pedestrian crossings that also allow cycling and making their approaches shared-use. This would greatly improve accessibility of the Promenade cycling facilities.
X	Promenade to Willaston	Provision of parallel crossing over A2 Grovenor's Road Widening of track parallel to A2 to allow cycle access to Blackberry Lane track Improve access from Blackberry Lane to Strathallan Road Widening of carriageway on Port Jack between Promenade and Strathallan Road	136	This is a key link towards the promenade from east Willaston. It links the proposed tracks in Y across the A2 to an existing cycle track on Blackberry Lane. This will provide good provision as far as Summer Hill. It is then proposed to sign the route down Strathallan Road to avoid the difficult junction between Summer Hill and the Promenade. It is still recognised that this is problematic however, as it is not direct and still steep. It is also proposed to look at extending the Promenade route along Port Jack to reach Onchan. This will require additional survey work to ensure widths can be made available. This would be a valuable link.
Y	North East Willaston Link	Conversion of existing footways to shared-use Provision of improved bridge that enables cycle use	10	An existing footway parallel to Bernahague Road should easily be widened to allow conversion to shared-use. This would serve nearby schools and provide an alternative to the busy carriageway. This will need to be designed in a way to reduce blind corners and to improve the look of the green space. The current link from the above path onto Hailwood Road is via a stepped temporary bridge. This should be replaced with a more permanent feature should at-grade facilities not be possible. An at-grade crossing would be an improvement both for cyclists and disabled and wheelchair users, and should be examined.
Z	Onchan – Promenade Link	Signing only	10	Surveys have shown that there is not an ideal link between the Promenade and Onchan. Stakeholder engagement has indicated the best route to sign as shown on the plan. This will need to be caveated in publicity for any route signed in that direction.
Aa	Onchan North to South link	Improved crossing over A2 Conversion of existing paths to cycle tracks.	12.6	The links between north and south Onchan are made difficult by the A2. An improved crossing between Church Road and Church Avenue would help improve the route that is suggested to be signed. There are many links that may be useful for local journeys however, and public engagement in the area may indicate many more. See section 5. There are numerous existing paths within the housing area between Avondale Road and the A2 that could be converted to cycle use and again this would be shown up in area studies.
Ab	Woodbourne Road / Bucks Road / A2	Provision cycle facilities	TBC	Woodbourne Road and Bucks Road lie on one of the main Journey Flow alignments raised in the theoretical mapping and came up in User Knowledge. A route here would form part of a Core Douglas - Onchan route and create a spine through the middle of the densest areas of town to which many communities could be connected. The road is narrow, however, and care must be taken to provide facilities that enable safer cycling but that do not adversely affect the many pedestrians who already use the road. At the northern end of the route there is uncertainty as to whether cyclists from Onchan would follow the A2 to drop down into Nobles Park or use Victoria Road. This would need to be discussed as part of the public engagement work in the LWCZ.

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10. Infrastructure Quick Wins

In addition to the main active travel infrastructure interventions described in previous pages, there is also the option to provide some lower-cost measures that can be implemented relatively quickly and help raise the profile of cycling.

Cycle Lanes

Road width studies (See Appendix D) show that there is little scope for wholesale installation of cycle lanes in Douglas as things stand. The carriageways are, for the most part, too narrow to allow implementation whilst retaining on-street car parking. If this cheap method of cycle facility provision is to be progressed then parking would need to be addressed and space reallocated to cycling.

Advance Stop Lines (ASLs)

ASL installation is standard practice in the UK on new roads and junction upgrades or when resurfacing. They have fallen out of favour with cycle campaigners in recent years as they provide little in the way of segregation and only really help experienced cyclists.

They can, however, raise the profile of cycling and are low cost. The map opposite shows the location of Stop Lines where ASLs could be provided.

Typical costs are around £4000 per unit, but much of that cost relates to traffic management and can be greatly reduced if done as part of maintenance works.

Note: The feeder lane is no longer required in UK law, which reduces the need to have stop lines of 4m minimum width. Now ASLs can be provided at any stop line.

Cycle Contraflow

The map opposite also shows that there are numerous one-way streets in Douglas that could provide useful routes for cyclists in both directions. Again, UK DfT regulations have changed recently and cycling exemptions can be provided with the addition of signing and lining only provided:

- There is enough width for a cyclist to pass a vehicle
- Speeds and volume of traffic is low

Typical costs are around £2000 but dependent on length and complexity of the road in question.

Pedestrian Waymarking

The time it takes to make a journey on foot can often be overestimated by people used to driving or taking a bus. This can be overcome with signing if destination and estimated length of time is included. Good signing can also be used to direct people to the Core Walking Zones.

Costing of waymarking can be difficult as costs of signs and poles depends on the specification and ambition of the programme. Simple signs on existing poles can cost £50, but bespoke heritage signs that require large designer poles can cost several thousand pounds.



Figure 12. A cycle exemption in Leeds. "Except Cycling" signs have been placed beneath a "No-Entry" roundel.



Figure 13. At the opposite end of the Leeds example, a sign warns oncoming drivers of the presence of cyclists in the opposite direction.

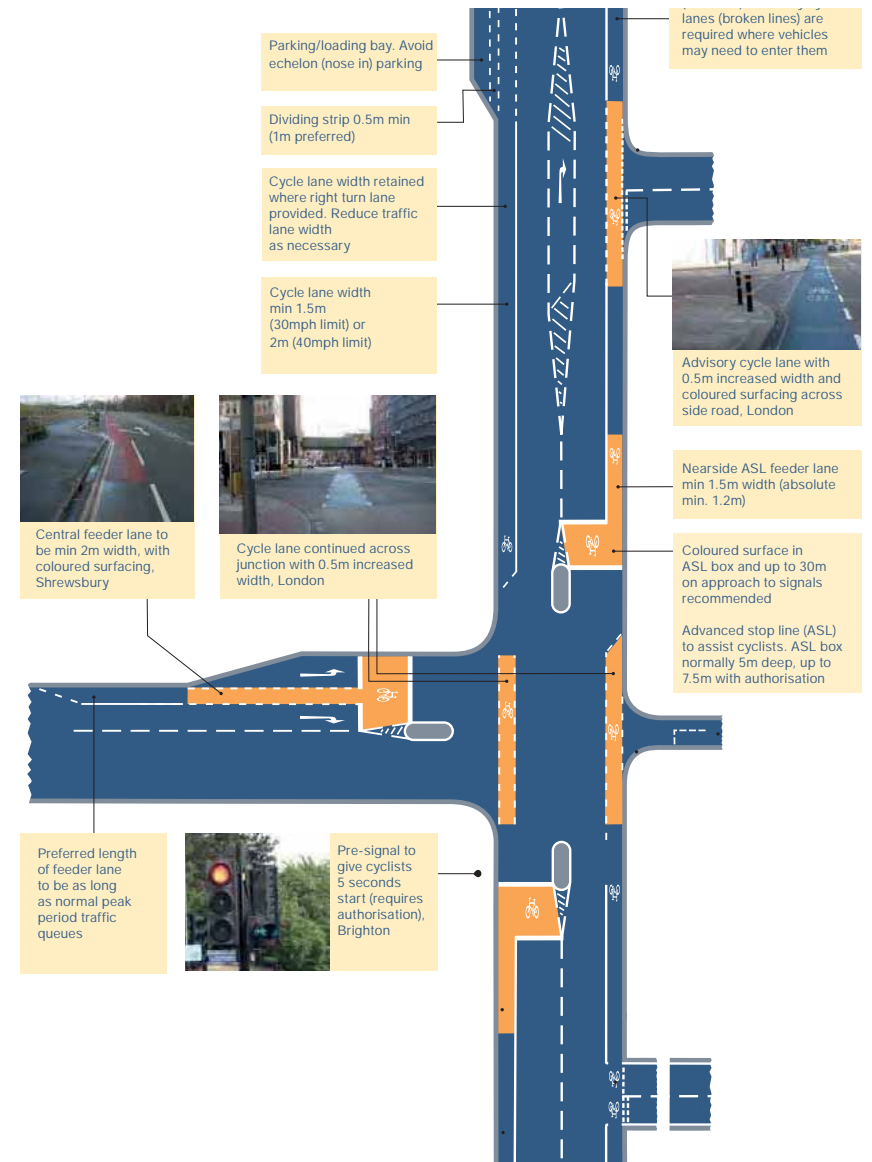


Figure 14. An extract from the Sustrans Design Guide shows typical ASL and cycle lane arrangements. Note: the feeder lanes shown here are no longer required.

Map 6. Locations of One-Way Streets and ASLs in Study Area



Key

- Advanced stop lines
- One-way streets

11. Network Planning for Local Walking and Cycling

As the 2011 Census and Social Attitude Surveys have shown, walking to work is a popular form of transport in the Isle of Man. Around 14% of people in the Census and 20% of respondents in the Social Attitude Survey in 2017 walked to work. This is above the UK average for working to work which is around 10% and reflects that many residents of Douglas and surrounding urban areas also work within those areas.

The LCWIP guidance outlines three stages for planning a network for walking:

- Identify key trip generators
- Identify Core Walking Zones
- Determine the type of improvements required

This has been undertaken for this report, and we have also included outputs from some complementary Pedestrian Environment Review System (PERS) undertaken by transport consultancy SYSTRA.

Key Trip Generators

The Gathering Information stage of the report have identified the key trip generators in terms of major businesses, government departments, schools and shops.

These are shown on Map 7 opposite, along with areas where people who work in Douglas also live.

The map highlights that the most dense site for trip generators is, as you would expect, the centre of Douglas with its many shops and services. This reflects the Journey Flow map, which holds true for walking as well as cycling. It also shows that there are numerous schools, shops and services spread across the town. If these are ignored, then many of the background trips made outside of peak times will not be addressed and the overall culture of walking and cycling will be harder to take root.

This section is normally (in UK LCWIPs) titled Network Planning for Walking, with cycling wholly dealt with in Section 9. However, many of the interventions we will suggest in this section will also be beneficial to cycling and will have a hand in creating a fine-grained network that enables shorter journeys than those facilitated by the longer proposed routes in Section 9, and/or provide access to them. The engagement and behaviour-change work suggested will engage the public with cycling as well as walking as a potential means to get around.

Pedestrian Environment Review System (PERS) Studies

SYSTRA Ltd was commissioned by the Department of Infrastructure to undertake PERS studies for 15 settlements across the Isle of Man. Information included here relates to the studies undertaken in Onchan, Douglas and Union Mills, which covers the study area of this Active Travel Investment Plan.

SYSTRA describe PERS as, “.. a walking audit of a specified area, which seeks to assess the quality and composition of a range of pedestrian environments to understand how they impact on walking movements”.

The full documents are available in Appendix G but recommendations include:

- Installation of more dropped kerbs and tactile paving across side roads in residential areas and near schools, and repair existing damaged dropped kerbs and tactile paving
- install formal signal crossings across busy carriageways near schools and surrounding links (plus a number of other specific locations)
- Provide more handrails and rest points on links with a noticeably severe gradient
- Install lighting to improve safety along certain links
- Clear dead leave and foliage
- Increase pedestrian signage around the Promenade, Noble’s Park, Onchan Park and on the A2



Figure 15. PERS East Douglas extent

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Figure 16. PERS West Douglas extent



Figure 17. PERS Onchan extent



Figure 18. PERS Union Mills and Strang extent

Map 7. Residential Areas and Trip Generators

Education sites

- ▲ Primary schools
- ▲ Secondary/High schools & colleges/universities

Major businesses (no. of employees)

- 50...100
- 100...200
- 200...400
- 400...800
- > 800

Commuter residential density (no. listed per postcode)

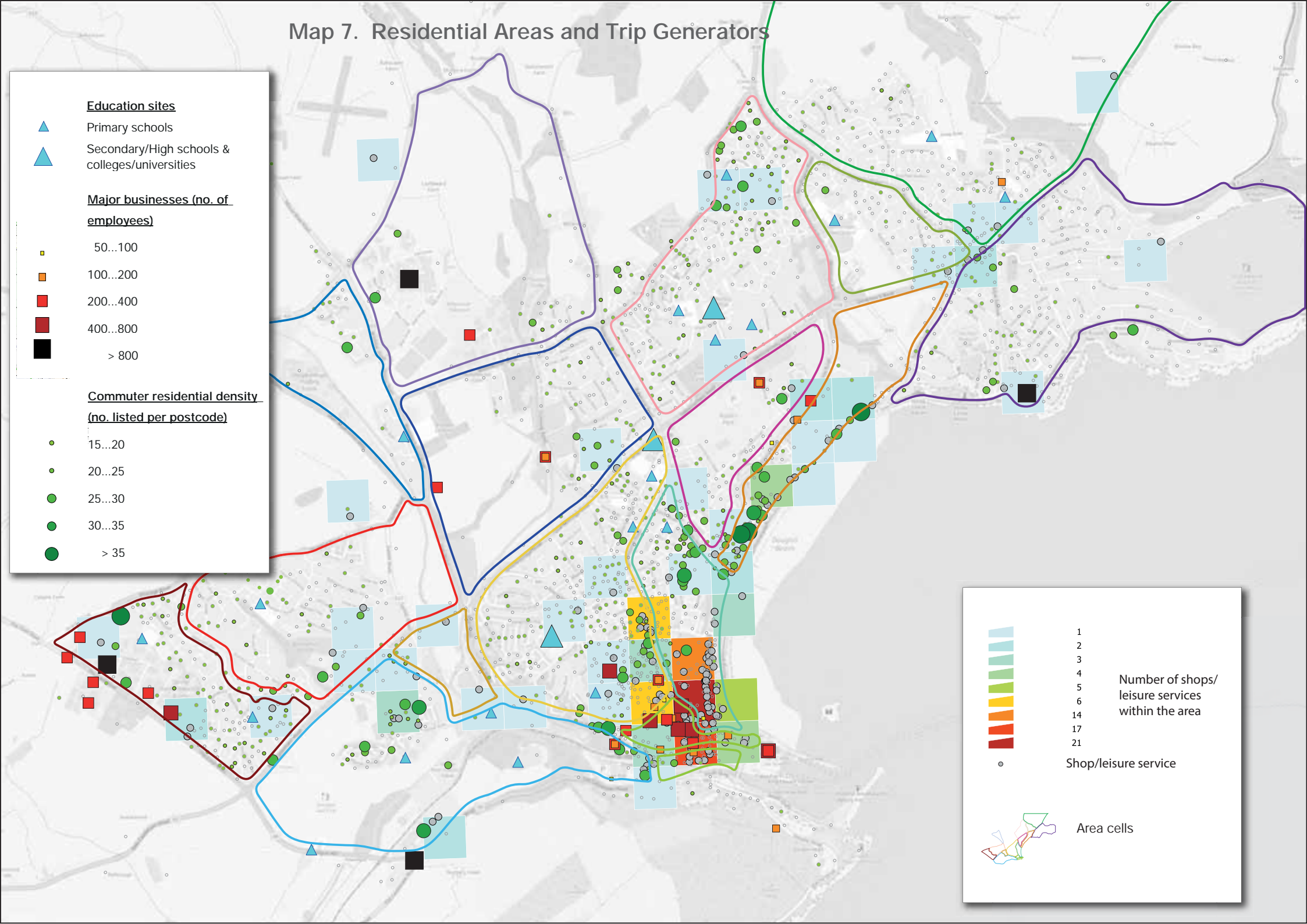
- 15...20
- 20...25
- 25...30
- 30...35
- > 35

Number of shops/leisure services within the area

- 1
- 2
- 3
- 4
- 5
- 6
- 14
- 17
- 21

○ Shop/leisure service

Area cells



Map 8. Core Walking Zones & Local Walking & Cycling Cells, Crossings and Trip Generators

Education sites

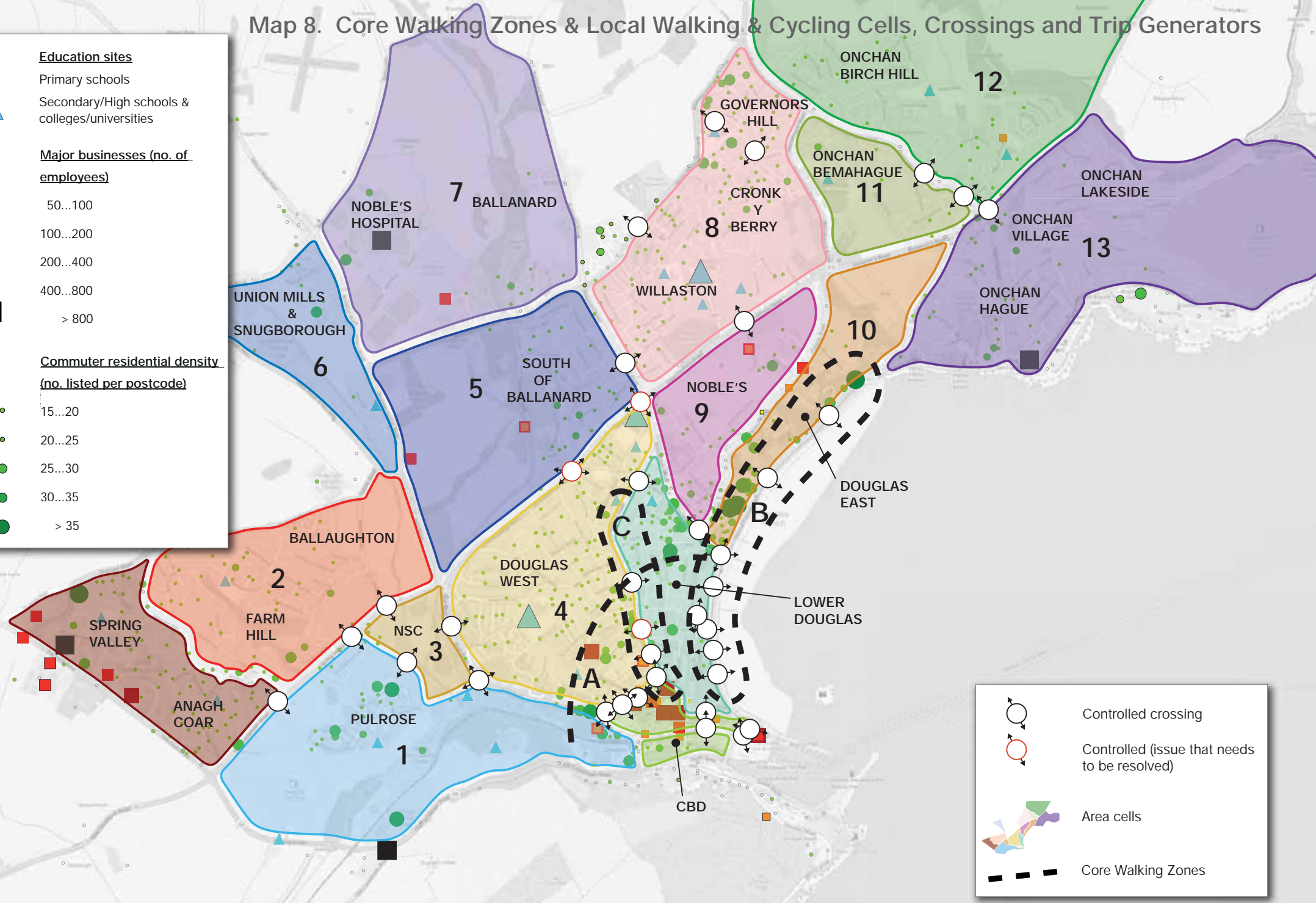
- ▲ Primary schools
- ▲ Secondary/High schools & colleges/universities

Major businesses (no. of employees)

- 50...100
- 100...200
- 200...400
- 400...800
- > 800

Commuter residential density (no. listed per postcode)

- 15...20
- 20...25
- 25...30
- 30...35
- > 35



- Controlled crossing
- Controlled (issue that needs to be resolved)
- Area cells
- Core Walking Zones

Core Walking Zones

From data analysis of trip generators Douglas can be seen to have three overlapping Core Walking Zones:

- A. The town centre with Strand Street being the main pedestrian zone for shops and a concentration of government departments, which are the islands major employer.
- B. The Promenade which is a popular walking route for both purposeful and leisure trips.
- C. Woodbourne Road which was highlighted as a problem for both walking and cycling and as having the potential for effective improvements.

The town centre, Promenade, and Woodbourne Road would need separate studies to ascertain pedestrian movements, parking issues and analysis of use to determine what works are likely to be physically viable. In addition, consultation with local businesses would be needed to determine what changes would be acceptable to them.

The Core Walking Zones all include streets which have recently had work undertaken on them or are in the process of improvement. As such only minor changes are detailed in this report, associated with the main cycle routes or related Local Walking and Cycling Zones.

Potential additional improvements might include:

- Provision of more pedestrianised streets
- Provision of more crossings
- More one-way streets to reduce impact of traffic
- Exception of cycling from existing one-way streets
- Additional public artwork
- Additional tree/shrub planting
- Lighting improvements
- Outdoor dining potential

Local Walking and Cycling Cells (Liveable Neighbourhoods)

Although the Core Walking Zones reflect the densest trip generators, many day-to-day journeys will be to local shops, services, bus stops, schools, friends' houses etc. Put together these will have a significant effect on the numbers choosing to walk and cycle, and on the safety and liveability of people's neighbourhoods. These shorter routes enable local journeys but can also link together to enable longer trips along Journey Flow corridors that feed the Core Walking Zones.

To attempt to deal with these areas we have split Douglas into a

series of cells, which are separated (in the main) by busy roads. These provide manageable areas for which to undertake Community Engagement, Business Engagement, behaviour-change measures and provision of infrastructure.

Within these cells Community Engagement is recommended to identify barriers to active travel and opportunities to improve it.

Inter-cell links should also be identified by Community Engagement in order to ensure residents can pass from one cell to another. The adjacent map shows where existing crossings provide links between the cells, but also highlights crossings that are not as good as they could be and shows where there are significant gaps in provision. Rather than proposing new crossings to fill these gaps, analysis and conversation with local residents is needed to determine where they think the barriers are and what infrastructure would make their journeys easier to undertake by foot and cycle.

PERS audit data can also feed into these decisions.

By providing for these local routes, it will also help to create longer walking routes as indicated in the Journey Flow map. Studies have shown that distances up to 2.5km can easily be undertaken on foot. This distance puts large areas of the study area within reach of the Core Walking Zones.

"Liveable Neighbourhoods" is an approach used by London and Glasgow to improve walking, cycling and the general "liveability" of residential areas. London has termed the approach "Mini-Hollands" but various names are used. Manchester and Sheffield are now developing similar approaches.

This takes the approach of co-designing improvements with local residents, and although walking and cycling improvements are the overall aim of the project sponsors, it is accepted that many of the actual proposals that result of the co-design will centre around safety, play, improving green spaces and making the area a nicer place to live. It is then found that walking and cycling increases naturally as a result. To boost results a combination of engagement, infrastructure provision, and behaviour-change work can be applied.

A number of methods are used to engage with the public:

- Meetings with residents to present "Blank Canvasses" of their area with discussions around their issues, fears, and opportunity ideas
- Walkabouts with residents
- Online consultation
- Trialling of ideas using temporary measures such as the Sustrans street kit (Figure 20)

Outputs for the PERS work being undertaken by SYSTRA can also be included with these proposals.



Figure 19. Street engagement in Hexham Market Place - 2018



Figure 20. Hexham. The street kit is made of recyclable plastic (polyethylene) and each link unit is hollow, which means it is lightweight to move and assemble, and stable when filled with water.



Figure 21. Extract from the online engagement website - Stickyworld

Schools and Businesses at the Heart of Engagement

All engagement work that is proposed within the Local Walking and Cycling Cells should build on initiatives already taking place and those proposed by newly appointed Sustrans Active Travel Officers.

Sustrans Officers have been appointed to work in schools and with businesses and a number of projects have been proposed to be carried out in the first year of the project. All their work will be done in liaison with the Isle of Man's Road Safety Team and be directed by the aims of the Isle of Man Road Safety Strategy 2019-2029.

An indication of which schools and businesses should be engaged and in what order is included on the Prioritisation Table in section 14. These are indicative only however based on the order of cycle route investment and should be superseded by levels of enthusiasm and willingness to take part in the Active Travel Island project.

Sustrans' experience has shown that engagement with schools and businesses should form the core of any work in the community. Having a captive audience can help with the initial activation of discussion and produce some first ideas that can then stimulate debate in the wider community.

This will help to identify infrastructure requirements but also enable behaviour change work to take place.

Some of the benefits of working with schools and businesses are laid out below with case studies provided opposite.

Examples of the Benefits of Working with Schools

In projects (undertaken by Sustrans) to increase cycling and reduce car use on the school run, car use reduced by an average of 11% over a year.

A study looking at 165 schools in the UK showed an average reduction in pupils being driven every day of 11% in each and estimated value of over £3.3 million in reduced congestion in just three years.

37 schools in the IoM over 3 years would equate to £740,000 saved in reduced congestion over 3 years.

A school project in Scotland known as iBike, running from 2013 to 2016 showed average active travel mode share of 57% over three years, 11 percentage points higher than schools with no intervention. Schools with no interventions stayed at 46%

Benefits of Working with Businesses

Analysis of a variety of projects undertaken with businesses has shown:

- 29% increase their physical activity to above minimum levels leading to a decrease in absenteeism averaging 2.4 sick days per year (across 100 staff and including only those engaged by the project)

- Increased productivity
- Increased self-reported wellbeing/contentment
- Improved staff perception of SMT/ CEO/ business
- On average, car journeys with engaged businesses have reduced by 1,428 per year per 100 staff members (One project with Northumbria Police saw a trip reduction 5379 per 100 staff members)
- In projects the average number of car parking spaces required reduced by 6 cars per 100 members of staff. A parking space costs between £300 and £500 per year to maintain (source: DfT), therefore assuming car parking spaces reduced as above, between £1,800 and £3,000 saving per year, for every 100 staff is gained

Total Benefits to business calculation: At least £4000 per 100 staff engaged based on:

- Absenteeism reduction 2.4 days per 10 staff engaged @£700/day (estimated figure) = approx £1750 saving per year
- Car parking reduced by 6 car parking spaces per 100 staff @£400/ space = approx £2400
- £2400 + £1750= £4150 per 100 staff minimum

Examples of success

UCycle Nottingham – September 2009–July 2011

6,841 staff, students and other participants engaged with the scheme for over two years. The reduced mortality resulting from increased time spent cycling is estimated to be worth £4,359,000 for staff and £2,483,000 for students over 10 years. The present value of the benefit of the new walking and cycling trips made by the additional route users accumulated over 10 years estimated to be £1,243,000.

Travel West Big Commuting Challenge – 2015

4,569 individuals registered for the challenge made 196,232 active or sustainable journeys during the challenge and covered a distance of 932,000 miles. They burned 17 million calories and avoided 83,000kg of CO2 emissions due to their switching to active or sustainable journeys. This saved participants a total of £100,648. 78% of respondents switched to walking or cycling instead of driving for short, regular journeys and intended to keep it up.

GlaxoSmithKline (GSK) investing to save

When the choice came down to providing car parking at a cost of £2,000 per space per year at its worldwide headquarters in Brentford, or supporting those who were willing to give up their cars and cycle to work at the cost of £400 per annum, GSK found that there was no decision to make. As a result, the number of staff cycling to work has increased from 50 to 350 (out of 3,000) and is still rising.

Schools Work planned for 2019/20

A number of initiatives are planned for the first year of the Active Travel Island Strategy by the Road Safety Team and Sustrans. These include;

- Continuation of the National Standard Cycle Training Scheme.
- School engagement, baseline monitoring & audits looking at how children currently travel to school, closely followed by a student led audit of the physical environment around the school using an audit tool known as the Big Street Survey.
- Engagement activities with schools to accurately identify the most impactful interventions to achieve high levels of behaviour change. All interventions will be needs-led, recognising and acting on school priorities and aspirations. A list of all intervention types will be presented to the schools and help will be given to select projects that are right for the specific school in question.
- Identification of schools with high levels of stakeholder support, which will help considerably in overcoming the initial challenges of approaching very busy schools.
- School Streets, which uses Experimental Traffic Regulation Orders (ETROs) to close the roads outside schools at pick-up and drop-off times. School Streets is usually run in conjunction with active travel programmes that encourage a change from the car to cycling, walking or scooting to school.

Workplace interventions for 2019/20

Sustrans officers will work with the Road Safety Team to provide 5 step programmes for businesses:

Stage 1 Organisation and Policy - What policies are in place within the business to help walkers and cyclists? Can new policies such as providing bike mileage or storage facilities help?

Stage 2 Raising Awareness - An Officer will work with companies to build awareness and support throughout the organisation and help raise the possibilities and opportunities for individuals to change their travel behaviour.

Stage 3 Empowerment - Having helped show people the reasons for changing behaviour, the next stage is to enable this change. We will assist in Active Travel take-up with a range of interventions including; Dr Bike sessions, Mapping sessions, Facilitating bike buddying and Cycle training

Stage 4 Action - A range of activities will be planned such as organised group rides and walks, bike breakfasts, workplace challenges etc

Stage 5 Moving Forward - In this stage we look for opportunities to build legacy into the project by encouraging and empowering champions within workplaces to continue the work that has been started.

Increasing business productivity through sustainable travel at the Cobalt Business Park

Sustrans worked over a three-year period with Cobalt Business Park in the north east of England to remove the barriers to sustainable commuting, reduce congestion and increase workplace health and productivity.

The project achieved 520 fewer sick days per year, equating to £125,320 of accumulative savings for the Business Park per year.

Tackling sickness absence

In 2011, around 131 million days were lost through absences due to sickness or injury in the UK. The average worker takes 4.5 sick days each year. The impact on UK employers is significant, with absenteeism costing employers £258 per worker per day.

Employees who travel to work actively are fitter, healthier and happier. This is supported by a range of recent research showing that regular cyclists take less sick days than non-cyclists.

Employee engagement activities

Activities and events included:

- volunteer training
- adult cycle skills training
- weekly lunchtime walk group
- evening guided cycle rides
- coordination of a cycle buddy system
- bike user group
- workshops e.g. how to fix a puncture
- awareness events
- information and advice sessions



Outstanding results

The Cobalt Business Park active travel project resulted in:

- 520 fewer sick days per year
- £125,320 of accumulative savings for the business park per year or £0.5 million over four years
- 43% of people with access to a car reduced the amount they drove by at least one mile per day
- 50% increase in the number of people achieving 30 minutes of physical activity on seven days per week
- 76% increase in the number of people travelling actively for 10 minutes or more on five or more days per week

Sefton Council boosts cycling to school

In 2008 Southport had been teaching children Bikeability for over two decades, but they couldn't understand why the number of children participating plateaued. We worked with over 30 schools in Southport to help them realise their Cycle Town ambitions, and later expanded to other schools throughout Sefton.

The Council started by commissioning Sustrans to deliver the Bike It schools programme in 10 schools in Southport and expanded to 30, including Formby. Later they got more funding for schools officers throughout Sefton and now work with 41 schools.

When our schools officers went into the schools they discovered that a lot of the children couldn't ride a bike by Year 5, the year when Bikeability training started. This meant they weren't able to participate in the scheme, which offers cycle training on the roads. The schools officers focussed on teaching those children to cycle before Year 5 so they were ready to take up the next level of training.

Just a year after the Bike It scheme began, the results of participation in Bikeability jumped to 86% across 10 schools and the number of children who never cycled to school almost halved, to 34%.



Today, in schools taking part in the project within Sefton, 17% of children say they regularly cycle to school and 51% say they sometimes cycle (compared to just 2.8% in 2007, before Sustrans started work in the area).

"Some of the results were quite startling," says Jean Hunt at Sefton Council. "We thought Bikeability was good but within a few years of Bike It the results were much better."

"I've been to loads of Bike It schools and you can't help but get carried away by the enthusiasm of the people involved. The children really enjoy it. In some schools,

children may not achieve much in their school life, but they can experience a massive achievement in getting their cycling certificates."

Costing of Walking and Local Cycling Proposals

Unlike the cycling proposals, the zone and cell based proposals are more difficult to cost. This is mainly because proposals will be generated at a later time through engagement and co-design.

Rough figures are shown for the cost of engagement work only and the zones referenced so that they can be included in the prioritisation process.

As with cycling proposals, costs are indicative only and designed to give a sense of scale of funding required.

Figures given for the Local Walking and Cycling Cells are based on approaches developed by Sustrans in London and Manchester. The "Study Work" involves the co-design elements, preliminary design, community events, street trials etc.

Cost of delivery varies greatly between zones and can typically include road closures, new crossings, public art etc

Ref	Section Name	Provision Required	Cost of study (£k)	Cost of Delivery	Deliverability Narrative
A	Core Zone A – Douglas Centre	Engagement to determine a mandate for development-derived changes to the built environment of Douglas Centre	50 to 100	000s	<p>Douglas centre is already undergoing a transformation, with public realm improvements recently completed and new projects underway. This work should continue and bear in mind new developments off Victoria Street. Provision of cycle-specific infrastructure is difficult within the limited space available in the town centre but up-coming developments should be explored to understand if parking can be reduced, traffic lanes reduced etc whilst still allowing cyclists to move around freely.</p> <p>In terms of walking, any attempt should be made to improve crossings, and provide traffic-free space in which people can move around and dwell more freely and which improve the ambience of the centre.</p> <p>Specific projects are unlikely to arise as part of the Active Travel Project directly but the information within this ATIP should provide the evidence to influence development.</p>
B	Core Zone B - Promenade	Public consultation to determine need Engineering Study to determine potential	20 - 50	00s	<p>As with cycling, the Promenade is a key area of pedestrian movement. Improvements are imminent with the forthcoming restoration project, but access along the side roads immediately to the north could be examined as a second phase to ensure the benefits of planned improvements are fully realised. In practice this might mean improved access to crossing points and improvements in the Sea Terminal car park and at the northern end at the approach to Onchan.</p>
C	Core Zone C – Woodbourne Road	Public consultation to determine need Engineering Study to determine potential	30-60	00s	<p>Woodbourne Road was highlighted as a key link in a number of evidences. However, stakeholder engagement raised the road both as a problem, in that it is unpleasant to move around on foot and by cycle, and as an opportunity in that it forms one of Douglas's key streets which should justify investment.</p> <p>Movement studies and extensive work with residents and business owners would be needed to see what improvements would be useful.</p>

Ref	Cell Name	Provision Required	Cost of study (£k)	Cost of Delivery (£k)
1	LWCC 1 - Pulrose	Public Engagement Exercise Trialling of proposals Implementation of proposals Walking and cycling behaviour change	20-40	10 - 100
2	LWCC 2 - Farm Hill / Ballaughton	Public Engagement Exercise Trialling of proposals Implementation of proposals Walking and cycling behaviour change	20-40	10 - 100
3	LWCC 3 - NSC	Public Engagement Exercise Trialling of proposals Implementation of proposals Walking and cycling behaviour change	20-40	10 - 100
4	LWCC 4 - Douglas West	Public Engagement Exercise Trialling of proposals Implementation of proposals Walking and cycling behaviour change	20-40	10 - 100
5	LWCC 5 - South of Ballanard	Public Engagement Exercise Trialling of proposals Implementation of proposals Walking and cycling behaviour change	20-40	10 - 100
6	LWCC 6 - Union Mills & Snugborough	Public Engagement Exercise Trialling of proposals Implementation of proposals Walking and cycling behaviour change	20-40	10 - 100
7	LWCC 7 - Ballanard / Noble's Hospital	Public Engagement Exercise Trialling of proposals Implementation of proposals Walking and cycling behaviour change	20-40	10 - 100
8	LWCC 8 - Governors Hill / Cronk Y Berry / Willaston	Public Engagement Exercise Trialling of proposals Implementation of proposals Walking and cycling behaviour change	20-40	10 - 100

Ref	Cell Name	Provision Required	Cost of study (£k)	Cost of Delivery (£k)
9	LWCC 9 - Noble's	Public Engagement Exercise Trialling of proposals Implementation of proposals Walking and cycling behaviour change	20-40	10 - 100
10	LWCC 10 - Douglas East	Public Engagement Exercise Trialling of proposals Implementation of proposals Walking and cycling behaviour change	20-40	10 - 100
11	LWCC 11 - Onchan Bemahague	Public Engagement Exercise Trialling of proposals Implementation of proposals Walking and cycling behaviour change	20-40	10 - 100
12	LWCC 12 - Onchan Birch Hill	Public Engagement Exercise Trialling of proposals Implementation of proposals Walking and cycling behaviour change	20-40	10 - 100
13	LWCC 13 - Onchan Lakeside / Onchan Village / Onchan Hague	Public Engagement Exercise Trialling of proposals Implementation of proposals Walking and cycling behaviour change	20-40	10 - 100

12. Maximising Benefits of Active Travel Infrastructure

A variety of studies have shown that capital investments in active travel infrastructure, such as cycle tracks and pedestrian crossings, can increase the numbers of people making active travel journeys, but that a combination of infrastructure and complementary behaviour-change interventions can have a much bigger impact.

Sustrans has produced a report called "Finding the Optimum" which takes data from a variety of programmes and looks at how behaviour change can build upon the benefits of capital investment.

The report is included in Appendix E but the key findings are:

- Cycling schemes with revenue spends of 20-40% (the rest being capital) seem capable of delivering high BCRs. (There are too few long running town-wide cycle investment programmes having over 50% revenue funding for the report to comment.)
- Revenue measures may sometimes be more effective and offer greater value for money than capital schemes
- There is a growing view that capital schemes such as new cycle routes on their own will not attract as high use as intended, due to not addressing obstacles of a psychological or social nature
- Several examples show that a large-scale programme combining both revenue and capital schemes can deliver value for money. A study of the 18 Cycling Demonstration Towns / Cycling City and Towns (CDTs/CCTs) indicates that no strong relation is seen between proportion of capital-to-revenue spend and increase in cycling - suggesting that this depends on local circumstances
- It appears easier to increase cycling in towns that have a pre-existing cycle culture. Therefore a long-term scheme may be required, with investment initially focused on behaviour change and information programmes to stimulate interest, followed by a period of higher capital investment to create a high-quality cycle network, followed then by further revenue projects such as cycle training and bike loan
- **Case study - Exeter:** A study in the report showed an increase from 3.6% to 5.0% in cycling to work in Exeter between 2001 and 2011. There was significant investment in both capital and revenue funding focussed on cycling to work. Cycle-count data suggested that a workplace-focussed smarter choices programme had been key to this increase
- **Example - Cycle Superhighways Programme, London (Transport for London):** Approximately 12-20% of the revenue funding went towards promotional work including engaging with businesses, leaflet drops to residential properties nearby, free cycle training and advertising on buses that run along the route and at bus stops. A programme of cycle parking, cycle training and cycle safety checks aimed at employees of workplaces within 1.5km of two Cycle Superhighways in London resulted in an increase in cycling mode share from 11% to 14% at the 84 targeted workplaces. (Transport for London, 2011,2013)

- **Example - Middlesbrough:** 'Cycling to Employment' scheme in which £1.15 revenue spend per £1.00 capital spend aimed to address multiple obstacles preventing people getting to work by bicycle. Revenue purchases include cycling training, bicycle maintenance sessions, a broader campaign to encourage use of all sustainable modes of transport, promoting cycling through events and distribution of packs containing cycle maps and information. A 20% increase in the recorded levels of cycling since the start of the project was reported
- **Study - schools:** Comparison of schools which received investment in cycle infrastructure (Links to Schools) with schools that received investment in both infrastructure and cycle promotion (Bike It) suggests that the combination of capital and revenue investment is more effective than capital investment on its own. Although small sample sizes, five schools that had received both capital and revenue investment showed an increase of 1.8% points in cycling mode share in the School Census compared to schools with no intervention. Comparatively, there was a 0.4% points increase for

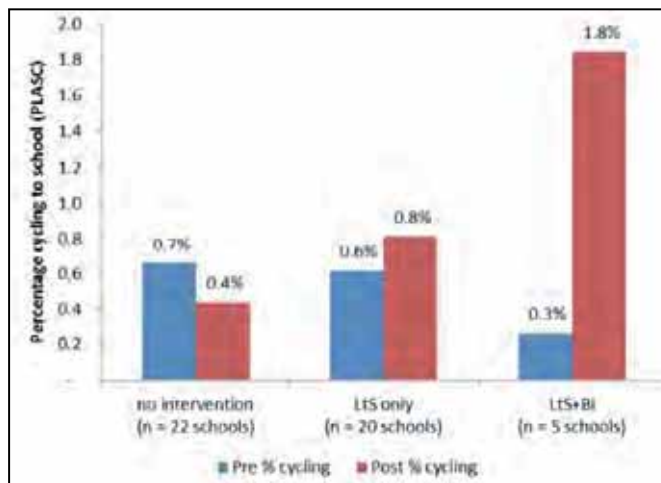


Figure 23. Schools: percentage cycling to school in pre and post intervention

	Pre % cycling	Post % cycling	%-pt change
No intervention	0.7%	0.4%	-0.2
Links to Schools only	0.6%	0.8%	+0.2
Links to Schools + Bike It	0.3%	1.8%	+1.6
All English primary schools*	1.1%	1.0%	-0.1
	Pre % walking	Post % walking	%-pt change
No intervention	62.1%	69.7%	+7.6
Links to Schools only	51.4%	54.3%	+2.9
Links to Schools + Bike It	62.0%	65.9%	+3.9
All English primary schools*	55.5%	59.8%	+4.3
	Pre % car*	Post % car*	%-pt change
No intervention	34.7%	28.3%	-6.4
Links to Schools only	43.3%	41.6%	-1.7
Links to Schools + Bike It	33.7%	29.0%	-4.7
All English primary schools*	39.3%	35.0%	-4.3

Figure 24. Schools: percentage travelling by each mode in each group

schools receiving capital investment alone. See Figure 23. Figure 24 shows percentage travelling by each mode in each group

- Two further studies - a review of the Links to Schools programme (Sustrans 2010) and a qualitative evaluation of Sustrans' infrastructure (CLES Consulting, 2012) provided evidence that the provision of safer routes for walking and cycling can substantially increase the numbers of children travelling to school by foot or bike, and that by combining with programmes such as Bike It, uptake can be further enhanced - particularly if both interventions occur within the same academic year. It was found that 64% of school representatives agreed or strongly agreed that activities to promote walking and cycling had been as important as infrastructure improvements. Children responded more positively to promotion of cycling and walking through activities they could take part in rather than general promotion of routes.

Typical behaviour change measures to encourage cycling and walking may include:

Marketing

- Cycling or walking fun days or festivals
- Competitions or challenges to cycle or walk or to not drive
- Community engagement for local street improvements
- Guided cycle rides and walks
- Cycle/walk to work/school days or 'walk-once-a-week' schemes
- Workplace and school champions
- Classroom active travel sessions
- Reward schemes for cycle/walking
- Social media initiatives
- Area-wide cycle route publicity
- Promotion of online journey planners and information

Information

- Information to job changers / house movers
- Personal travel plan information
- Cycle and pedestrian route information points

Services

- Cycle 'buddy' schemes to show quiet safe routes
- Cycle repair schemes
- Cycle maintenance training
- Cycle training
- Free or affordable loan of bikes, e-bikes, scooters
- Bicycle recycling schemes to provide cheap bikes

13. Outline Economic Appraisal

Benefit Cost Ratio (BCR) Generation and the Active Mode Appraisal Tool (AMAT)

Most business cases seek to generate a BCR to justify spend. The UK has developed a tool known as AMAT that can generate a BCR for cycling and walking schemes without overly onerous calculations and is WebTAG compliant.

The AMAT outputs include information on benefits that can be attributed to a project including those associated with:

- Congestion benefit
- Infrastructure development
- Accident savings
- Local Air Quality improvement
- Noise reduction
- Greenhouse Gases reduction
- Reduced risk of premature death
- Absenteeism reduction
- Journey Ambience improvement
- Indirect Taxation (can be negative for cycling)

In an ideal scenario a BCR would be generated for all interventions proposed in this report so that they can be compared against each other. However this is problematic for a number of reasons:

- AMAT requires significant baseline data which is not available at this time
- AMAT is not ideal for use on new off-carriageway cycle routes
- AMAT is not suitable for Local Zone engagements or behaviour change work

BCR data is desirable however as an overall sense check and Sustrans has developed a methodology, accepted by the UK DfT, for assessing cycle routes when data is limited.

- Routes are sorted into named lengths that link origins to destinations. This is done here by merging a number of route sections identified in the Cycling Network Plan. This is necessary to reduce the amount of double counting ie a cyclist using part of a route near their home may also use part of a route near their destination and be counted twice if that route is split in two.
- Costs and general assumptions are input into the AMAT tool
- Walking and cycling figures are input so as to provide a BCR of close to 2.0 (This is the BCR figure regarded as "Good" by the UK DfT)
- The levels of use required to achieve a Good rating are then given an achievability narrative and routes compared against similar past schemes to examine the probability of achieving those levels. (Routes are examined against the Sustrans report "Improving

Access for Local Journeys"(IALJ) attached as Appendix F

This process can give a means to prioritise the main active travel routes, around which other interventions can be programmed. It does not provide a detailed Economic Appraisal but enables a sensible view to be taken on how much use a route needs to achieve to justify its cost.

NOTE: BCRs are generated that cover a 20 year period from completion of the project. Also New Cyclists Required refers to average use per day over and above current use.

Behavioural Change BCRs

Behavioural Change projects would not typically use WebTAG or AMAT to calculate BCRs, given the framework is designed primarily for infrastructure projects.

However, the 'Get Britain Cycling' APPCG Inquiry 43 states that "there is substantial evidence that behaviour change initiatives, like other smarter choices give very good value for money indeed – better than most infrastructure projects – in line with a decade of discovery that small, local, cheap improvements to the quality and ease of transport typically give benefit cost ratios (BCRs) in double figures, with benefits that may be 10 or 20 times as large as costs, or more".

(43 Get Britain Cycling, Report from the Inquiry (2013) All Party Parliamentary Cycling Group (Available online at: <https://allpartycycling.files.wordpress.com/2013/04/get-britain-cycling-goodwin-report.pdf>)

In schools where projects have been undertaken by Sustrans a 4:1 benefit to cost ratio has been achieved.

Analysis of Monetised Costs and Benefits (in £'000s)

Congestion benefit	7.90
Infrastructure	0.08
Accident	2.25
Local Air Quality	0.01
Noise	0.15
Greenhouse Gases	0.41
Reduced risk of premature death	236.00
Absenteeism	57.76
Journey Ambience	114.59
Indirect Taxation	-1.64
Government costs	183.70
Private contribution	0.00
PVB	417.43
PVC	183.63
BCR	2.27

Benefits by type:

Mode Shift	9.16	2.2%
Health	293.76	70.4%
Journey Quality	114.59	27.4%

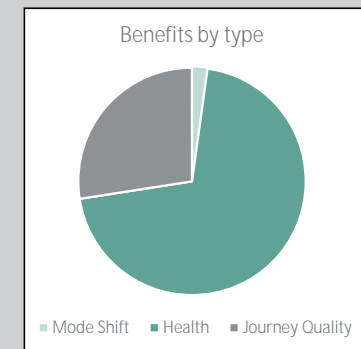


Figure 25. Example of an AMAT output - Heritage Trail Link

Route No.	Route name	Route sections included	Route Cost (£k)	BCR	New Cyclists Required to achieve BCR	New Walkers Required to achieve BCR
1	Enterprise Way	D, F, G, L, M	1863	2.11	170	510
2	Heritage Trail Link	N, P	202.6	2.27	35	5
3	Pulrose - Brewery	C	460	2.23	50	150
4	Tromode to Central Douglas	K, R, S, T	698.6	2.19	130	NA
5	Douglas Core Route	J, U	TBC	TBC	TBC	TBC
6	Tromode to Heritage Trail	Q	285	2.27	25	75
7	Nunnery	B	600	2.16	50	150
	Near delivery	A, W,				
	To be included in Local Walking and Cycling Zones	E, H, I, O, V, X, Y, Z, Aa				

BCR Achievability Narrative

1. Enterprise Way

The Enterprise Way uses an alignment which takes best advantage of topography (as far as new Castletown Road) and links key residential housing areas to key industrial sites, sports facilities and Douglas Centre. It has similarities to the Winchester scheme in the IALJ report with 219 daily trips. It is also the key route for housing at the southern side of Douglas, funnelling in cyclists from numerous residential areas. It should therefore easily achieve the 170 cyclists required to generate a good BCR. Priority - HIGH

2. Heritage Trail

With the development of the Enterprise Way, there will be much improved links to the Heritage Trail from industrial sites, the Promenade and tourist areas and from large areas of housing. (Health benefits are counted regardless of whether the journeys are for a purpose of for leisure). Only 35 new cyclists per day would enable a high BCR to be achieved (once Enterprise Way is complete) and the IALJ report includes several similar routes that have achieved much more than this. Priority - HIGH

3. Pulrose - Brewery

This route links the Enterprise Way to the Okells Brewery site. This showed up as having high potential Journey Flow. However, there is high risk in providing the high costs of the route to serve a handful of employers. Work would be needed with the Brewery to understand if staff actually would use the route if provided. There is risk that the numbers of cyclists would not be met and the BCR not achieved. Priority - LOW

4. Tromode to Central Douglas

This links the centre of Douglas with large residential areas, but the proposed infrastructure would be of a more on-road nature than other projects. The scheme does not have much comparison with others in the IALJ report and therefore there is risk in achieving a good BCR. Priority - MEDIUM

5. Douglas Core Route

Costing has not been undertaken for this route, but is likely to be high. However, this route would provide large areas of Douglas and Onchan with access to Central Douglas and to routes served by Enterprise Way. The route would also serve a number of schools (although those journeys are not taken into account in AMAT). It is likely that a good BCR would be achieved. Priority - MEDIUM HIGH

6. Tromode to Heritage Trail

This is a short route but would provide a relatively flat option to travel between Tromode, Douglas Centre, NSC, Anagh Coar etc. It compares well with several routes in the IALJ report but would need a number of

other routes to be provided first to be really useful. Priority - MEDIUM LOW

7. Nunnery

This provides a relatively flat alignment and would be an alternative to Enterprise Way for cyclists travelling to the Sea Terminal area. It compares well with several routes in the IALJ and should easily achieve a good BCR. However, it requires a major development to take place to provide a critical bridge before it can be wholly constructed. It will also likely serve leisure and tourist journeys more than those for a purpose and be slow: Priority LOW

A note on the Health Benefits.

The AMAT outputs show that benefits attributed to health make up by far the largest portion of overall benefits.

The health benefits of physical activity are well documented. Sedentary lifestyles can have serious impacts and have been linked to many physical and mental health conditions. It is reported that inactivity levels in the UK cost the NHS £8-10 billion a year (Department of Health, 2004, 'At least five a week').

Results from Sustrans' Active Travel projects show that participants who initially had physical activity levels similar to the national average increase their levels of walking and cycling.

A study by University of Glasgow and published in the British Medical Journal in April 2017 which followed the lives of more than 250,000 Britons over five years found that regularly cycling to and from work had the effect of reducing an individual's incidence of cancer, heart disease and early death by over 40%. Although to a lesser extent, walking was also found to be beneficial, particularly so for people walking more than 6 miles per week.

Statistics relating to the health cost-benefit of Active Travel are plentiful and include:

BikeLife 2040 report (Sustrans 2019)

By increasing cycling in the seven Bike Life cities between 2017 and 2040 (Belfast, Birmingham, Bristol, Cardiff, Edinburgh, Greater Manchester and Newcastle) on average from 0.4 to 3.3 trips per person each week, it is estimated that:

- 628 early deaths could be prevented
- 34,000 long-term health conditions - including Type 2 diabetes, stroke, breast cancer and depression - could be averted
- The NHS could save £319 million, equivalent to the annual salary of 13,481 nurses

(Figures are based on the Societal Gain Model from Bike Life 2017, the World Health Organisation's Health Economic Assessment Tool (HEAT)

and Sport England MOVES tool.)

Public Health England

Recent estimates state that physical inactivity costs the NHS more than £450 million a year at Clinical Commissioning Group level, equating to £817,274 per 100,000 individuals or £8.17 per person. (Cycling and walking for individual and population health benefits, Public Health England, 2018).

The World Health Organisation

The World Health Organisation (WHO) includes walking and cycling as key actions in its Global Action Plan on Physical Activity 2018-2030.

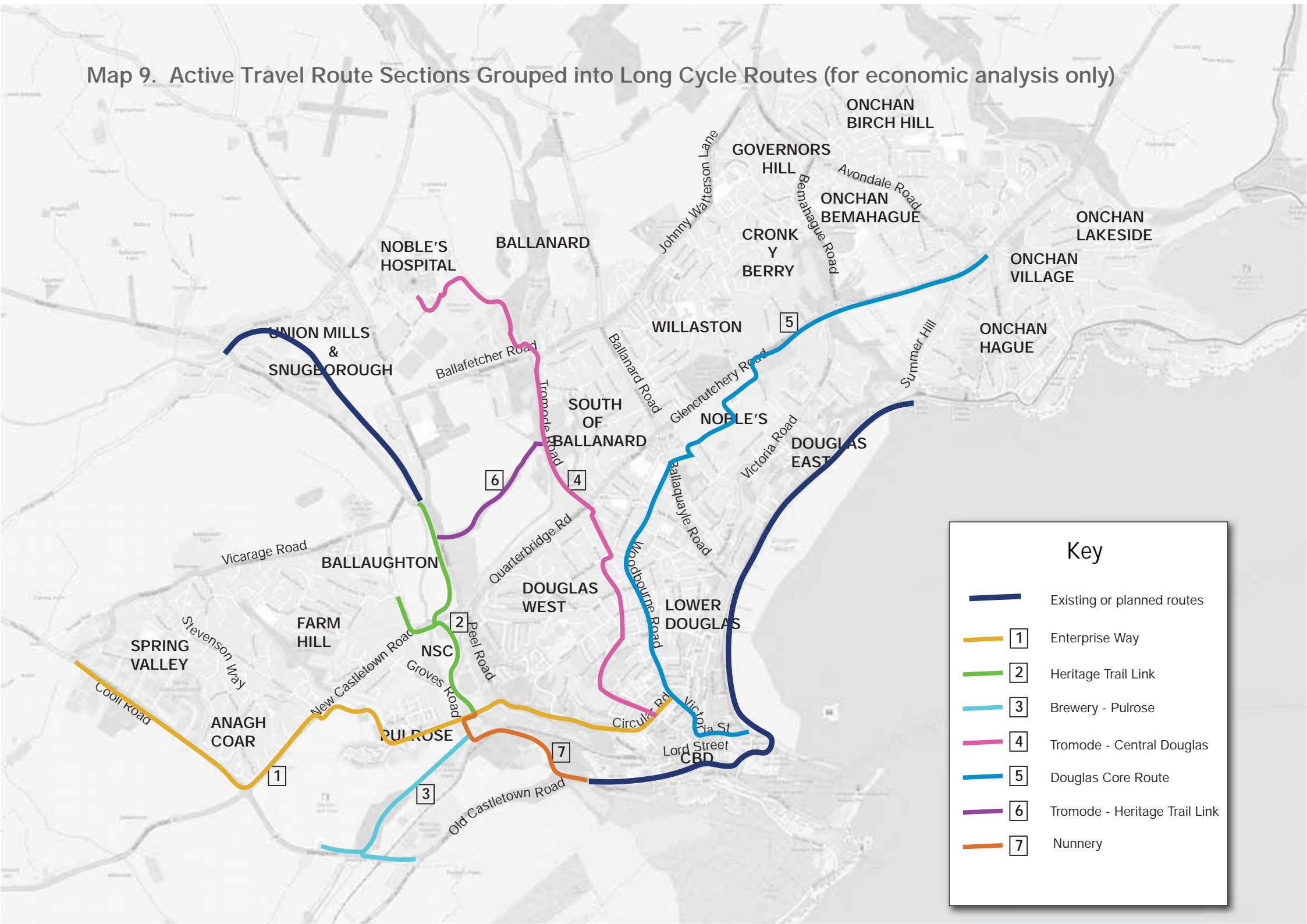
Chief Medical Officers (CMO) for England

A study by public health economists estimated that a 10% increase in cycling and walking in urban centres in England could generate a saving to the NHS of over £15 million within 3 years. Within 20 years this increase would lead to savings of roughly £17 billion (in 2010 prices) for the NHS in England and Wales. (Jarrett et al (2012) Effect of increasing active travel in urban England and Wales on costs to the National Health Service: The Lancet 379 (9382).

The Department of Health

The four CMOs say the physical activity target will only be achieved by helping people to build activity into their daily lives. They say, "for most people, the easiest and most acceptable forms of physical activity are those that can be incorporated into everyday life. Examples include walking or cycling instead of travelling by car, bus or train." (Start Active, Stay Active - (Department of Health, 2011).

Map 9. Active Travel Route Sections Grouped into Long Cycle Routes (for economic analysis only)



Key

- Existing or planned routes
- 1 Enterprise Way
- 2 Heritage Trail Link
- 3 Brewery - Pulrose
- 4 Tromode - Central Douglas
- 5 Douglas Core Route
- 6 Tromode - Heritage Trail Link
- 7 Nunnery

14. Full Prioritisation

All factors examined in this document are now brought together in a single prioritised table that builds a picture of what interventions should be provided in what order.

This is intended as a guide only to show how a sensible cycle infrastructure network can be built up over time and matched to behavioural change work and community engagement.

The order in which projects are delivered may depend on numerous variables including development of growth sites, the enthusiasm of

particular schools and businesses to be involved in the project or provision of complementary projects, such as maintenance work that could reduce the costs of infrastructure.

A Note on Demographics

The lifestyle and affluence of various residential areas is sometimes used to influence prioritisation. There is a general trend that the more affluent an area is, the more likely people are to take up cycling. This is a factor in the modelling used by the UK DfT. It suggests that the more affluent areas of Douglas, such as Onchan, should be prioritised.

However, increases in active travel will have the most effect on areas which are more deprived. This is mainly because people living in

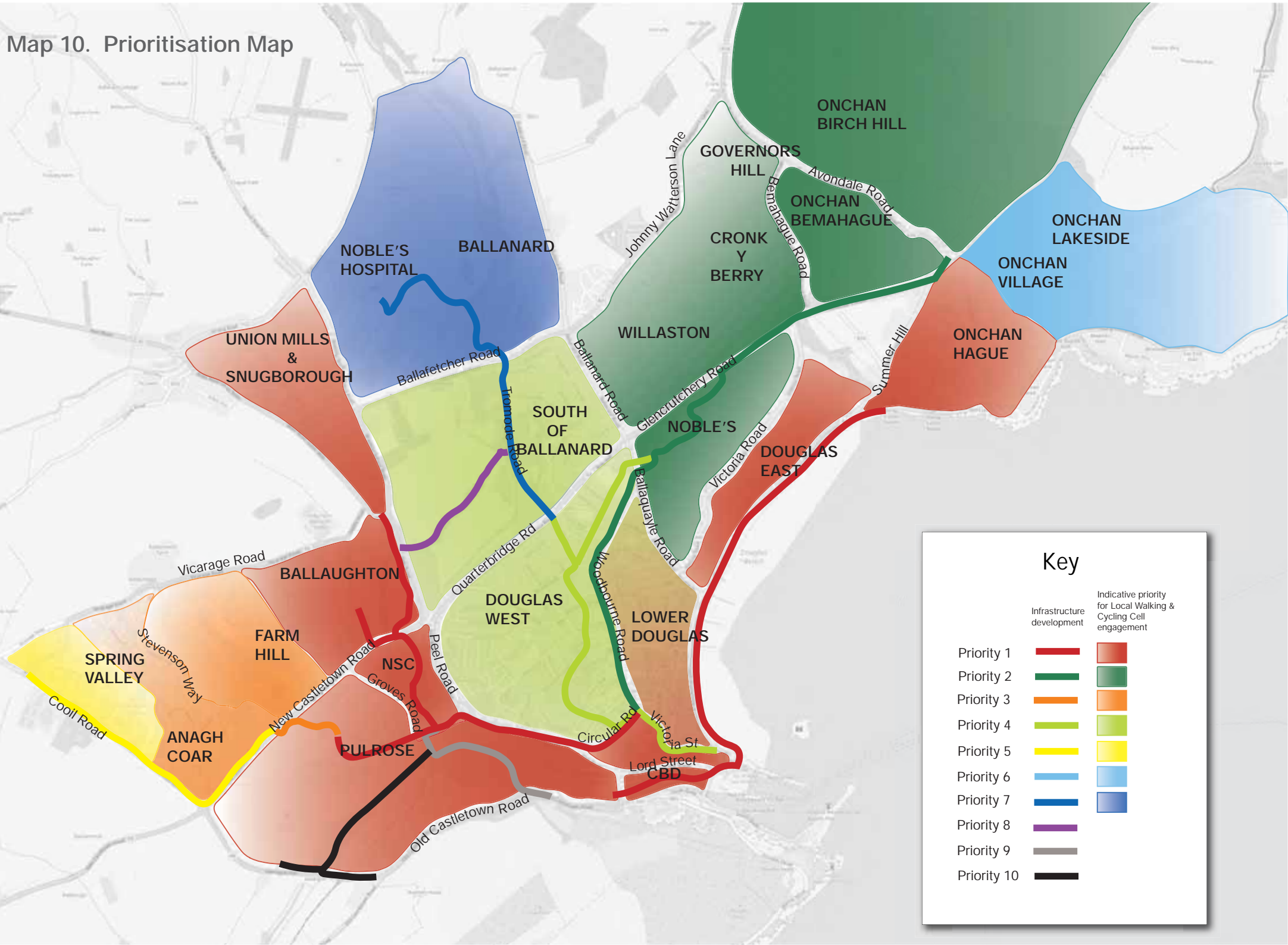
more deprived areas can be expected, on average, to have worse health (there is a well known link between health deprivation and low affluence) and as we have seen, it is the health benefits that make up the larger part of the benefits overall.

A problem is that take up in less affluent areas is more difficult. The key to achieving this is complementary engagement and behaviour change work that can influence the harder to reach areas.

As such affluence has not been taken into account in prioritisation and it is assumed that behaviour change measures will be undertaken as physical infrastructure is provided.

Priority	Project	Cost	Local Walking and Cycling Cells	Active Travel Support	Prioritisation Narrative
1	Promenade	LOW	Onchan Hague, Douglas East	Work with Businesses: <ul style="list-style-type: none"> Dol Douglas Borough Council HSBC IoM Steam Packet 	Infrastructure Fit: <ul style="list-style-type: none"> Review junction designs to make small-scale amendments that will better enable cyclists and walkers to join the seaward side of the Promenade Policy Fit: <ul style="list-style-type: none"> Douglas Corporate Plan 2017-2021: "Ensure that active travel is encouraged and facilitated as a component of all infrastructure projects undertaken by the Council..."
1	Sea Terminal and North Quay (Section A)	LOW			Infrastructure fit: <ul style="list-style-type: none"> Proposals have been developed that are close to delivery Will join existing / developing projects of the promenade and North Quay Planning Development: <ul style="list-style-type: none"> Major new development proposed at Lord Street, the proposal will connect to this on its completion. Development plans should be examined to ensure tie-in and improvement of proposed infrastructure and so adequate parking, storage, shower facilities included for staff and/or visitors Connects the Promenade with new private cycle business on North Quay Policy Fit <ul style="list-style-type: none"> Central Douglas Masterplan: North Quay and links to the Promenade are included
1	Introduction of cycle exemptions to one-way streets	LOW			Other: <ul style="list-style-type: none"> Highways Forward Programme. Reconstruction of Market Street planned in 2022. Opportunity could be taken to provide contraflow cycling

Map 10. Prioritisation Map



Key

	Infrastructure development	Indicative priority for Local Walking & Cycling Cell engagement
Priority 1		
Priority 2		
Priority 3		
Priority 4		
Priority 5		
Priority 6		
Priority 7		
Priority 8		
Priority 9		
Priority 10		

Priority	Project	Cost	Local Walking and Cycling Cells	Active Travel Support	Prioritisation Narrative
1	Enterprise Way Sections L, M, D	HIGH	Pulrose (inc. Section E)	<p>Work with Businesses:</p> <ul style="list-style-type: none"> Barclays Cabinet Office Capital International Dept Education Sport and Culture Enterprise KPMG Lloyds Int. Microgaming Standard Bank <p>Work with Schools:</p> <ul style="list-style-type: none"> Ballakermeen High School Henry Bloom Noble Primary Manor Park Primary 	<p>Infrastructure Fit:</p> <ul style="list-style-type: none"> Connects Douglas Centre with existing facilities on Peel Road and Pulrose Pulrose is in walking and cycling distance of Douglas Centre and topography is relatively flat between Links Douglas Centre to National Sport Centre (NSC) Available space in streetscape makes positive public realm works likely <p>Planning Development:</p> <p>Main cost of works will be on Pulrose Road and modifications will need to be built into proposed bridge works</p> <p>Policy fit:</p> <ul style="list-style-type: none"> Area Plan for the East. Routes in this area require consideration as part of the Proposed Comprehensive Treatment Area 8 Central Douglas Masterplan. Contains objective to: "Create a network of streets and spaces connected by safe and attractive pedestrian and cycle routes", and "A transformed network of pedestrian, cycle and vehicle routes will connect the centre and address movement through previous barriers."
1	Advance Stop Lines (ASLs) at signal junctions	LOW			<p>Other:</p> <ul style="list-style-type: none"> Highways Forward Programme. Glencruthery Road due to be resurfaced in 2021. ASL markings could be included. (if agreed with TT organisers) Highways Forward Programme. Ballaquayle Road to be resurfaced in 2022. ASL markings could be included. (if agreed with TT organisers)
1	Waymarking	LOW			<p>Infrastructure Fit:</p> <p>Provides information regarding journey direction and information and should be erected as other proposals are implemented or communities engaged with. A comprehensive signing strategy is required that can be used as proposals and developments occur.</p>
1	Heritage Trail Link Sections N, O, P (Quarterbridge Bypass)	HIGH	Heritage Trail Link Sections N, O, P	<p>Work with Schools:</p> <ul style="list-style-type: none"> Ballacottier Primary Braddan School 	<p>Infrastructure Fit:</p> <ul style="list-style-type: none"> Provides a bypass of Quarterbridge Junction to those travelling from the Heritage Trail towards Central Douglas Crossings of New Castletown Road is the most expensive part of the route and should also provide a route into Ballaughton to connect that large residential area and maximise the impact of the route Maximises the use of the NSC circular track and improves Active Travel Access to it PROW Policy and Strategy 2018-28: Access for All proposals in 2018 on Heritage Trail <p>Policy Fit:</p> <ul style="list-style-type: none"> By improving access to the Heritage Trail, The Isle of Man Strategic Plan 2016 Objective 3.2 "To reduce the need for travel, especially by private car, and to make the best use of existing infrastructure, including existing and former railway routes" is met Area Plan for the East. Provision of Section O could form part of a link to site BM006 Area Plan for the East. Proposed residential sites to the north of Union Mills could enhance demand for a route using the Heritage Trail

Priority	Project	Cost	Local Walking and Cycling Cells	Active Travel Support	Prioritisation Narrative
2	Douglas Core Route Section Ab	HIGH	Onchan Bemahague / Onchan Birchill Nobles Willaston / Cronk Y Berry / Governor's Hill (inc. Sections V and Y)	Work with Businesses: <ul style="list-style-type: none"> Marks & Spencer Newfield RBS/loM Bank Santander Shoprite Treasury Work with Schools: <ul style="list-style-type: none"> St Mary's Primary St. Ninians Upper St. Ninians Lower Cronk Y Berry Primary Willaston School 	Infrastructure Fit: <ul style="list-style-type: none"> This alignment will provide the route of best gradient between Onchan, Nobles, Lower Douglas and Douglas Centre. The impact and cost of scheme may well be high. However significant junction works are programmed for Woodbourne Road and cost savings could be achieved by including improved walking and cycling infrastructure in the overall improvement project. This factor has raised this project to Priority 2. <ul style="list-style-type: none"> 1. Once cycling infrastructure as far Nobles Park and to Douglas Centre is complete and Promenade work is well underway, there will be enough infrastructure to carry out carry Engagement work with local residents in the central north of Douglas to understand how links can be made to the infrastructure and how else Active Travel can be increased for example through Behavior Change programmes Policy fit: <ul style="list-style-type: none"> Area Plan for the East. Proposed residential sites to the north of Johnny Waterson Lane would greatly enhance the value of routes in these areas. and improve links from Governor's Hill and Birch Hill Links through and between them should be sought through the Planning process
3	Enterprise Way Sections F	HIGH	Farm Hill (inc. Section I) Anagh Coar (inc Section H)	Work with Schools: <ul style="list-style-type: none"> Anagh Coar Primary 	Infrastructure Fit: <ul style="list-style-type: none"> Builds on Priority 1 and provides links between major residential areas and Douglas Centre Paths and green space within the Local Walking and Cycling Cells (LWCCs) provide potential for links within and between the residential areas. Connect residential areas to NSC
4	Tromode – Central Douglas Sections J, K, R, and Core Douglas Core Route Section U	MED LOW	Douglas West South of Ballard	Work with Businesses: <ul style="list-style-type: none"> Home Affairs Dept. Health and Social Care First Names Group loM Constabulary Nedbank Work with Schools: <ul style="list-style-type: none"> Scoil Vallajeelt Primary University College 	Infrastructure Fit: <ul style="list-style-type: none"> Would provide relatively low cost and short-term to cater for walkers and cyclists in central Douglas (and as an alternative Douglas Core Route) Provides links over the A2 to connect large residential areas towards Douglas Centre Planning Development: <ul style="list-style-type: none"> Provides onward routes to (soon to be provided) tracks within Nobles Park

Priority	Project	Cost	Local Walking and Cycling Cells	Active Travel Support	Prioritisation Narrative
5	Enterprise Way Section G	HIGH		<p>Work with Businesses:</p> <ul style="list-style-type: none"> B&Q Canada Life Dandara Group Graylaw Freight Group IoM Post Office Jacksons Manx Telecom Robinson's Fresh Food Zurich International RL 360 <p>Work with Schools:</p> <ul style="list-style-type: none"> Scoil yn Jubilee Infants 	<p>Infrastructure Fit:</p> <ul style="list-style-type: none"> Builds on Priority 2 and 3 to create a route between Douglas Centre, South West Anagh Coar and the Industrial Estates at Spring Valley. Relatively low priority reflects the fact that a significant gradient is required to be overcome on New Castletown Road. <p>Planning Development:</p> <ul style="list-style-type: none"> Connects to private cycle related business within Industrial Estate <p>Policy Fit:</p> <ul style="list-style-type: none"> Area Plan for the East: Site BE002 / BE006 is designated as a Strategic Reserve which when developed could include provision of walking and cycling routes and be served by this route. Planning agreements may be sought from developments to reduce overall programme costs.
6		MED	Village and Lakeside (in. Section Aa, X, Z)	<p>Work with Businesses:</p> <ul style="list-style-type: none"> Old Mutual Poker Stars <p>Work with Schools:</p> <ul style="list-style-type: none"> Ashley Hill Primary Onchan School Scoil yn Jubilee Juniors 	<p>Infrastructure Fit:</p> <ul style="list-style-type: none"> Completion of Promenade, and Douglas Core Route will provide infrastructure to reach these residential areas. Community Engagement work should be undertaken in preparation for their completion and to identify links within and between the residential areas <p>Policy fit:</p> <ul style="list-style-type: none"> Area Plan for the East. Proposed residential sites to the north of Section A would greatly enhance the value of facilities in these areas. Links through and between them should be sought through the Planning process
7	Tromode to Central Douglas Sections S and T	HIGH	Ballanard	<p>Work with Businesses:</p> <ul style="list-style-type: none"> Noble's Hospital Swagelok 	<p>Infrastructure Fit:</p> <ul style="list-style-type: none"> Tromode Road provides a link to Noble's Hospital and South of Ballanard, however infrastructure is likely to be challenging to deliver. Engagement work may offer alternative opportunities to provide lower cost links between residential areas of Willaston and Cronk Y Berry that may be cheaper and more effective <p>Policy fit:</p> <ul style="list-style-type: none"> Area Plan for the East. The value of this route would be increased or route could be provided by any development of site BM003 <p>Other:</p> <ul style="list-style-type: none"> Highways Forward Programme. Ballafletcher Road to be resurfaced in 2021. Opportunity to provide improved Active Travel infrastructure at same time

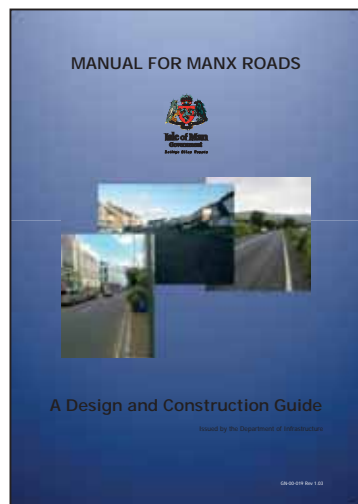
Priority	Project	Cost	Local Walking and Cycling Cells	Active Travel Support	Prioritisation Narrative
8	Tromode – Heritage Trail Link	MED			<p>Infrastructure Fit:</p> <ul style="list-style-type: none"> Provides a level route between South of Ballard and the Heritage Trail to provide journeys to work, the NSC and the leisure opportunity of the Heritage Trail <p>Policy fit:</p> <ul style="list-style-type: none"> Area Plan for the East. The value of this route would be increased or route could be provided by any development of site DBH002
9	Nunnery	HIGH		<p>Work with Businesses:</p> <p>Dohle Tesco</p> <p>Work with Schools:</p>	<p>Infrastructure Fit:</p> <ul style="list-style-type: none"> Provides relatively level and visually beautiful route between Pulrose and the Promenade (if other proposals are implemented) Could provide a route of "Tourism Quality" to link the Promenade to the Heritage Trail <p>Planning Development:</p> <ul style="list-style-type: none"> New track provision needs to be linked to development at Lake Road as a new bridge and internal tracks within the site are required to take cycle track over the river <p>Policy Fit:</p> <ul style="list-style-type: none"> Improvements from development of the Lake Road site should meet Isle of Man Strategic Plan 2016 Transport Policy 2: "New Development where appropriate, make provision for new bus, pedestrian and cycle routes.." Central Douglas Masterplan: A bridge is included between the Lake Road site and Old Castletown Road. This should be made usable by cyclists. It also suggests links between the IoM University Campus at the Nunnery and Douglas Centre PROW Policy and Strategy 2018-28: Strategy 4. "Improvement schemes will include conversion of some footpaths to cycle paths and bridleways, where possible...." Highways Forward Programme. Nunnery/Tesco Road bridge is included for 2027
10	Pulrose Brewery Link	HIGH		<p>Work with Businesses:</p> <p>Heron and Brearley</p> <p>Work with Schools:</p> <p>Kewaigue School</p>	<p>Infrastructure Fit:</p> <ul style="list-style-type: none"> Relatively level route between Pulrose (for NSC, Heritage Trail and Douglas Centre) and Okell's Brewery (a major employer) Would need to be sure of demand from the Brewery as there are few houses at the end of the route and the nearby school requires a major hills to be climbed from the valley. Data evidence shows high levels of employment but anecdotal evidence questions this. <p>Policy Fit:</p> <ul style="list-style-type: none"> Area Plan for the East: Further industrial development planned in sites DE002, 002, 004 and 007 could increase the likely use of this route and of the Nunnery PROW Policy and Strategy 2018-28: Strategy 4. "Improvement schemes will include conversion of some footpaths to cycle paths and bridleways, where possible...."

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Appendix A

Relevant Strategy Documents and Existing Journey Data

A.1. Strategy Document Reviews



Manual for Manx Roads - A Design and Construction Guide

The Manual for Manx Roads (MfMR) sets out the principles applied by the Department of Infrastructure to the design and construction of highway infrastructure associated with new development and alterations/repairs to existing layouts.

Some relevant sections are summarised below:

Movement and Place

2.1.4 Street design should consider both the function of movement and the creation of a positive sense of place, even where there are high volumes of traffic, such as high streets.

Connectivity and Accessibility

3.2.3 A development meeting the sustainability aims in the Isle of Man Strategic Plan should be located so as to be easily accessible by various modes of travel, including walking, public transport and bicycle – the latter of which can make a development more accessible to a wider area than walking.

3.2.6 Walking and cycling distances should be measured along routes that are safe for such activity (rather than along unsafe routes).

3.2.8 Factors to consider when designing walking and cycling routes include:

- Paths next to busy main roads can be unattractive for pedestrians, especially where paths are narrow and vehicles large
- Main roads may be unpleasant and hazardous for cyclists, especially where speeds are perceived as high
- Conversely, personal safety can be a concern where walking and cycle routes are away from busy roads
- Gradient, street lighting and natural surveillance may significantly affect the success of such schemes

User Hierarchy

3.3.9 The User Hierarchy below should be followed in the design and assessment of all development proposals:

- 1) Pedestrians
- 2) Cyclists
- 3) Public transport users
- 4) Specialist service vehicles (emergency services, refuse collection etc.)
- 5) Other motor traffic

Road Hierarchy

4.3.2 The table below shows the desired user and user-activity hierarchy by link and place types. Link Hierarchy for all roads on the Isle of Man and desired user hierarchy are shown in the table in Figure 26 and the Road Hierarchy Map in Figure 27.

Link Hierarchy	Desired user hierarchy (from highest to lowest) by link level
1 – Primary	Cars, HGVs/MGVs, LGVs, buses, cyclists, pedestrians
2 – District	Buses, pedestrians, cyclists, cars/taxis, LGVs, HGVs/MGVs
3 – Local	Pedestrians, cyclists, buses, cars/taxis, LGVs, HGVs/MGVs
4 – Local Access	Pedestrians, cyclists, cars/taxis, LGVs, MGVs HGVs

Figure 26. Desired user hierarchy, Manual for Manx Roads



The Isle of Man Strategic Plan 2016

The Isle of Man Strategic Plan 2016 (forming part of the Development Plan - a key strategic document of the Government along with the Area Plans) sets out the Department of Infrastructure's policies regarding land-use and development. It is influential in the allocation of land for development and in the assessment process of planning applications.

The Strategic Plan aims to "plan for the effective provision of services and infrastructure, and to direct and control development taking into account the principles of sustainability whilst at the same time preserving, protecting and improving the quality of the environment of our precious Island" (foreword 2016 to the document).

Some relevant Strategic Objectives:

3.2 Resources

(f) To reduce the need for travel, especially by private car, and to make the best use of existing infrastructure, including existing and former railway routes.

3.5 Transport and Communications

(a) To develop an integrated transport strategy which balances the growth of car usage with the promotion of more sustainable alternatives such as public transport, cycling and walking.

(b) To locate new housing and employment close to existing public transport facilities and routes, or where public transport facilities are, or can be improved, thereby reducing the need to use private cars and encouraging alternative means of transport.

(c) To encourage development which would result in a more integrated transport network.

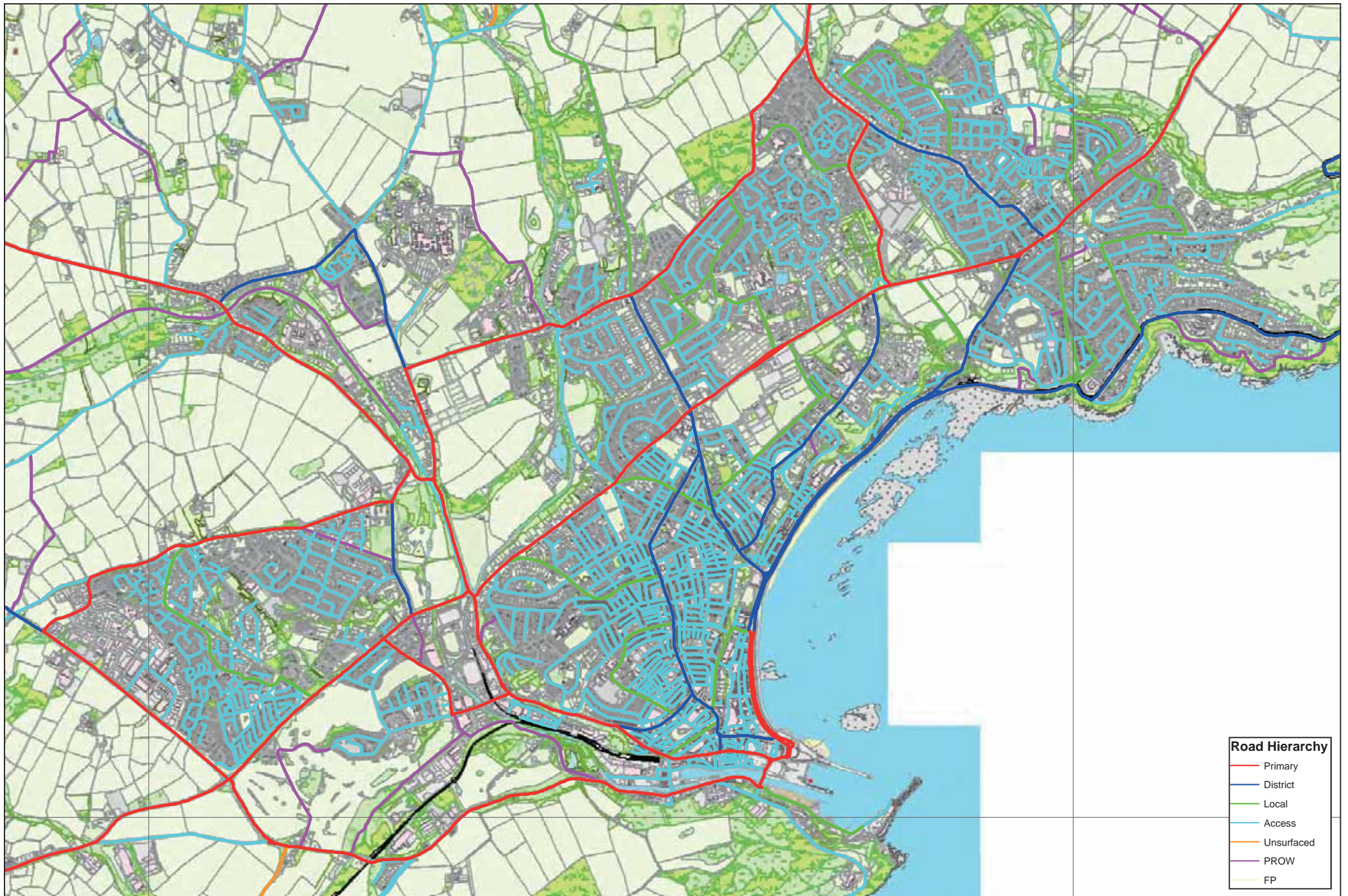


Figure 27. Section of the Road Hierarchy map, Isle of Man Government

(d) To provide for improvements to the Island's road network such as to ensure that travel demand is met in a safe, effective and environmentally acceptable manner.

(e) To safeguard existing and abandoned railway routes.

Strategic Policy 10 states:

4.5 Transport and Communications

New development should be located and designed such as to promote a more integrated transport network with the aim to:

- (a) minimise journeys, especially by private car
- (b) make best use of public transport
- (c) not adversely affect highway safety for all users
- (d) encourage pedestrian movement

Transport Policy 2:

The layout of development should, where appropriate, make provision for new bus, pedestrian and cycle routes, including linking into existing systems.

Transport Policy 3:

New development on or around existing and former rail routes should not compromise their attraction as a tourism and leisure facility or their potential as public transport routes, or cycle/leisure footpath routes.

Transport Policy 5:

Any improvements to the Island's highway network, including the provision of new roads, footpaths, and cycle routes, should be undertaken in accordance with the environmental objectives of this plan.



Douglas Corporate Plan 2017 - 2021

Produced by Douglas Borough Council, the Douglas Corporate Plan sets out the Council's priorities, objectives, responsibilities and aspirations for 2017-2021.

Extracts of some Corporate Objectives and Strategic Objectives in the Document that are directly relevant to the ATIP are:

Desirable place to live, work and visit

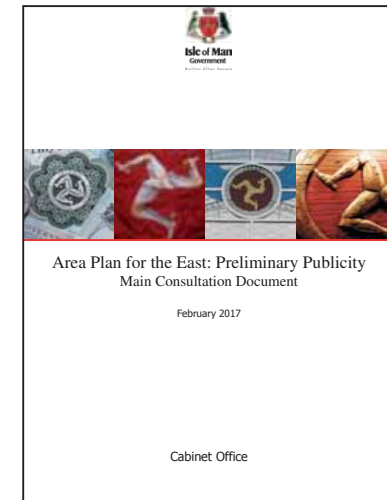
- A clean, green and safe place to live, work and visit
- Maintain the Council's membership of the Douglas Community Partnership. Encourage and support the community in looking after the environment of Douglas

Sense of community

- Enabling and supporting community groups of all ages in local activities relating to heritage, culture and creativity
- Ensure that active travel is encouraged and facilitated as a component of all infrastructure projects undertaken by the Council, and actively engage with partners in the production of an Isle of Man Cycling Strategy and the development of a cycle network in Douglas

Environmental stewardship

- Continue to maintain and improve a green and biodiverse environment, providing accessible, open activity spaces and encouraging the use of sustainable transport, cycling and walking
- Continue to organise educational open days and school visits promoting the importance of recycling and environmental sustainability



Area Plan for the East

The Island Development Plan comprises the Isle of Man Strategic Plan 2016, Area Plans, the 1982 Development Plan and a number of Local Plans. The Area Plan for the East is currently in Draft and consultation on proposals ended in August 2018. Once adopted, the Area Plan will guide development in Douglas and Onchan.

Some of the policies contained within the plans are directly relevant to cycling and walking and the ATIP, including:

- **Transport Proposal 1:** 'Development proposals must take into account the Active Travel Strategy and any specific actions set out in the Active Travel Action Plan.'

The plan also includes draft proposals maps identifying development sites and their proposed uses. This information will be vital in planning the transport (including active travel) network.

- **Site BE002 / BE006**, west of Cooil Road has been designated as a site of strategic reserve which, when developed, could include the provision of cycle and walking routes that help people travel to and within the site along the Enterprise Way corridor
- **Proposals for 'Town Centre – Mixed Use Proposal 8b and 8c'** stipulate that any proposals will include improved pedestrian and cycle links
- **Comprehensive Treatment Area 3 and 4 – Riverside and Peel Road (East)** states that 'Provision for a cycle route that could eventually link to the Millennium cycleway shall be included'.

See Figure 28 - draft Area Proposals Plan.

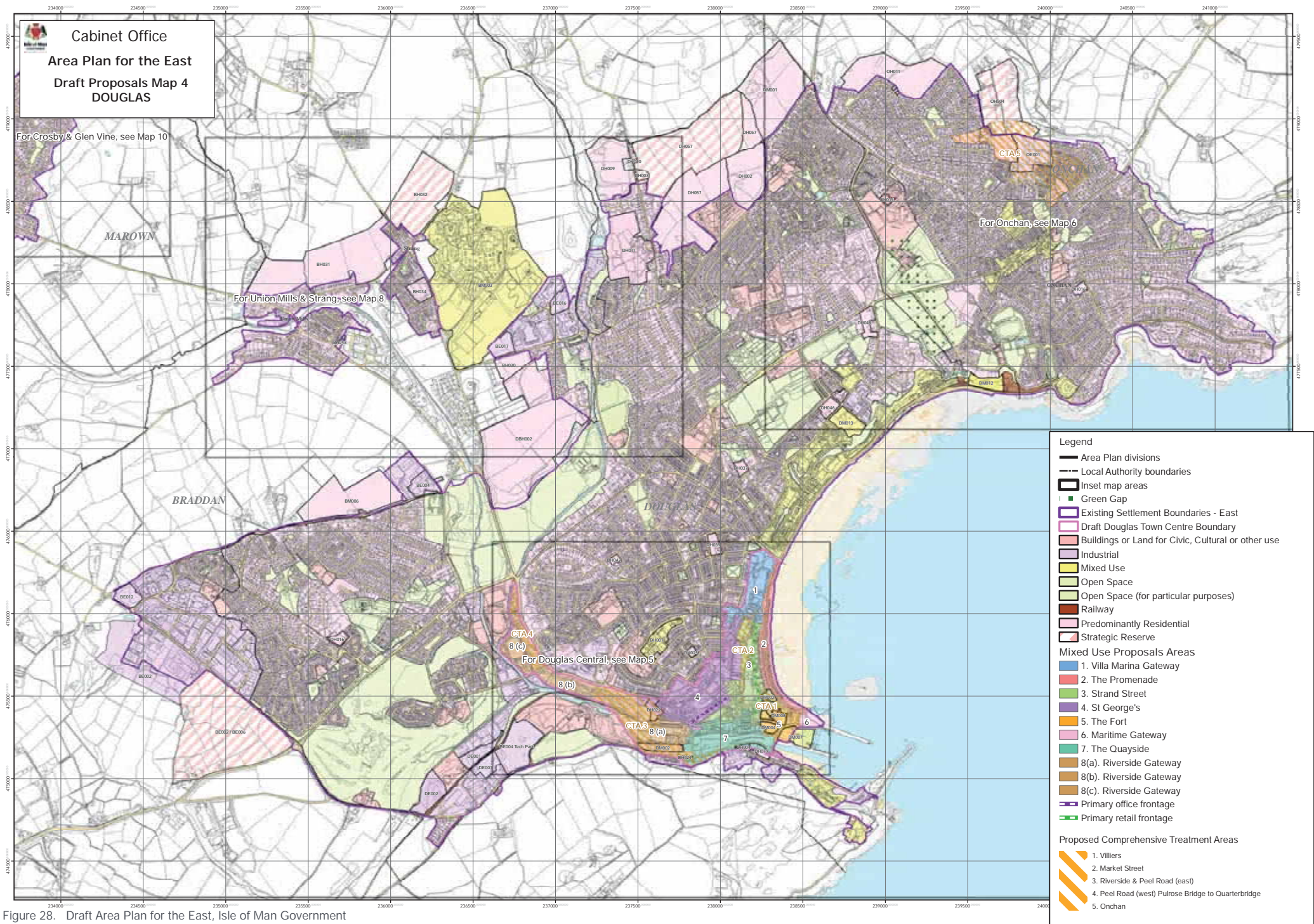


Figure 28. Draft Area Plan for the East, Isle of Man Government

Highways Forward Programme

The Department for Infrastructure's Highways and asset Management team have published a forward programme of works that includes roads in Douglas and Onchan. These highways works, ranging from resurfacing to major reconstruction schemes, could present opportunities to significantly improve provision for active travel. The relevant schemes are listed in the table in Figure 29.

Location	Project type	Proposed year
Willaston footways (near shops)	Unknown	2020
Ballafletcher Road	Resurfacing & drainage	2021
Glencrutchery Road	Reconstruction / St Ninian's junction improvement	2021
Market Street	Reconstruction	2022
Ballaquayle Road, Douglas (top of Broadway to St Ninian's junction)	Resurfacing	2022
Victoria Street, Ridgeway Street	Regeneration/ reconstruction	2023
Nunnery/Tesco road bridge	Unknown	2027
Quarter Bridge roundabout	Unknown	2027

Figure 29. Highway Forward Programme, Isle of Man Government



Central Douglas Masterplan

The Isle of Man Government's 2014 document 'The Central Douglas Masterplan' has the aim of encouraging private sector investment in the town and supporting long term economic regeneration.

It is not a statutory document but sets a strategic framework for guiding decision making and informing future policy, in seeking and promoting development opportunities.

Stakeholder workshops and public consultations took place to inform the document.

Some of the key challenges to be addressed:

- Topography - finding and enhancing routes between Upper and Lower Douglas
- Connecting the key attractors in the town centre through a quality and easily navigable public realm

Some Strategic Objectives for Central Douglas:

- To create a network of streets and spaces connected by safe and attractive pedestrian and cycle routes
- The centre will be accessible for all modes of transport
- Public transport access and facilities will be improved around the town centre to support sustainable alternatives to car use
- A transformed network of pedestrian, cycle and vehicle routes will connect the centre and address movement through previous barriers

Cyclists and pedestrians will be supported by new links across and into Central Douglas. Proposals look to support movement around the centre via a modal shift away from car use.

Masterplan Projects are suggested in the document for identified regions ("Character Areas") of Central Douglas. Many plans include public realm improvements for a better pedestrian experience. Some particularly of interest to the ATIP study include:

The Promenade, Proposal TP6 – Currently a key leisure destination used for walking and cycling, improved connections across the promenade, linking to Strand Street and the main retail area are proposed.

St Georges, Proposal SG5 & SG6 – The business and commercial core of Douglas containing a large number of office buildings, including Tynwald and Borough Council offices - public realm improvements to create higher quality links to the Quayside are proposed.

Maritime Gateway, Proposal MG2 – The Sea Terminal building sits within this gateway - new leisure-focussed developments including visitor facilities such as bike hire for the Promenade are proposed.

Riverside Gateway, Proposal RG5 – Contains the Island's largest food store. A potential riverside connection for pedestrians and cyclists is suggested, connecting the town centre to the National Sports Centre and the former Peel rail line route.

Further New and Improved Links

- A new pedestrian and possibly vehicular bridge is proposed, linking Old Castletown Road with Lake Road to the south west of Tesco in Riverside Gateway
- A new pedestrian bridge over the Marina for access between the South Quay and the town centre is proposed
- The former Peel railway corridor, already accessible for pedestrians, could be developed to also be accessible by bicycles. It offers a key connection between Lower Douglas, the National Sports Centre and beyond. Links could also be created between the Isle of Man University campus at The Nunnery and the town centre
- A dedicated cross-town connection is also suggested in the Central Douglas Masterplan, in the Movement Framework diagram (Figure 30)

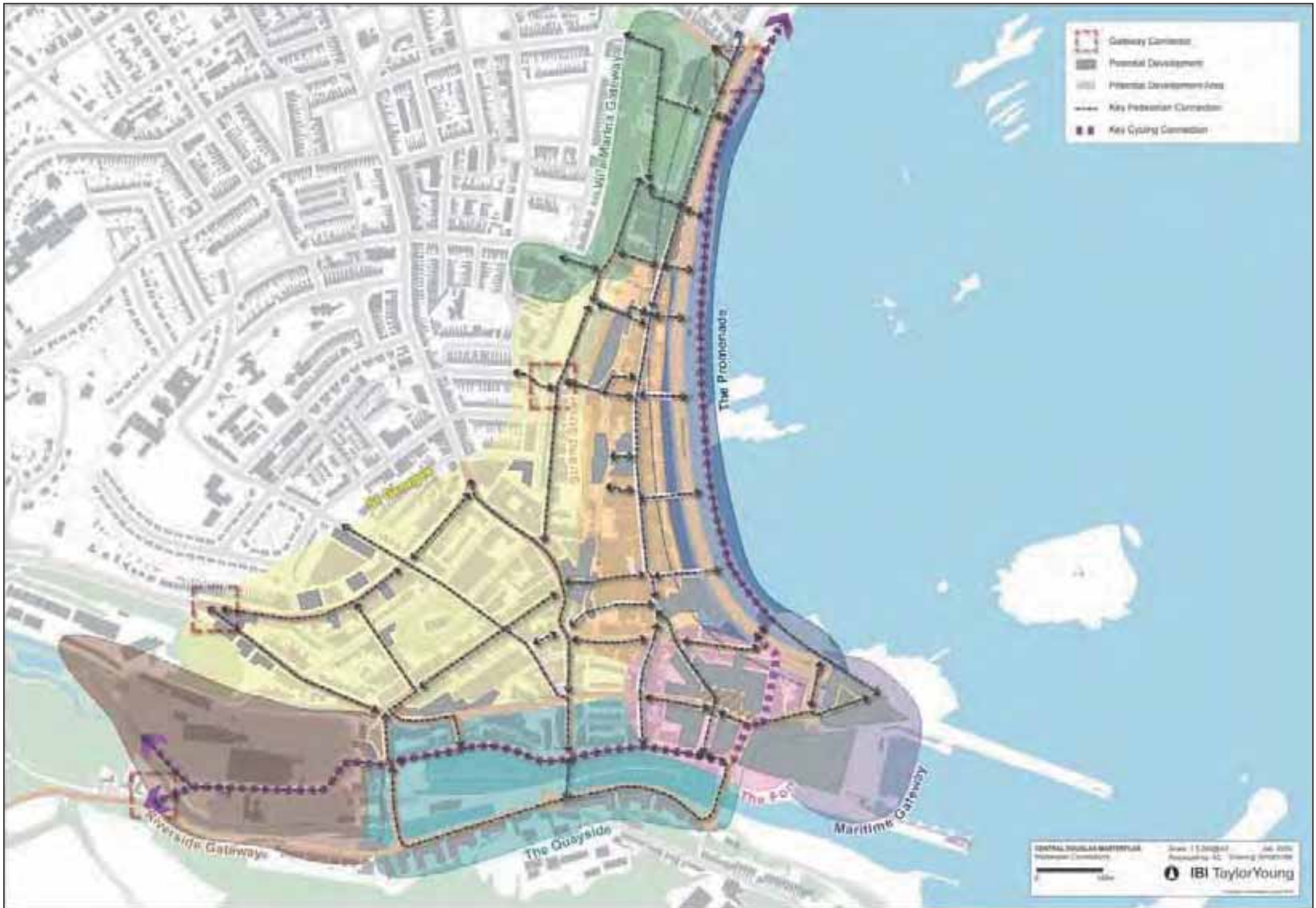


Figure 30. Movement Framework diagram, Central Douglas Masterplan 2014



Public Rights of Way - Policy & Strategy 2018 - 2028

This document identifies the Department of Infrastructure's strategy to improving the Isle of Man's public rights of way and green lane network over the given 10 year period.

Due to a limited budget being available, the footpath network is currently under-maintained, underused, and undervalued. Plans to seek resources and a Programme of works are set out.

The Department's Vision includes to:

- Increase accessibility on the network particularly for the ageing population, people with limited mobility or other disabilities
- Encourage more people to use the network for the benefits of health, social wellbeing, and the economic wellbeing of the Isle of Man
- Help create a more attractive destination for visitors

A five-point strategy for achieving the Vision includes the following:

(Strategy 2) Promote Access for All, Access for Many and Access for Some (see definitions opposite)

When planning upcoming works, priority will be given where possible and practical to increase accessibility for users with disabilities or limited mobility.

(Strategy 4) Conversion of Public Footpaths

Improvement schemes will include conversion of some footpaths to cycle paths and bridle paths, where possible, in accordance with the Highways Act 1986.

Currently, most public rights of way on the Isle of Man are footpaths only.

Although the focus of the ATIP is on journeys of necessity rather than leisure, public rights of way information is useful in the consideration of potential links.

Categorisation of public rights of way

- **Public footpath** - a path that the public has a right to use on foot only
- **Public cycle-path** - a path that the public has a right to walk, pedal-cycle on only
- **Public bridle-path** - a path that the public has a right to walk, pedal cycle and lead or ride horses on
- **Green lane** - an unsurfaced road through the countryside open to all traffic

Premier Routes

The Premier Routes are the Island's four most prestigious walking paths, made up of public footpaths, green lanes and other areas.

They are:

- Raad Ny Foillan (Coastal Footpath) - 95 miles
- The Millennium Way - 45 miles
- The Heritage Trail (Douglas to Peel) - 10.5 miles
- Bayr Ny Skeddan - 14 miles

Green, Amber and Red Routes

The remaining footpaths on the Isle of Man are categorised based on the amount of use they receive:

- **Green routes** - high volumes of use
- **Amber routes** - frequent levels of use
- **Red routes** - low levels of use

Accessibility categories

Access for All - accessible by self-assisted wheelchairs and pushchair users; no gates or stiles; non-slip, smooth, level surface; gradient not more than 1:20 (5%)

Access for Many - accessible by assisted wheelchairs and those with robust, all-terrain type buggies; no gates or stiles; a rougher surface than Access for All paths; gradient not more than 1:20 (5%)

Access for Some - no stiles, may have low steps, wheel-chair friendly kissing gates (where required for animal management purposes); a rougher surface than Access for All and Access for Many paths; gradient ideally not more than 1:20 (5%) but maximum of 1:12 (8%).

Proposed Programme of Improvements 2018 - 2028

Year 1

Public consultation

Heritage Trail (Douglas to Peel) - Access for All

Year 2

Millennium Way (Silverdale to Rushen Abbey section) - Access for All

Year 3

Millennium Way (Ballasalla to Castletown section) - Access for All

Year 4

Raad Ny Foillan (Ronaldsway Airport to Santon, Piston Castle section) - re-establish sections of path

Raad Ny Foillan (Majestic, Onchan section) - improvements to path

Raad Ny Foillan (Port Erin to Port St Mary section) - re-level path

Raad Ny Foillan (Whitestrand to Peel section) - improvements to path

Millennium Way (Narradale Boq, St Lukes Track, St Marks sections) - improvements to paths/tracks

Year 5

Raad Ny Foillan (Peel to Sloc, Rushen section) - improvements

Year 6

Raad Ny Foillan (the Lhen, St Germans to Glen Wyllin section) - improvements to path, new footbridge

Year 7

Heritage Trail (Quarterbridge section) - improvements to the cycle crossing

Year 8

Millennium Way (Sneafell, Tholt y Will, Brandywell sections) - improvements to path

Year 9

Raad Ny Foillan (Breeze Hill, Laxey section) - improvements to path

Year 10

Raad Ny Foillan (Glen Mooar, Glen Wyllin sections) - establish bridges and Access for All

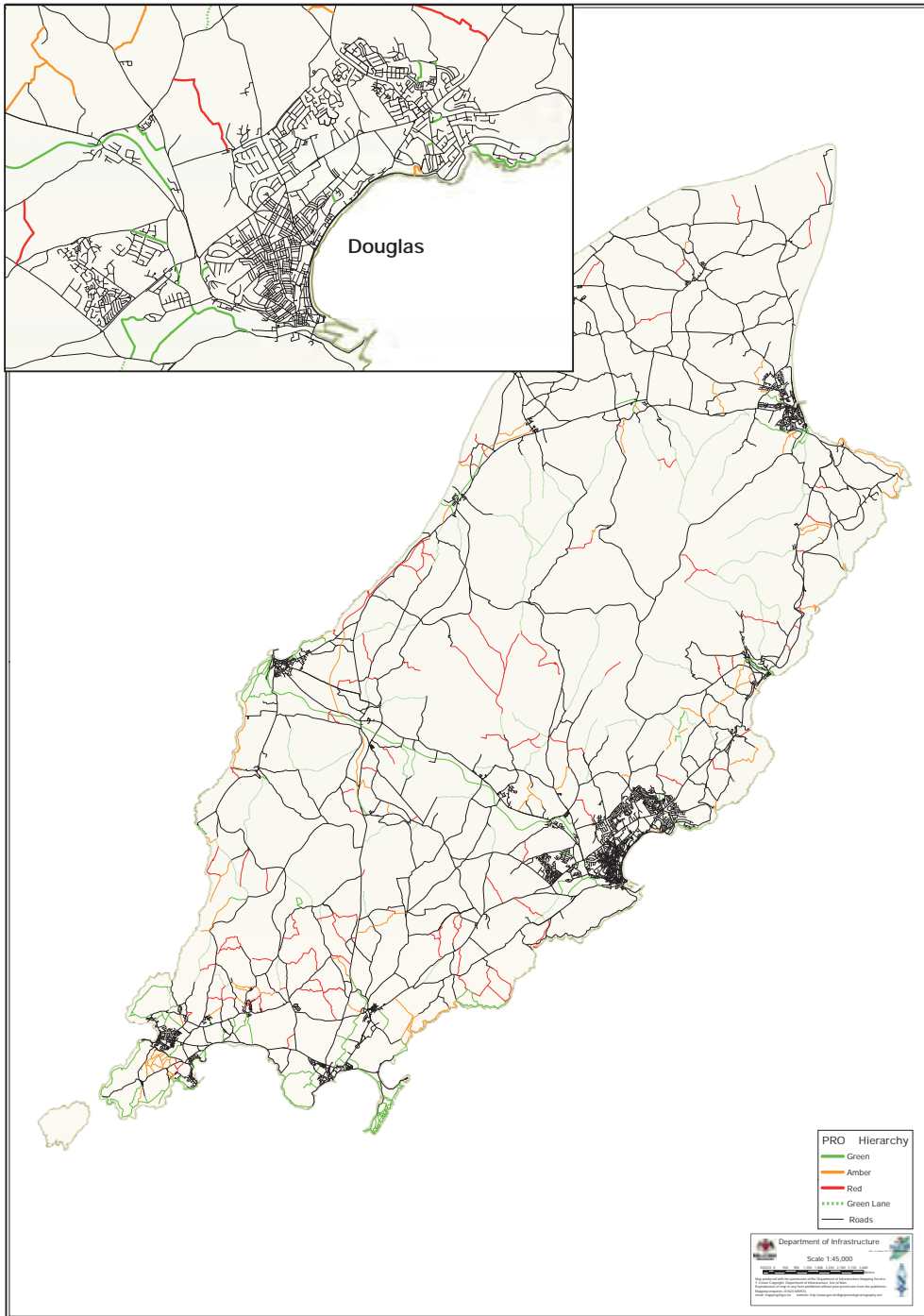


Figure 31. PRO Hierarchy, Isle of Man Government



Figure 32. Long Distance Footpaths, Isle of Man Government



Health & social care in the Isle of Man - the next five years - August 2015

This document sets out the Department of Health and Social Care's plan and strategic goals for the five-year period from August 2015.

Some extracts directly relevant to the ATIP:

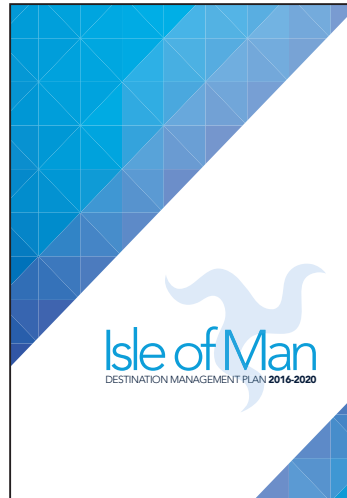
First strategic goal: Prevention - enable people to take greater responsibility for their own health by helping to make good lifestyle choices.

At a personal level this includes factors such as diet and exercise.

At a community level, the challenge is finding ways to influence wider environmental and social issues by considering areas such as:

- Employment
- Education
- Safe, supported and connected communities
- People on low incomes
- Social isolation, exclusion and loneliness
- Stigma and discrimination

"The health and wellbeing of communities can begin with the design of urban spaces. Designers can improve the 'viability' in neighbourhoods, for example by using spatial planning to increase the number of people who cycle, and by factoring in well-planned green spaces." (p8)



Destination Management Plan 2016 - 2020

The mission of the 2016 - 2020 Destination Management Plan (DMP) is to promote the Isle of Man as a place to visit, live, work and invest.

This report outlines the Isle of Man's plan in achieving necessary growth of its tourism and visitor sector in a sustainable manner.

Points in the report that are relevant to this ATIP study follow:

Current attractions of the Isle of Man include:

- On and off-road cycling events, outdoor adventure, endurance events and walking
- There is a comprehensive public bus service, the Isle of Man Steam Railway, running between Douglas and Port Erin, and the Manx Electric Railway between Douglas and Ramsay. Also the Snaefell Mountain Railway

Some new-growth markets to target:

- Niche markets including walkers, cycling holidays and groups/coach parties
- Several other categories of tourists are identified in the report as potentially being attracted by an effective walking and cycling network, for leisure use and also as a means of travel between local attractions and eateries

Figure 33 below contains an extract from a table in the DMP's Appendix (p54) that sets out markets and products to be further assessed and developed in the DMP's objective:

The TT Races and associated motor sports events are an existing main attraction for visitors to the Island. (New cycling and walking infrastructure designs should bear in mind.)

While the ATIP study is focusing on journeys of necessity, improvements in walking and cycling facilities and infrastructure will have a positive outcome for tourists too, by enabling better and easier movement around the town. It will also benefit businesses - employees and customers will have more opportunity to choose car-free travel into and around the town centre.

WALKING	<ul style="list-style-type: none"> ■ Varied routes & tours for all ages & levels of experience ■ A range of well signposted and maintained paths ■ Welcome Walkers scheme widely adopted by serviced and self-catering operators
SPECIALIST CYCLING	<ul style="list-style-type: none"> ■ Cycle centre offering hospitality, sales & rentals, varied routes for all ages & levels of experience ■ Quality on and off road routes/paths that are well signposted ■ Welcome Cyclists scheme widely adopted by serviced and self-catering operators

Figure 33. Extract from DMP



Isle of Man Strategy for Sport 2014 - 2024

Developed by Manx Sport and Recreation, this document sets out ten objectives aimed at helping to ensure that regular and sustainable physical activity is made more accessible to all.

Working in partnership with other Government Departments including the Department of Health and Social Care and the Department of Home Affairs, goals include helping to address the health issues such as the onset of obesity.

Relevant Objectives and Key Actions identified in the Strategy include:

Objective 1: Increase levels of physical activity in young people

A Key Action: **Where it is safe to do so, promote the value of walking and cycling to school.**

A Performance Measure: Increase the percentage of children who do one hour of physical activity per day (World Health Organisation recommended daily amounts of physical activity for young people).

Objective 3: Improve the quality of life and social wellbeing for people with disabilities.

A Key Action: **Develop physical activity initiatives for people with disabilities.**

A Performance Measure: Increase the percentage of people with disabilities who experience an improved quality of life through participation in physical activity.

Objective 6: Maintain, develop and improve facilities

A Key Action: **Promote the possibility of developing cycling and walking paths both on and off road.**

Impact: Better use of the natural environment for a range of physical activity and more people taking advantage of this free resource.

A.2. Information on Existing Network and Trips

The information needed to feed into the Propensity to Walk and Cycle Model (PWCM) comes from a variety of sources, namely:

- Data from the IoM Government Census 2011 and 2016, in particular Journey to Work data by mode
- Isle of Man Social Attitudes Survey 2017
- Encouraging Active Travel on the IoM 2017
- Isle of Man Health and Lifestyle Survey 2016
- National Highways and Transport Network Survey Report 2018
- Traffic counts and travel survey data - NO DATA RECEIVED
- Traffic, cycle and pedestrian flow data - NO DATA RECEIVED
- Travel plan data from employers and education establishments - NO DATA RECEIVED
- Data regarding new and proposed housing and employment growth sites
- Travel survey data
- Existing cycle routes
- Existing cycling and walking proposals
- Plans or proposals for the development of non-vehicular routes, quiet lanes, home zones, traffic calming or rights of way improvement plans

Census Data from Isle of Man

The Isle of Man Government has supplied data from a number of recent censuses including:



Isle of Man Census Report 2011

Question 20 of the Census asked about travel to work and recorded respondents' origin and work destinations as well as mode of travel. While the mode of travel and origin have been processed, the work destination has not, making it hard to use this data for modelling work trips.

The population on census night was 85,718 made up of 1,219 visitors and a resident population of 84,497.

Of these, 43,144 were recorded as employed.

Table 3.5 from the report shows Travel to Work and Area of Residence data which is illustrated here in the adjacent charts. Some active travel figures:

- Travel to work by walking: 5,737 (13%) of which 3,354 were in Douglas
- Travel to work by pedal cycle: 406 (1%) of which 133 were in Douglas
- Active travel total: 6,143 of which 3,487 in Douglas

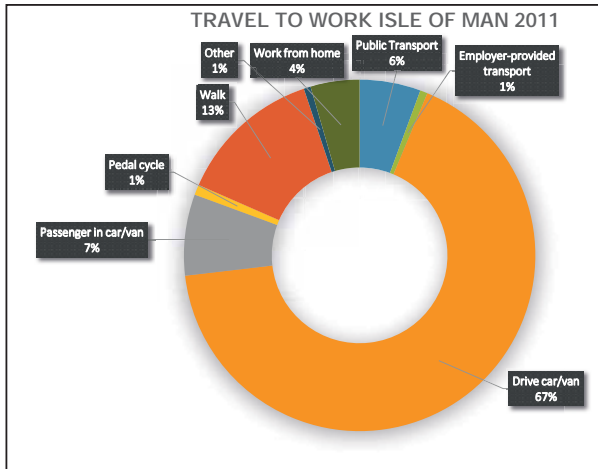


Figure 34. Census 2011 - transport data for Isle of Man

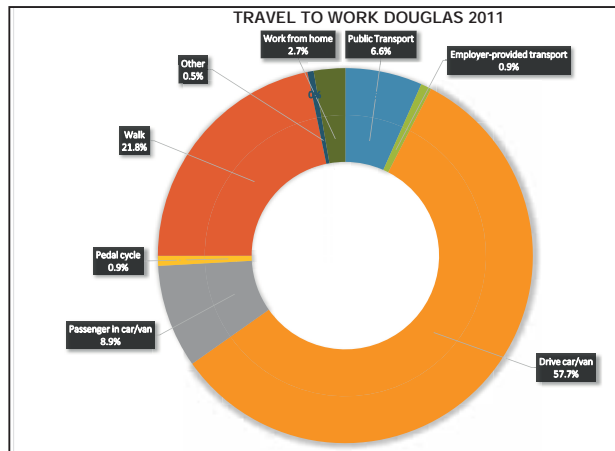


Figure 35. Census 2011 - transport data for Douglas



2016 Isle of Man Census Report

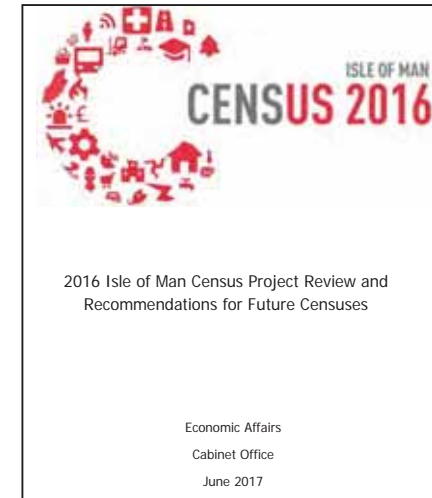
This was an interim census but unfortunately did not ask any questions about travel to work.

It does show a small drop in population by 1.4% and a rise in average age to 42.5 years.

There has been an increase in retirement-age population and a decrease in working-age population.

The number of people in employment fell to 41,636 from 43,134 in 2011.

It also shows a good proportion of the population are retired and so have plenty of leisure time.



2016 Isle of Man Census Project Review and Recommendations for Future Censuses

This documents looks at the operation of the 2016 census and makes four key recommendations:

1. Allowing other Government organisations to share information with the census office
2. Move to more online census returns so that it is "digital" by default
3. Review the design of the census form for more accurate completion
4. Retain mixed return methods - post, in person and online

Census Active Travel recommendations:

Inclusion in the 2021 Census of questions regarding journeys to work - both the home and work address, distance travelled and mode of travel - would enable better planning and modelling of active travel interventions to be carried out.



Isle of Man Social Attitudes Survey 2017

This document presents the findings of the Isle of Man Government's annual survey, an initiative commencing in 2016 to collect information about social and political attitudes in order to provide feedback to government for performance evaluation, policy development and future planning. It included some questions on Transport and Travel.

Some information relevant to the ATIP is below (charts are extracts from the document).

Primary/daily modes of transport to work

In 2017, 23% said active travel was their main mode of commuting (21% walking and 2% cycling - see Figure 36). In the 2011 census the total was 14%.

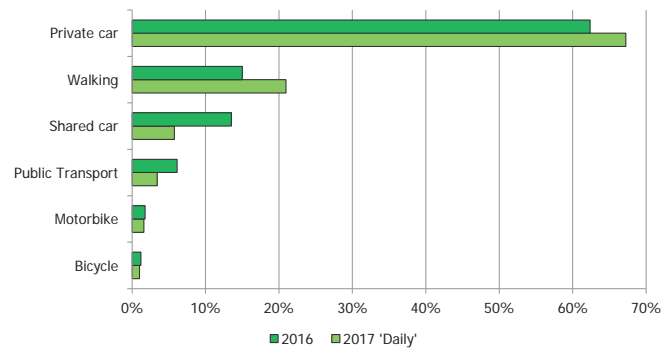


Figure 36. Primary modes of transport, 2017 Social Attitudes Survey

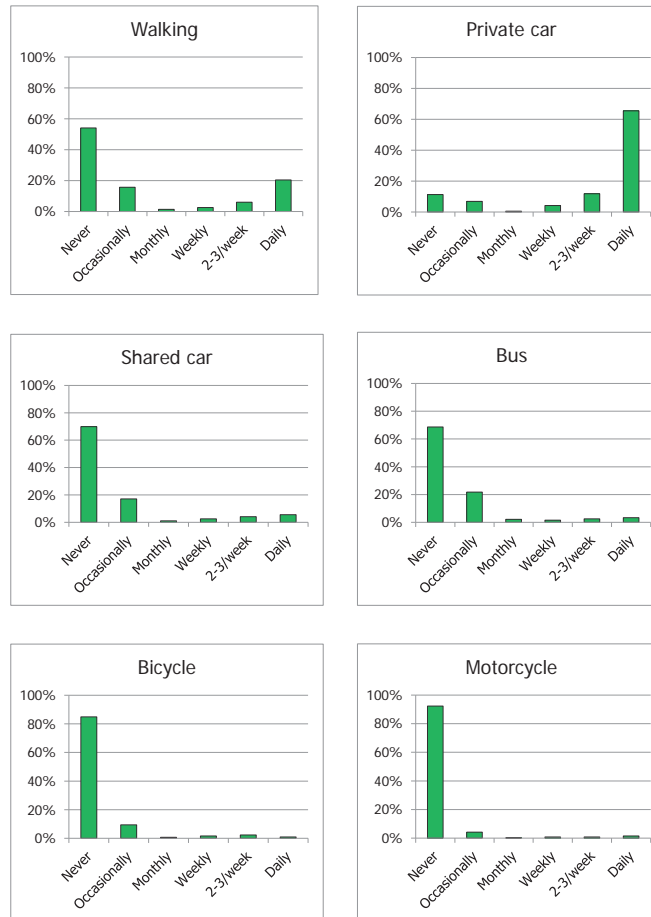


Figure 37. Frequency of use of transport mode, 2017 Social Attitudes Survey

Frequency of transport mode use

Figure 37 shows the frequency of use of each mode of transport. 54% of respondents said they never walk, and 85% never cycle.

Barriers to active transport

Respondents who said they didn't walk or cycle to work were asked what their barriers to active travel were. A summary of responses is in Figure 38. The most prevalent themes were 'distance' (30%) and 'weather' (23%).

Note that the survey was island-wide and that the responses specifically from Douglas residents are not indicated in the report.

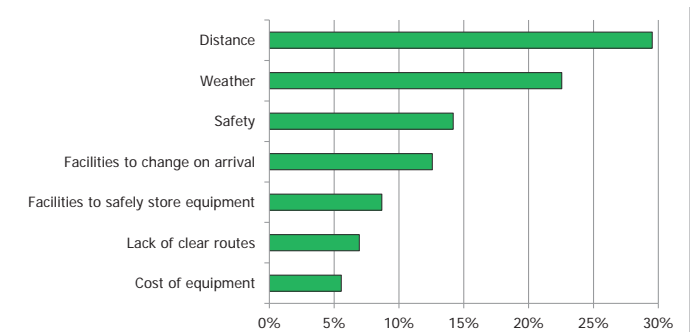
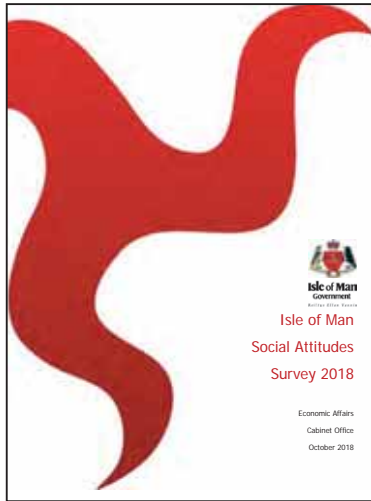


Figure 38. Barriers to active travel, 2017 Social Attitudes Survey



Isle of Man Social Attitudes Survey 2018

The 2018 survey report is also available. New questions have been added in the Transport and Travel section.

A question asking about perceived levels of safety while travelling revealed that car users and pedestrians felt relatively safe but that cyclists felt significantly less safe (see Figure 39).

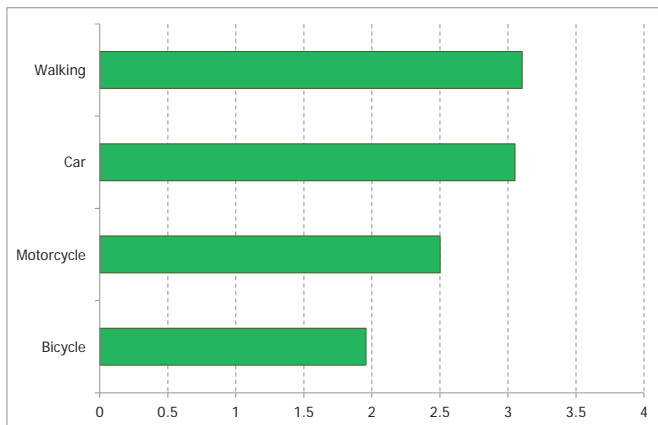


Figure 39. Levels of perceived safety on roads

Commute times

Over half (57%) reported travel to work takes less than 20 minutes, and nearly 1-in-4 commutes take less than 10 minutes. See Figure 40. There was no indication of data regarding actual distances travelled being collected.

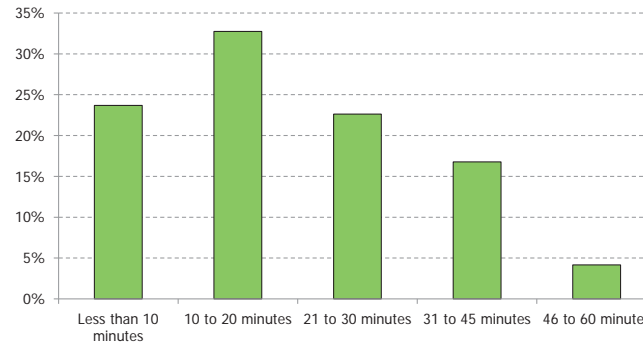


Figure 40. Commute time

Barriers to active travel

Barriers to active travel were again asked about, with responses varying slightly from 2017 (Figure 41). Safety, the availability of changing and/or storage facilities, lack of clear routes, and cost of equipment are reported less as being barriers than were indicated in 2017, suggesting possibly that recent policy initiatives addressing these issues have had an early effect. 'Distance' and 'weather' account for higher percentages of responses in 2018 than 2017 though.

The survey report suggests that as the majority of respondents report commute times of less than 20 minutes and that 'distance' is a main barrier, that further research might be conducted to establish a regarded 'manageable distance' for active transport.

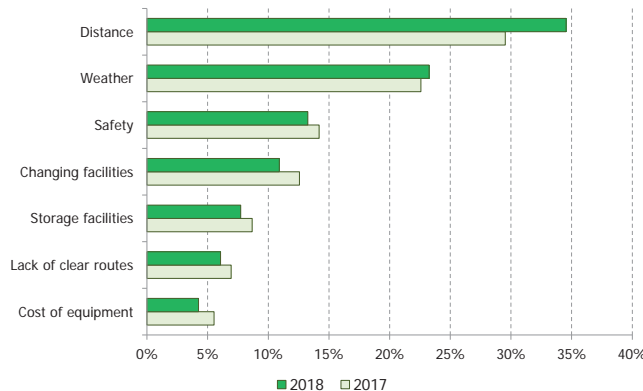
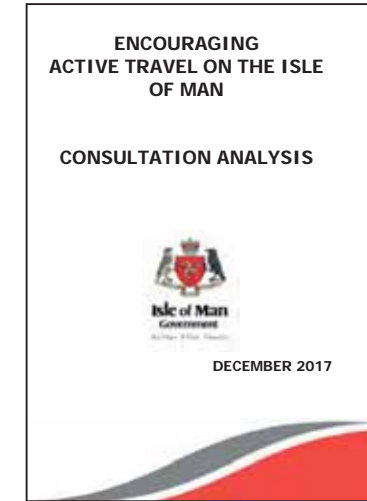


Figure 41. Barriers to active travel



Encouraging Active Travel on the Isle of Man - Consultation Analysis December 2017

The Department of Infrastructure (DoI) carried out a consultation exercise between 31 July 2017 and 25 Sept 2017 entitled "Encouraging active travel for the Isle of Man" for which 379 responses were received.

The aim of the consultation was to collect information to help formulate an action plan working towards one of the objectives from the Isle of Man's Programme for Government: - to increase the number of people who choose active travel.

The document details the findings of the consultation. Some main points emerging are:

4.3 59% of respondents said they travelled actively. Of those who specified, 35% said they walked, 44% cycled and 21% did both. (This question was set to determine whether the participants of the consultation generally were already engaged in active travel.)

5.2 Of those responding, 82% agreed and 15% disagreed with the vision:

"The Isle of Man is to be an Island where cycling and walking are normal and realistic transport choices for people of all ages and abilities."

8.1 An action plan focussing on key issues including the following was proposed, of which 82% agreed and 14% disagreed:

- infrastructure provision
- behaviour change and improved education
- a network of routes for people to walk and cycle on
- partnership working and delivery

9.2 264 responses to the question “is there anything else that should be included within the action plan to assist the Department in meeting its long-term vision for active travel?” were received, covered broadly by the following themes:

- education
- roads and pavements
- infrastructure
- financial incentives
- discourage motorised transport
- school travel
- bicycles and cyclists
- heritage railway lines
- walking and cycle route networks
- cycle to work scheme
- planning

10.5 Suggestions received, which are being considered by the DoI, include:

- ways to undertake appropriate monitoring to understand the impact of any of the proposed initiatives
- better education and communication
- any necessary legislative changes
- increasing and improving signage along cycling and walking routes
- incentives for people to make the modal switch to want to travel actively
- discouraging car journeys
- integrating public transport with walking and cycling
- identifying cycle routes, active travel routes, and walking routes that are well defined
- the introduction of community bikes (similar to “Boris” bikes in London)
- improving and increasing access to facilities such as showers, dry rooms and secure lock-up facilities
- making footpaths shared use as far as possible



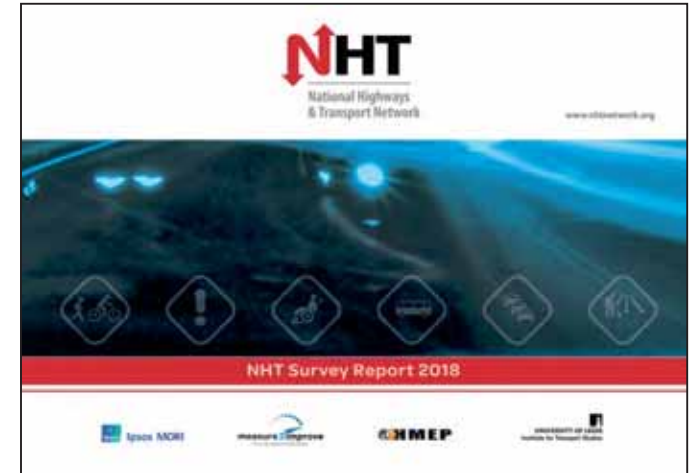
Isle of Man Health and Lifestyle Survey 2016

The Isle of Man Health and Lifestyle Survey 2016 was conducted by the Centre for Public Innovation for the Isle of Man Government. In total 2,990 responses were received, equating to 4.5% of the adult population.

In relation to activity and exercise:

- 40.7% of people usually sit down during the day and don't walk much
- 39.8% of people spend eight hours or more sitting – an increase of 22.7% on 2009
- Those aged 20-29 spent the longest time sitting
- People spend on average five hours per week walking to and from places
- The average amount of time spent cycling per week to get to and from places was 12 minutes
- Almost 75% of people said that they were active for 150 minutes or more per week – a level of activity that the World Health Organisation considers sufficient to maintain health and fitness
- There was a strong relationship between self-reported health and exercising for 150 minutes or more per week
- 31% of people said that they lack enough leisure time to do more physical activity, and 24.9% said they lack the motivation to do more physical activity
- 28.2% of people think they are currently doing enough exercise and so do not think that anything stops them from exercising enough

Key unhealthy behaviours are: 1. Binge drinking, 2. Smoking, 3. Sitting eight or more hours per day, and 4. Not eating five + portions of fruit and veg. Therefore active travel has an important role to play in reducing the amount of time people sit while travelling.



NHT Survey Report 2018

This report summarises the Isle of Man's results in the 2018 National Highway & Transport (NHT) Public Satisfaction Survey and compares them with the average satisfaction level of all authorities taking part.

Areas where satisfaction results vary most significantly from the average of all authorities are indicated in the report.

There are six themes identified: accessibility, public transport, walking and cycling, tackling congestion, road safety and highway maintenance. As seen in Figure 44, the Isle of Man scored above average in all themes except walking and cycling which scored 51%, 3% below average.

Questions in the walking and cycling theme and their variance from the average are shown in the table in Figure 42.

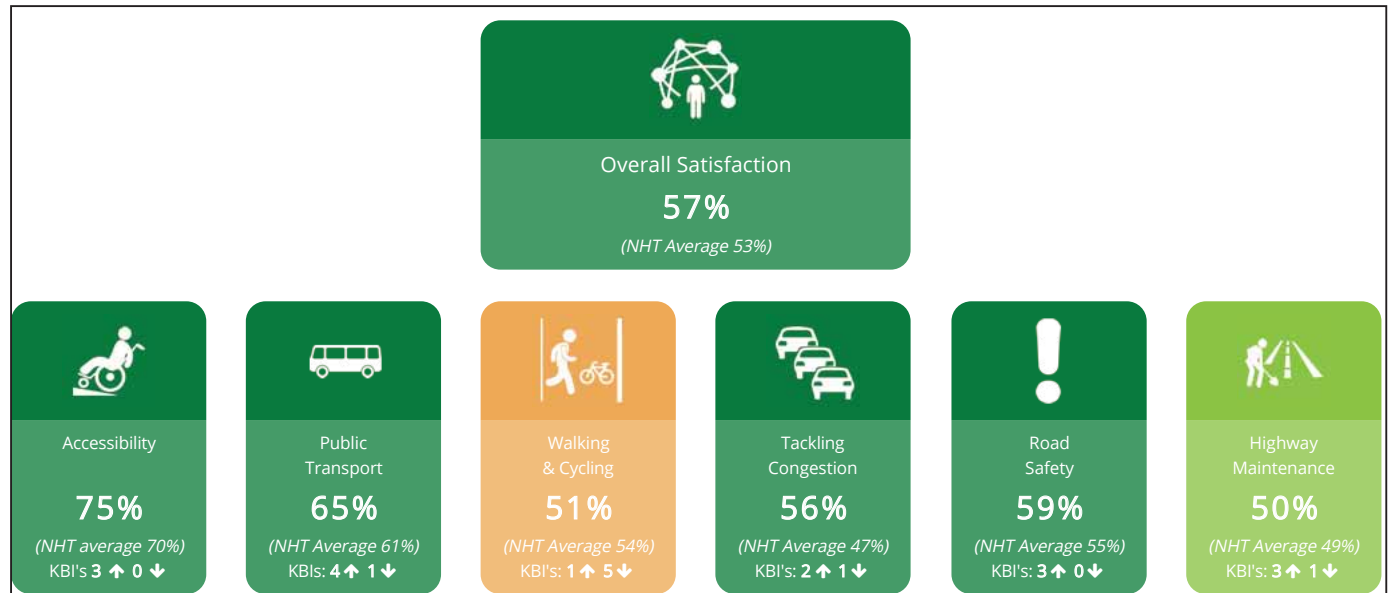
The relevant resulting KBI scores are shown in Figure 43 and Figure 45.

Walking and Cycling BI	Variance from Average
WCBI 01-The provision of pavements where needed	-3
WCBI 02-The condition of pavements	-4
WCBI 03-The cleanliness of pavements	6
WCBI 04-Direction signposts for pedestrians	0
WCBI 05-Provision of safe crossing points	1
WCBI 06-Drop kerb crossing points	-4
WCBI 07-Pavements being kept clear of obstruction	7
WCBI 08-The provision of cycle routes where needed	-7
WCBI 09-Location of cycle routes/lanes	-6
WCBI 10-Condition of cycle routes	-4
WCBI 11-Cycle crossing facilities at junctions	-6
WCBI 12-Cycle parking	-4
WCBI 13-Direction signing for cycle routes	-6
WCBI 14-Cycle route information e.g. maps	-4
WCBI 17-Provision of footpaths for walking/running	2
WCBI 18-Bridleways for horse riding and/or cycling	1
WCBI 19-Signposting of Rights of Way	1
WCBI 20-Condition of Rights of Way	-5
WCBI 21-Ease of use by those with disabilities	-9
WCBI 22-Information about Rights of Way routes	2
WCBI 23-Overgrown footpaths and Bridleways	-3

Figure 42. NHT Survey - Benchmark Indicator responses for Isle of Man

Key Benchmark Indicator (KBI)	Variance from Average
KBI 11 - Pavements & Footpaths	-4
KBI 12 - Pavements & Footpaths (aspects)	1
KBI 13 - Cycle routes and facilities	-5
KBI 14 - Cycle routes and facilities (aspects)	-5
KBI 15 - Rights of Way	-1
KBI 16 - Rights of Way (aspects)	-2

Figure 43. NHT Survey - Walking and cycling KBI for Isle of Man



Key: Dark Green = 4% or more above average, Light Green = up to 3% above average, Amber = up to 3% below average, Red = 4% or more below average.

Figure 44. NHT Survey - Overall satisfaction summary for Isle of Man



Key: Dark Green = 4% or more above average, Light Green = up to 3% above average, Amber = up to 3% below average, Red = 4% or more below average.

Figure 45. NHT Survey - Cycling and walking KBI satisfaction results for Isle of Man

A.3. Summary of Documents Reviewed

Strategies and Policies - Specific proposals of interest

All of the Isle of Man Government's strategies and policies reviewed are, on the whole, supportive of the development and promotion of active travel.

Some existing proposals put forward in the reviewed documents which may be particularly relevant to the development of cycle and walking networks in this ATIP study are:

The Manual for Manx Roads

- Pedestrians and cyclists are placed at the top of the 'desired user hierarchy' for "local" and "local access" roads as defined on the Isle of Man Government's Road Hierarchy Map (Figure 27 on page 49)

The Area Plan for the East

(See Figure 28 on page 51):

- Site BE002 / BE006, west of Cooil Road has been designated as a site of strategic reserve which, when developed, could include the provision of cycle and walking routes that help people travel to and within the site along the Enterprise way corridor
- Proposals for 'Town Centre – Mixed Use Proposal 8b and 8c' stipulate that any proposals will include improved pedestrian and cycle links
- Comprehensive Treatment Area 3 and 4 – Riverside and Peel Road (East) states that 'Provision for a cycle route that could eventually link to the Millennium cycleway shall be included'

Central Douglas Masterplan

Suggestions put forward of public realm improvements for a better pedestrian experience include:

- The Promenade – improved connections across the Promenade, and linking to Strand Street and the main retail area of Douglas
- St Georges (the business and commercial core of Douglas) – public realm improvements for better links to the Quayside
- Maritime Gateway – new leisure-focussed developments are proposed, including bike hire
- Riverside Gateway – location of the Island's largest food store (Tesco), a potential riverside walking/cycling connection to the

town centre and the National Sports Centre and the former Peel rail line route

- A new pedestrian and possibly vehicular bridge linking Old Castletown Road with Lake Road, south west of Tesco in Riverside Gateway
- Development of the former Peel railway corridor making it accessible for bicycles as well as pedestrians. (A key connection between Lower Douglas, the National Sports Centre and beyond.)
- A potential link between the Isle of Man University campus at The Nunnery and the town centre.
- A dedicated cross-town connection is suggested (see Figure 30 on page 53)

Public Rights of Way Policy and Strategy 2018 – 2028

- The planning of upcoming improvements to PRowS will give priority, where possible and practical, to increasing accessibility for users with disabilities (Strategy 2)
- Some footpaths are to be converted to cycle-paths and bridle-paths (Strategy 4)
- The PRow Proposed Programme of Improvements for 2018 – 2028, for potential links in the area.

Highways Forward Programme

This programme of works (Figure 29 on page 52) could present opportunities to improve active travel provision.

Isle of Man Destination Management Plan 2016 - 2020

New cycling and walking infrastructure designs should bear in mind that the TT Races and associated motor sports events are an existing main attraction for visitors to the Island.

Summary of reviewed survey data

Some key points drawn from the reviewed survey data are:

Census Reports and Social Attitudes Surveys

- Active travel as the main mode of commuting increased from 14% (13% walking and 1% cycling) in 2011 to 23% (21% walking and 2% cycling) in 2017
- Regarding the frequency of use of transport modes, 54% of respondents report never walking, and 85% report never cycling

- 30% of respondents said that distance was a barrier to active travel, and 23% said that weather was a barrier
- Car users and pedestrians feel relatively safe but cyclists have a lower level of perceived safety
- Commute times: 57% are less than 20 minutes and 24% are less than 10 minutes
- Although the majority of respondents report commute times of less than 20 minutes, 'distance' is given as a main barrier to active travel. Further research to establish a regarded 'manageable distance' for active transport has been suggested in the 2018 Social Attitudes Survey Report
- Barriers to active travel of safety, availability of changing and/or storage facilities, lack of clear routes and cost of equipment reduced between 2017 and 2018, suggesting that initiatives to address these issues are already having an effect

Health and Lifestyle Survey 2016

- Almost 75% of people said they were active for 150 minutes or more per week - a level of activity that the World Health Organisation considers sufficient to maintain health and fitness
- 39.8% of people spend 8 hours or more sitting – an increase of 22.7% on 2009
- There is a strong link between self-reported health and exercising for 150 minutes or more per week

NHT Survey Report 2018

Of the six themes covered by the survey (accessibility, public transport, walking and cycling, tackling congestion, road safety and highway maintenance) the Isle of Man scored above average in all except for walking and cycling – which scored 51%, 3% below average

Benchmark Indicators scoring below average - and providing areas to focus on - are:

- Provision and condition of pavements
- Drop-kerb crossing points
- Provision of cycle routes, cycle crossing facilities at junctions, cycle parking, direction signing of cycle routes and cycle route information

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Appendix B

Existing Infrastructure

Map 11. Existing Cycle Facilities



Key

- Shared cycleway/footway
- Pedestrian street
- Mixed street with low traffic
- On carriageway cycle lane
- Shared cycleway/footway (off highway)
- Toucan crossing

B.1. Existing Cycle Facilities in Douglas

1. The Promenade walkway/cycleway

The Promenade is the jewel in the crown of Douglas public realm and walking and cycling facilities. It stretches almost 3 kilometres across Douglas Bay, from Summerhill in the north to the Sea Terminal in the south, and provides a continuous and traffic-free route along its length. The width of the route varies, ranging from a simple walkway to a wide esplanade incorporating gardens, playgrounds and car parking, but it is generally of a high quality and provides an excellent environment for walking and cycling. Its connections for cycling are limited however, and getting from the Promenade to neighbouring streets can be difficult, with no cycle-specific crossings of the road part of the promenade.

Because of its nature as a shared path, there can be some conflict, particularly between people walking and cycling, as these forms of transport have naturally different speeds. Previous attempts to separate users using a white line to delineate space for different users was unsuccessful and removed. The Promenade generally provides a very high-quality route that enables people to travel from Onchan to central Douglas without conflict with motor traffic, however options for connecting it to side roads are limited.

2. The Promenade redevelopment

A planned major redevelopment of the Promenade will see a significant investment in the public realm of the town, improving traffic flow, junctions and footpaths and to create a cultural area around the Villa Marina and Gaiety in line with the town centre regeneration and Douglas Masterplan. The proposals focus primarily on the southern end of the Promenade, in the town centre, with the northern end to be redeveloped on a simple, like-for-like basis.

The redevelopment plans represent significant improvements to the carriageway and footway elements of the Promenade which will benefit people walking, however improvements for cycling are limited, and this could be considered a missed opportunity. A full review of the proposals can be found in Sustrans' Douglas Cycling and Walking Connectivity Study 2018.

3. Douglas Town Centre Regeneration 2011-2015

The retail and cultural heart of Douglas has been revitalised following a programme of public realm enhancement schemes. The first areas of the town that benefited from the project were Upper and Lower Nelson Street and Wellington Street, providing the opportunity to test high-quality materials. Strand Street – the town's flagship shopping street – and surrounding streets, including Regent Street and Duke Street, have been paved in high-quality stone, with tree planting, seating and public art. As a result the zone provides an excellent environment for people walking, with limited and managed access for motor vehicle traffic. High pedestrian density means that cycling is unlikely to be suitable at most times. The Promenade provides an alternative, parallel route, but requires improved connections across the carriageway in order to provide convenient access. Some cycle parking has been included, but more is required.



1. Promenade redevelopment



2. Promenade walkway



3. Douglas town centre regeneration (2011-2015)

4. Douglas Town Centre regeneration (ongoing)

Following on from the significant public realm improvements already completed, further works are planned. Some of these will be completed in conjunction with the Promenade regeneration, including Castle Street and Marina Road. Planned works include the continuation of Duke Street and the redesign of Victoria Street between Thomas Street and Fort Street. Plans include repaving and narrowing the carriageway to a single lane, with space reallocated for wider footways and areas for outdoor seating, tree planting and other street furniture.

These proposals will result in a considerably enhanced environment for people walking and cycling, however consideration will need to be given to whether traffic volumes are sufficiently low to allow for on-carriageway cycling, and the replacement of a signal-controlled crossing with an uncontrolled crossing. If this is not the case, it might be necessary to include cycleways.

5. Sea Terminal cycle improvements

6. North Quay

The quayside at North Quay was redeveloped in 2007, which resulted in a significantly enhanced public realm, with a one-way single-lane carriageway for general traffic which, through careful traffic management techniques such as alternating one-ways, removes through traffic, but provides for access and short-term parking. The highway comprises a level surface with public and commercial space, carriageway, and footway/cycleway delineated using differing materials.

The space generally works well, and offers a low-traffic environment that helps to facilitate cycling. The footway is designated shared-use, but this is not clear and in practice people cycling are likely to use the carriageway and/or footway pragmatically in order to continue their journey. Cycling exemptions should be put in place to legitimise these movements.

A planning application was submitted in August 2018 for a leisure-led mixed-use development at the site of the former bus station on Lord Street. The proposal, including a hotel, residential apartments, a cinema and multi-storey car parking would be accessed from North Quay and Chapel Row, including servicing by HGVs. This has the potential to have a detrimental impact on the suitability of North Quay as a low-traffic street suitable for use as part of a cycling route.



4. Douglas town centre regeneration (ongoing)



6. North Quay

7. Peel Road cycle lanes

Cycle facilities have been provided along Peel Road, from the junction of Lord Street and Circular Road in the south, to Quarter Bridge in the north. These were included as part of major resurfacing works to the road in 2014, and comprise primarily advisory cycle lanes, with some sections of shared-use footway at the approach to major junctions at Pulrose Road and Quarter Bridge. The scheme was the first of its kind on the Island, and represents a step change in the approach to facilitating cycling as a way of making journeys for purpose. Advisory lanes are, however, no longer considered to be a high-quality solution and will not enable cycling for most people. Similarly, the shared-use arrangements at junctions can be difficult to use and result in a poor level of service for people cycling.

The significant step - to identify space for people cycling - has been taken and can now be built upon. Initially, the Peel Road cycle lanes could be adapted with the simple addition of temporary light segregation such as bolt-down kerbs and bollards. These could transform the lanes into inclusive facilities. Junctions will require further consideration.



7. Peel Road cycle lanes

8. Steam Heritage Trail

The Isle of Man's Steam Heritage Trail is a multi-user path connecting Peel and Douglas at Quarter Bridge along the line of the former railway. Within the built-up area of Douglas the trail provides a very high-quality environment for cycling, running along an attractive wooded glen formed by the River Dhoo. The track is wide and has a bound surface.

Access points are located along it enabling people to access it from nearby residential areas, however some of these are steep and stepped, and there is at least one restrictive access barrier that should be removed. Outside of the built-up area, the track's surface has been unbound which reduces its attractiveness as a way to make every day journeys, however the Department of Infrastructure has recently begun a programme to improve the track along its length.

The trail terminates at New Castletown Road, at the end of an access track for TT races, running parallel to Peel Road at Quarter Bridge. There is currently no crossing of New Castletown Road, and crossing informally is likely to be unpleasant, as the road is very busy and sightlines are poor. If a crossing could be provided, however, the trail could be linked to facilities at the NSC, providing a continuation of the route, and linking more communities and services (see below).



8. Steam Heritage Trail

9. NSC perimeter raceway

The perimeter raceway is a multi-user road that forms a circular route around the National Sports Centre complex. It provides a wide tarmac track for use by people cycling, running and walking, and includes a footbridge over the River Dhoo, and a bridge over the River Glass that provides pedestrian and cycle access, but can be opened to allow access for motor vehicles. Motor vehicles can also use the raceway to access a number of parking areas around the complex. As a shared-use route, people using the raceway are asked to follow a code of conduct, with people driving and cycling advised to travel in a clockwise direction, and people walking and running in an anti-clockwise direction.

The low-traffic environment means that the raceway generally provides a safe and attractive environment for people walking and cycling. As a circular route it is particularly suitable and popular for sports and recreation, but provided with the right onward connections could facilitate journeys as part of a wider active travel network. Furthermore, if the parking and access arrangements at the NSC could be reorganised in order to further reduce the number of motor vehicles using the track, it could provide an even better place to travel actively.



9. NSC perimeter raceway

10. Anagh Coar cycleways

The Anagh Coar Estate includes a number of internal traffic-free 'roads', such as The Link Road and The Park Road. These are generally 3 metre-wide concrete tracks that link to the surrounding dense network of pedestrian paths that permeate the estates. The tracks in themselves serve only a small area of housing, but could form part of a wider network.

11. Isle of Man Business Park – new infrastructure

Cooil, in the west of Douglas continues to expand as a strategic business and enterprise zone. The latest in these developments, including Jackson's car dealership, has recently been completed, with the associated highways improvements including a 3 metre wide shared cycleway/footway, linking the development to bus facilities on Cooil Road.

The inclusion of this high-quality facility is a positive step in connecting the Isle of Man Business Park. Careful planning will now be required to ensure that this links well to the surrounding residential and commercial areas, and that it forms part of a high-quality route that will enable people to travel actively to work, education and for everyday journeys.



10. Anagh Coar cycleways



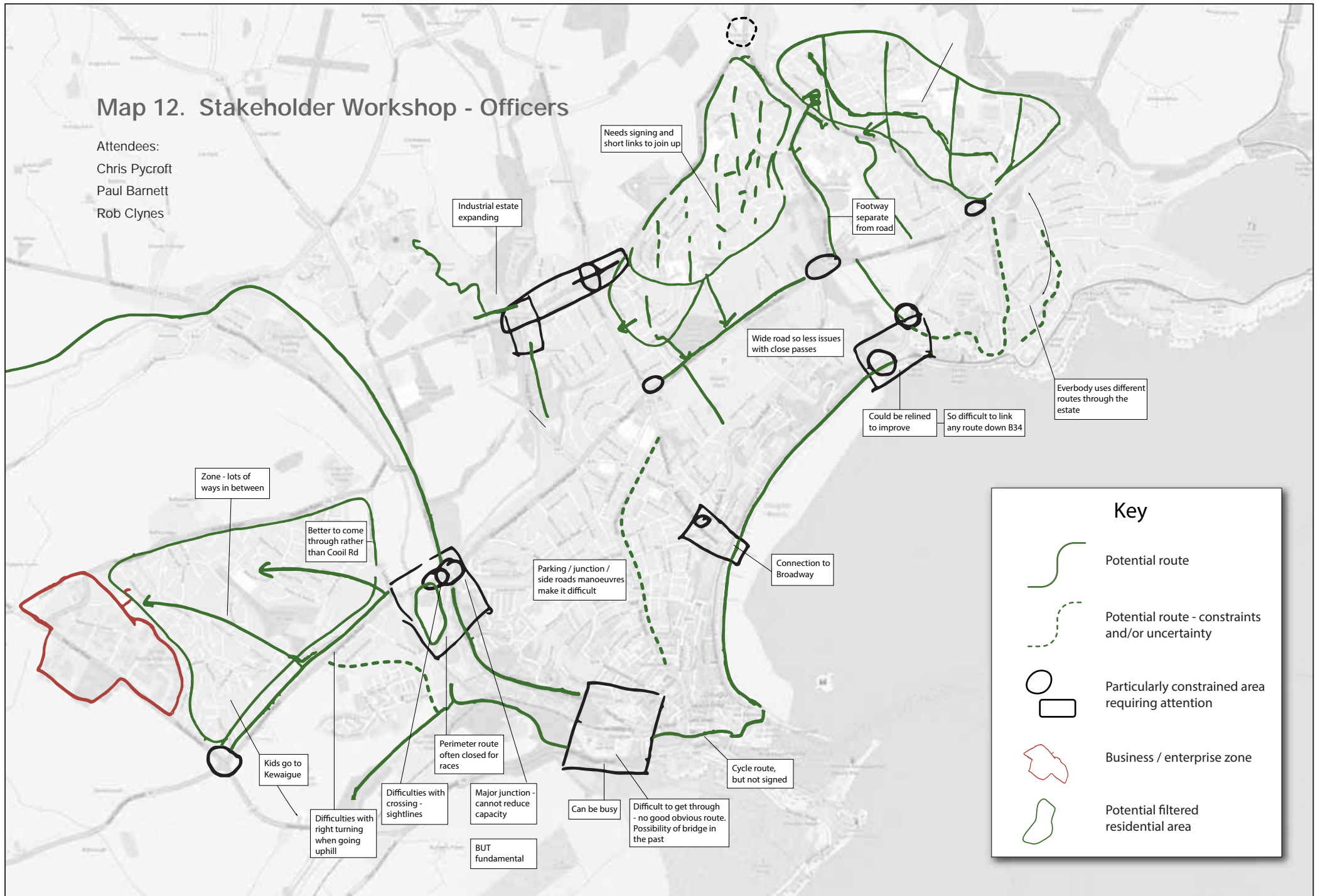
11. Isle of Man Business Park developing infrastructure

Appendix C

Stakeholder Group Engagement Output Maps

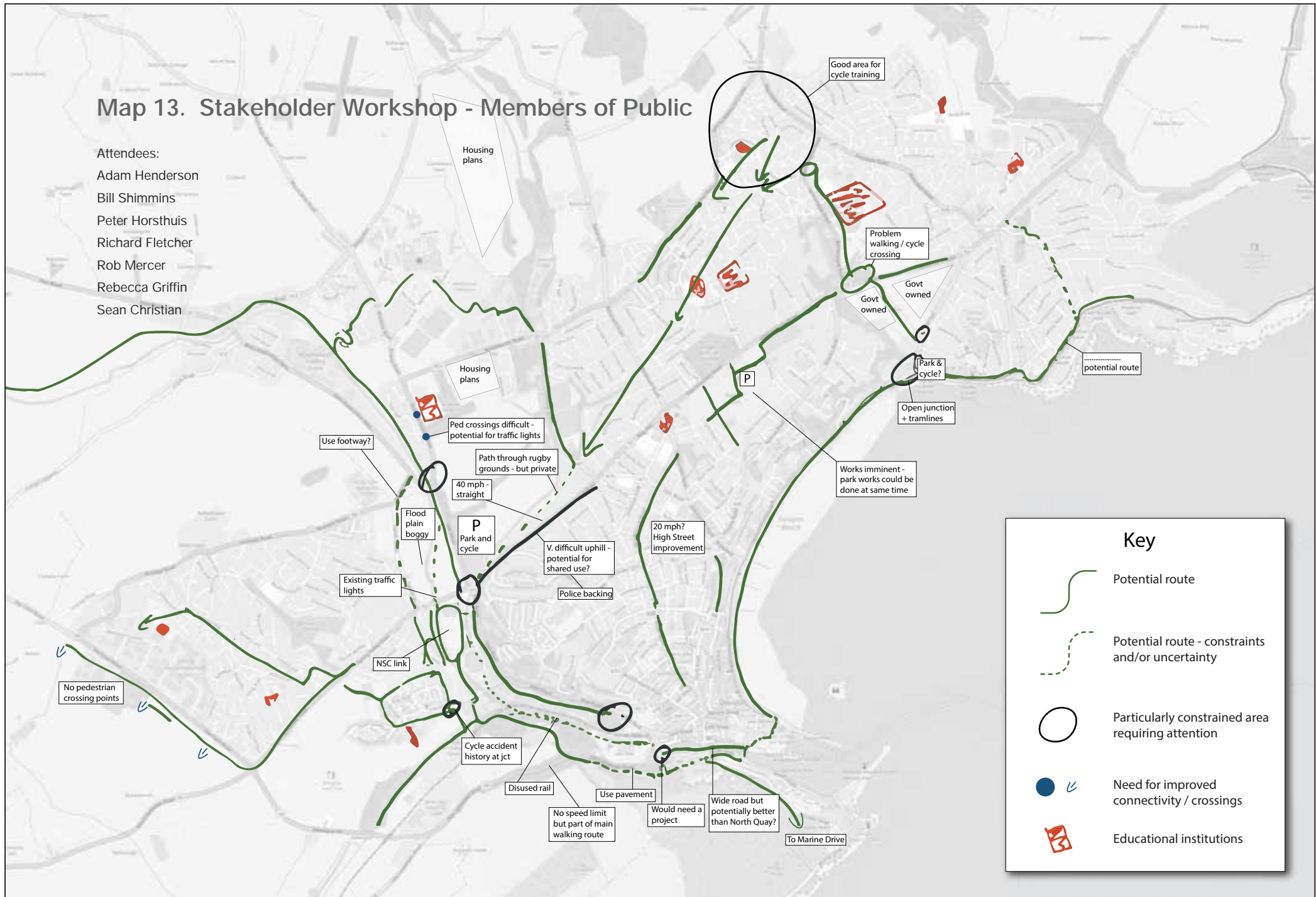
Map 12. Stakeholder Workshop - Officers

Attendees:
Chris Pycroft
Paul Barnett
Rob Clynes



Map 13. Stakeholder Workshop - Members of Public

Attendees:
 Adam Henderson
 Bill Shimmins
 Peter Horsthuis
 Richard Fletcher
 Rob Mercer
 Rebecca Griffin
 Sean Christian



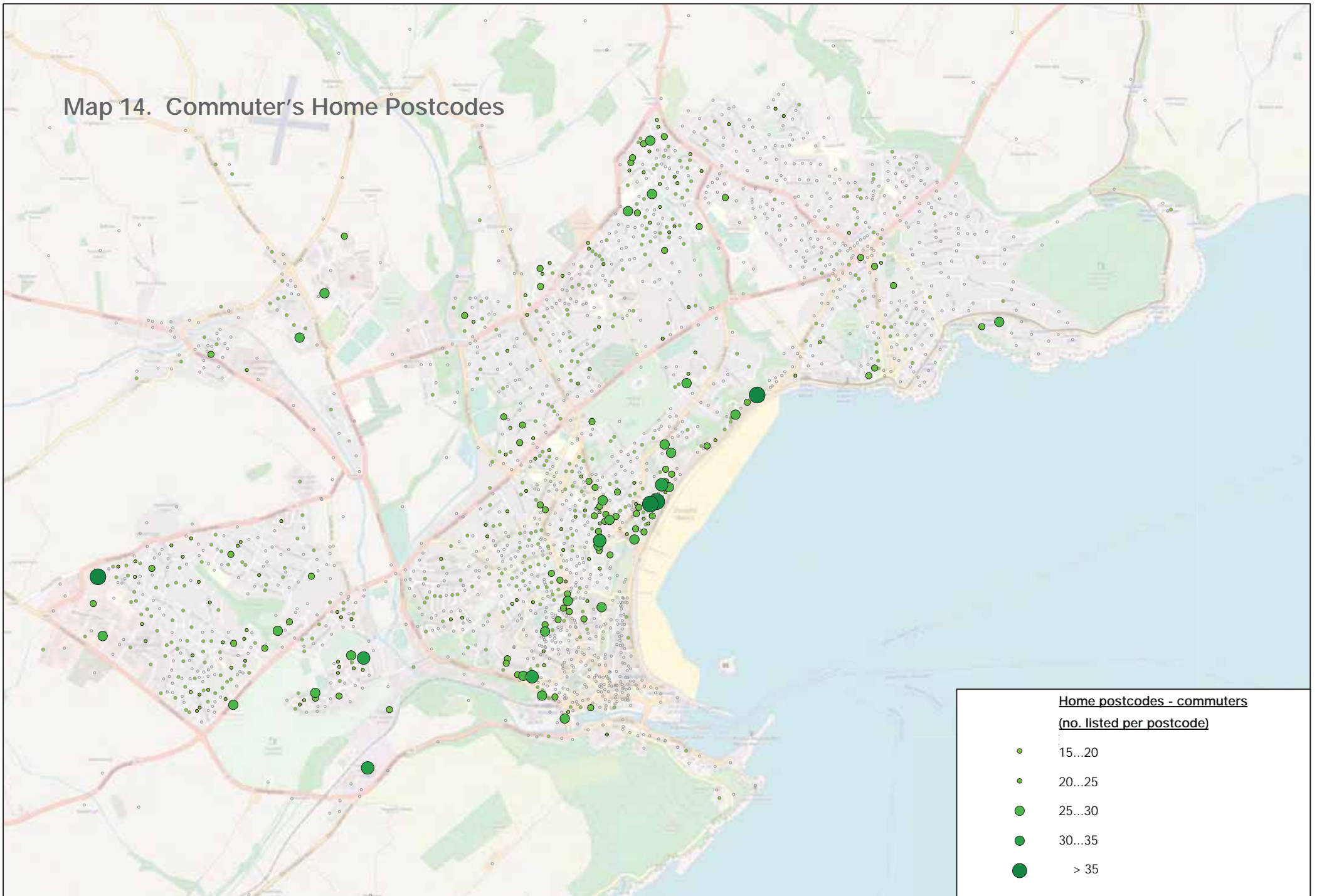
Key

- Potential route
- Potential route - constraints and/or uncertainty
- Particularly constrained area requiring attention
- Need for improved connectivity / crossings
- Educational institutions

Appendix D

Cycle Network Modelling Layers

Map 14. Commuter's Home Postcodes



D.1. Data Analysis Trip Origins and Destinations

Residential Areas of Commuters

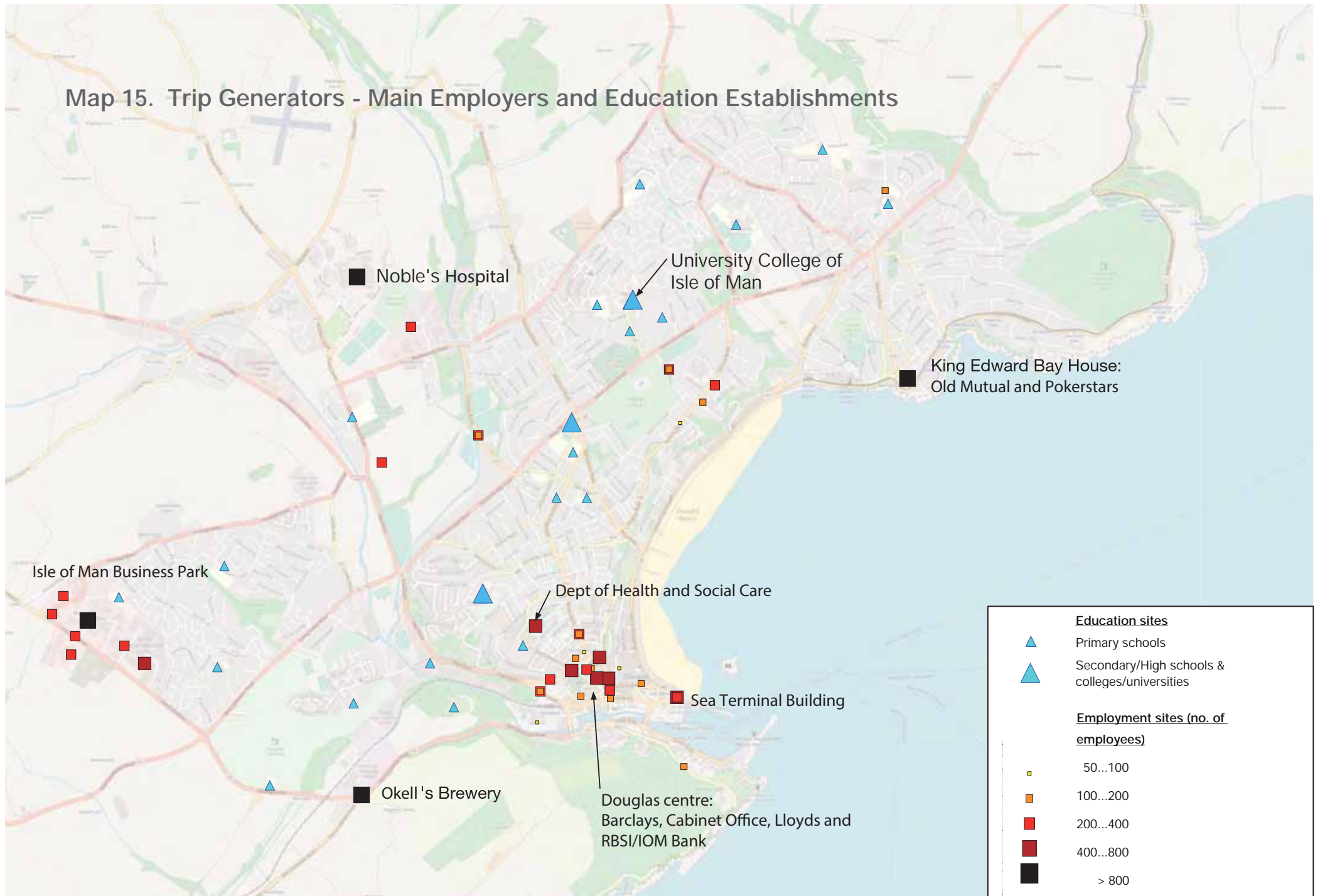
Home postcodes of commuters, provided by the Isle of Man Government, have been plotted to provide an indication of residential areas - ie start points for commutes to work and journeys to school. Only postcodes with more than 15 properties listed have been plotted - see Map 14. The size and shading of each dot represents the number of commuter homes within the given postcode.

This data provides an indication of where journeys are likely to begin, and can therefore be used in conjunction with other datasets, including trip generators to identify likely movement patterns and therefore where investment should be directed in order to facilitate journeys between these places by active travel.

Home postcodes are fairly evenly spread across the Douglas and Onchan urban area, however there are some particularly high concentrations, such as in inner Douglas, around Woodbourne Road and Bucks Road, which comprise a dense network of principally Victorian terraced streets. Similarly there is a particularly dense area around Broadway and along this section of the Promenade.

Beyond inner Douglas, there are also significant residential populations in Pulrose and Willaston/Cronk-y-Berry.

Map 15. Trip Generators - Main Employers and Education Establishments



Education and Employment

School locations have been identified and plotted. A selection of larger businesses having more than 50 employees (see Map 15, and Table 2) have also been mapped as a way of identifying some of the main journey end-points in Douglas and Onchan.

Central Douglas is by far the largest commercial area, with a significant proportion of major employers based in the area ranging from the Sea Terminal Building in the south east, the Quayside in the south and Westmoreland Road and Bucks Road in the west and north respectively.

The Isle of Man Business Park and other business and industrial estates along Cooil Road also have a significant number of major businesses, with this expected to increase as developments on land to the south of Cooil Road come forward.

There are also a number of major employers in outlying areas, such as Noble's Hospital, Heron and Brearley and the Okell's site along Old Castletown Road, smaller business parks and industrial estates such as Tromode, and to the north east of Douglas along Victoria Road.

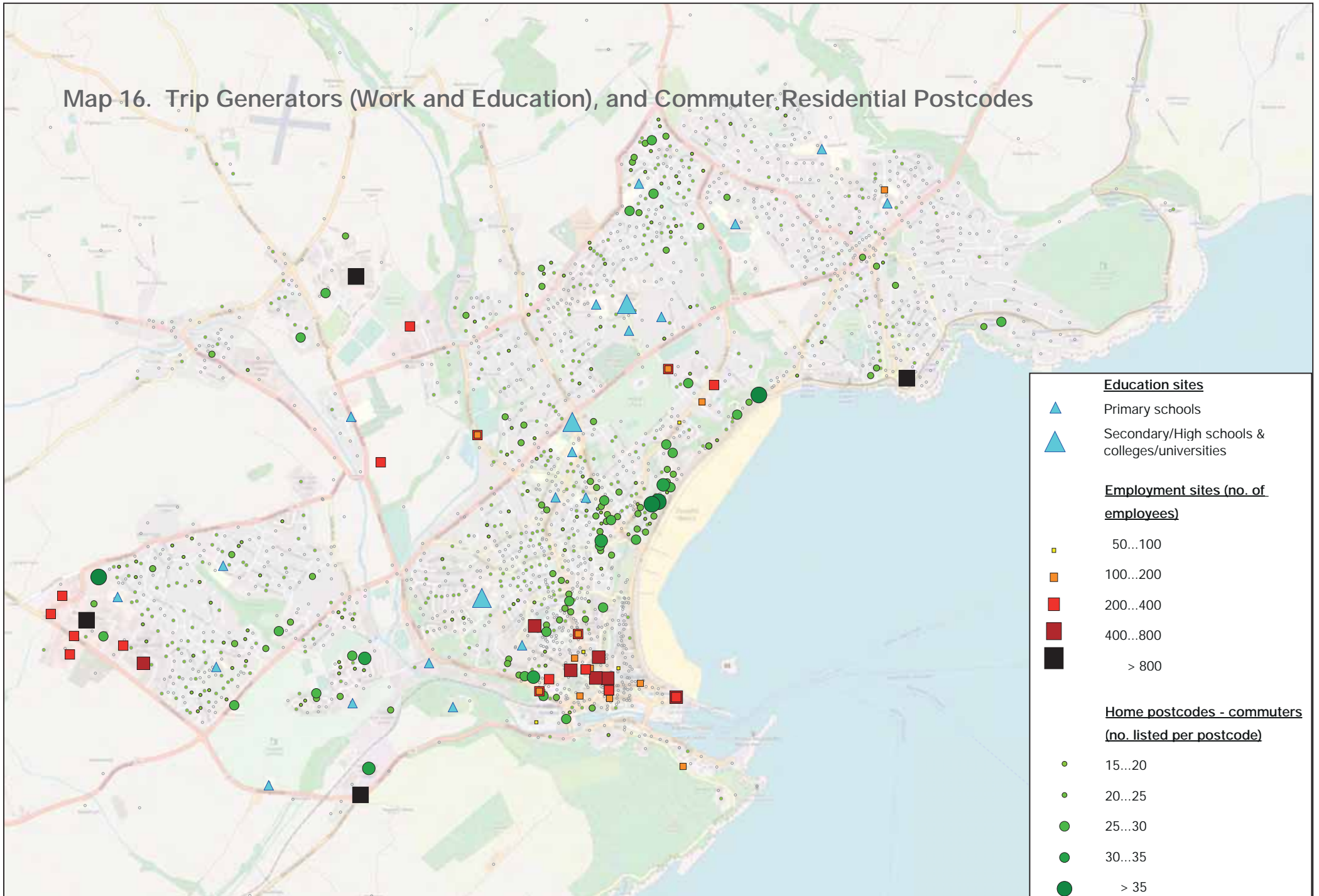
Table 1. Mapped education establishments

	Organisation	Address
1	Anagh Coar Primary School	Darragh Way, Anagh Coar, Douglas, Isle of Man, IM2 2BA
2	Ashley Hill Primary School	Onchan, Isle of Man, IM3 3LA
3	Ballacottier Primary School	Clybane Road, Farmhill, Braddan, IM2 2ST
4	Ballakermeen High School	St Catherine's Drive, Douglas, Isle of Man, IM1 4BE
5	Braddan School	Braddan, Isle of Man, IM4 4TQ
6	Cronk y Berry Primary School	Hailwood Avenue, Douglas, Isle of Man, IM2 7PA
7	Henry Bloom Noble Primary School	Westmoreland Road, Douglas, IM1 4AQ
8	Kewaigue School,	Kewaigue Hill, Braddan, IM2 1QH
9	Manor Park School	Manor Park School, Pulrose Road, Douglas, Isle of Man, IM2 1AT
10	Onchan School	School Road, Onchan, Isle of Man, IM3 4PD
11	Scoil Vallajeelt Primary School	46 Meadow Crescent, Douglas, Isle of Man, IM2 1NN
12	Scoil yn Jubilee Infants	Stoney Road, Douglas, Isle of Man, IM2 5EE
13	Scoil yn Jubilee Juniors	Laureston Avenue, Douglas, Isle of Man, IM2 3BR
14	St Mary's School	St Mary's Road, Douglas, Isle of Man, IM2 5RB
15	St Ninian's Lower School	Heywood Avenue, Onchan, Isle of Man, IM3 3AR
16	St Ninian's Upper School	Ballaquayle Road, Douglas, Isle of Man, IM2 5RA
17	St Thomas' C of E Primary School	St Thomas' C of E School, Meadow Campus, Meadow Crescent, Douglas, IM2 1NN
18	University College Isle of Man	Homefield Road, Douglas, Isle of Man IM2 6RB, Isle of Man
19	Willaston School	School Rd, Willaston, Douglas, Isle of Man, IM2 6RD

Table 2. (right):
Mapped businesses

	Organisation	Address
1	B&Q Isle of Man	Spring Valley Industrial Estate, Cooil Road, Douglas, IM2 2QT
2	Barclays Wealth and Investment Management	25 Circular Rd, Douglas IM99 1RH, Isle of Man
3	Cabinet Office	Third Floor, Government Office, Bucks Road, Douglas, IM1 3PN
4	Canada Life International	Canada Life House, Isle of Business Park, Douglas IM2 2QJ
5	Capital International	Capital House, Circular Road, Douglas IM1 1AG, Isle of Man
6	Dandara Group	Isle of Man Business Park, Cooil Road, Braddan, Isle of Man, IM2 2SA
7	Department of Health and Social Care	Crookall House, Demesne Rd, Douglas IM1 3QA, Isle of Man
8	Dohle	Fort Anne, Douglas, IM1 5PD
9	Douglas Borough Council	Town Hall, Ridgeway Street, Douglas, Isle of Man, IM99 1AD
10	Education, Sport and Culture	Hamilton House, Peel Road, Douglas, IM1 5EZ
11	Enterprise	1st Floor, St George's Court, Upper Church Street, Douglas, Isle of Man, IM1 1EX
12	First Names Group	First Names House, Victoria Road, Douglas, IM2 4DF
13	Graylaw Freight Group	Spring Valley Industrial Estate, Douglas IM2 2QT
14	Heron and Brearley	Old Castletown Rd, Kewaigue, Douglas, Isle of Man, United Kingdom IM2 1QG
15	Home Affairs	Home Affairs Tromode Road Douglas IM2 5PA
16	HSBC Isle of Man	Ridgeway Street Douglas IM, IM1 2SG, Isle of Man
17	Infrastructure	Sea Terminal Building, Douglas, IM1 2RF
18	Isle of Man Constabulary	Police Headquarters, Dukes Avenue, Douglas, Isle of Man, IM2 4RG
19	Isle of Man Post Office	Postal Headquarters, Douglas, Spring Valley, Isle of Man, IM2 1AA
20	Isle of Man Steam Packet	Sea Terminal Building, Douglas, IM1 2RF
21	Jacksons Isle of Man	Cooil Road, Braddan, IM4 2AZ
22	KPMG LLC	Heritage Court, 41 Athol St, Douglas IM1 1LA
23	Lloyds International	8 Prospect Hill, Douglas, IM99 1AH
24	Manx Telecom	Isle of Man Business Park, Cooil Road, Braddan, Isle of Man, IM99 1HX
25	Manx Utilities	PO Box 177, Douglas, Isle of Man, IM99 1PS
26	Marks and Spencer	7 Drumgold Street, Douglas IM1 2SP, Isle of Man
27	Microgaming	Sixty Two, Circular Road, Douglas, Isle of Man, IM1 1AE
28	Nedbank Private Wealth	St Mary's Court, 20 Hill Street Douglas, IM1 1EU
29	Newfield	Newfield Ltd, Clarendon House, Victoria Street, Douglas, IM1 2LN
30	Noble's Hospital	Strang, Isle of Man IM4 4RJ, Isle of Man
31	Old Mutual	Douglas Bay Complex, King Edward Road, Onchan, IM3 1DZ, Isle of Man
32	Pokerstars	Douglas Bay Complex, King Edward Road, Onchan, IM3 1DZ, Isle of Man
33	RBS/IOM Bank	2 Athol Street, Douglas, IM99 1AN
34	RL360	International House, Cooil Road, Douglas, Isle of Man, IM2 2SP
35	Robinson's Fresh Foods	Ballapaddag, Cooil Road, Braddan, Isle of Man, IM4 2AF
36	Santander UK plc	19-21 Prospect Hill, Douglas IM1 1ET
37	Shoprite (Douglas store)	Victoria Rd, Douglas IM2 4RF
38	Shoprite (head office)	Centre House, Little Switzerland, Douglas, IM2 4RE
39	Standard Bank Isle of Man Ltd	Standard Bank House, 1 Circular Road, Douglas, IM1 1SB
40	Swagelok	Ballafletcher Farm Rd, Douglas, IM4 4RA
41	Tesco	Lake Rd, Douglas IM1 5AF
42	Treasury	Treasury Government Office Bucks Road, Douglas IM1 3PZ
43	Triumph	School Rd, Douglas, Isle of Man IM3 4PB
44	Zurich International	PO Box 67, Douglas, Isle of Man, IM99 1EF

Map 16. Trip Generators (Work and Education), and Commuter Residential Postcodes



Journey Start and Destination Points

The available datasets (residential, schools and businesses) have been plotted on the map opposite. This provides a more visible idea of purposeful journey 'start' and 'destination' points, and also a broad indication of routes to look more closely at for potential active travel improvements.

Some regions have high numbers of residents, employment sites and/or schools.

Residential areas

There are concentrations of people who both live and work in Douglas shown by the green circles. Larger groupings are along the Promenade, in the Town centre, ferry terminal and also by the Business Park

Employment sites

Employment sites are shown by black and red squares and are concentrated in Douglas town centre with its many Government Departments, the Isle of Man Business Park, Nobles Hospital, King Edward Bay House and the Okell's Brewery. There are over 800 people working at each of these clusters meaning they are significant trip generators.

The map shows that not many people who work in Douglas live near the hospital.

The proximity of people who work in Douglas who live near workplaces means that distance should not be a barrier to making these trips by active travel. Many working people live within 1km of the town centre which is ideal for walking and is reflected in the 20% of people who work to work.

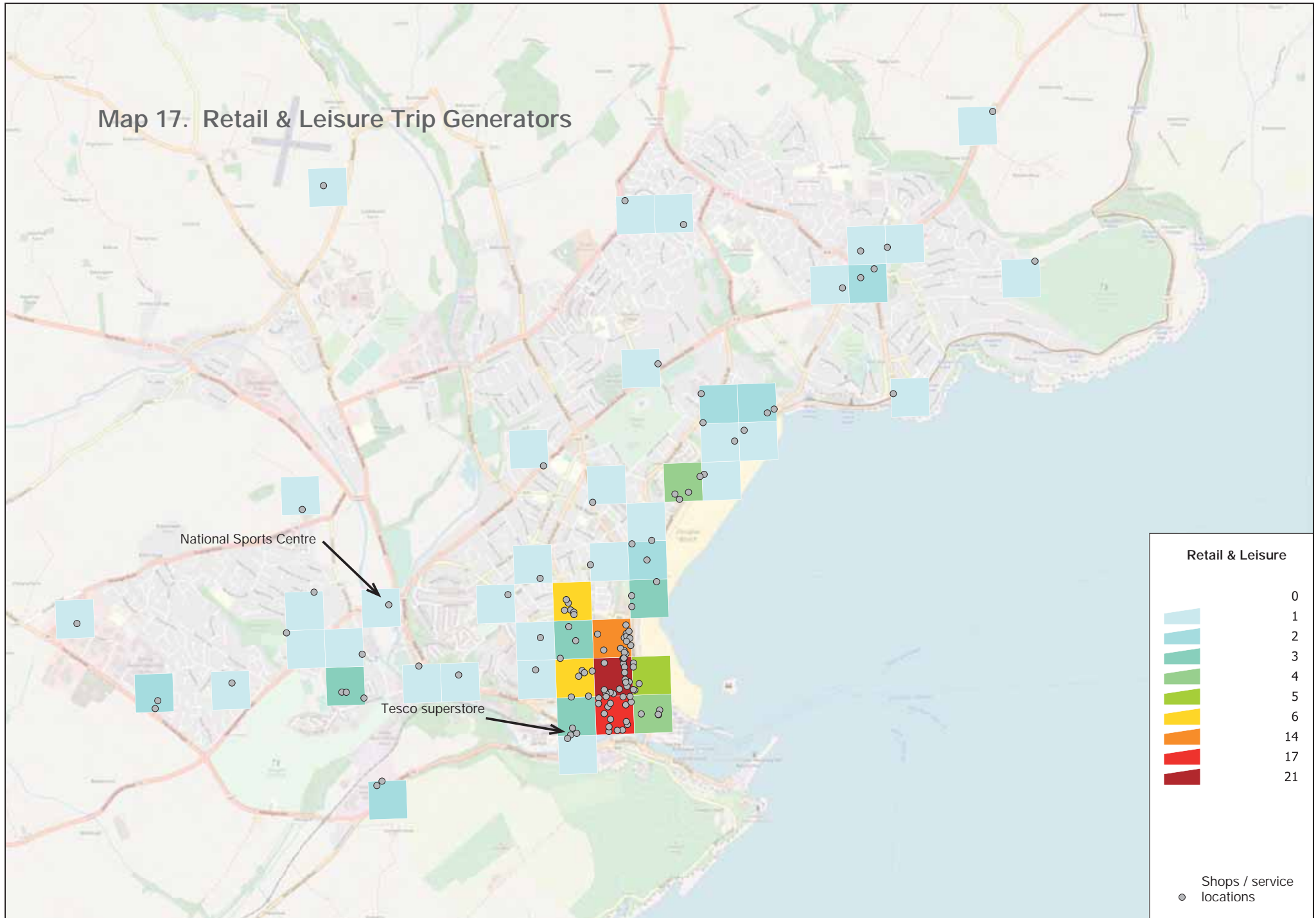
While the data we have been sent can show origins and destinations we have not been able to show how people travel between these areas as this data does not exist at present.

However we can give some broad indications of the routes to work that people could take.

Education

Schools tend to be grouped fairly close to each other and within residential areas, so trips to them will be short distances ideal for walking, scooting and cycling. We have been supplied with postcode data for only one school so far so have not yet been able to map trips to school.

Map 17: Retail & Leisure Trip Generators



Retail & Leisure Trip Generators

'Active travel' is defined in the Isle of Man's Active Travel Strategy 2018-2021 to be journeys made for a purpose - for example, journeys to work, school, shops and leisure facilities. It excludes recreational cycling, which will be covered in a separate Government document (Cycling Strategy).

Retail premises and leisure facilities in Douglas are shown on Map 17 opposite by blue circles. The grid of 250m squares is colour coded to indicate number of shops and facilities within each square.

Main retail areas and further outlying shops

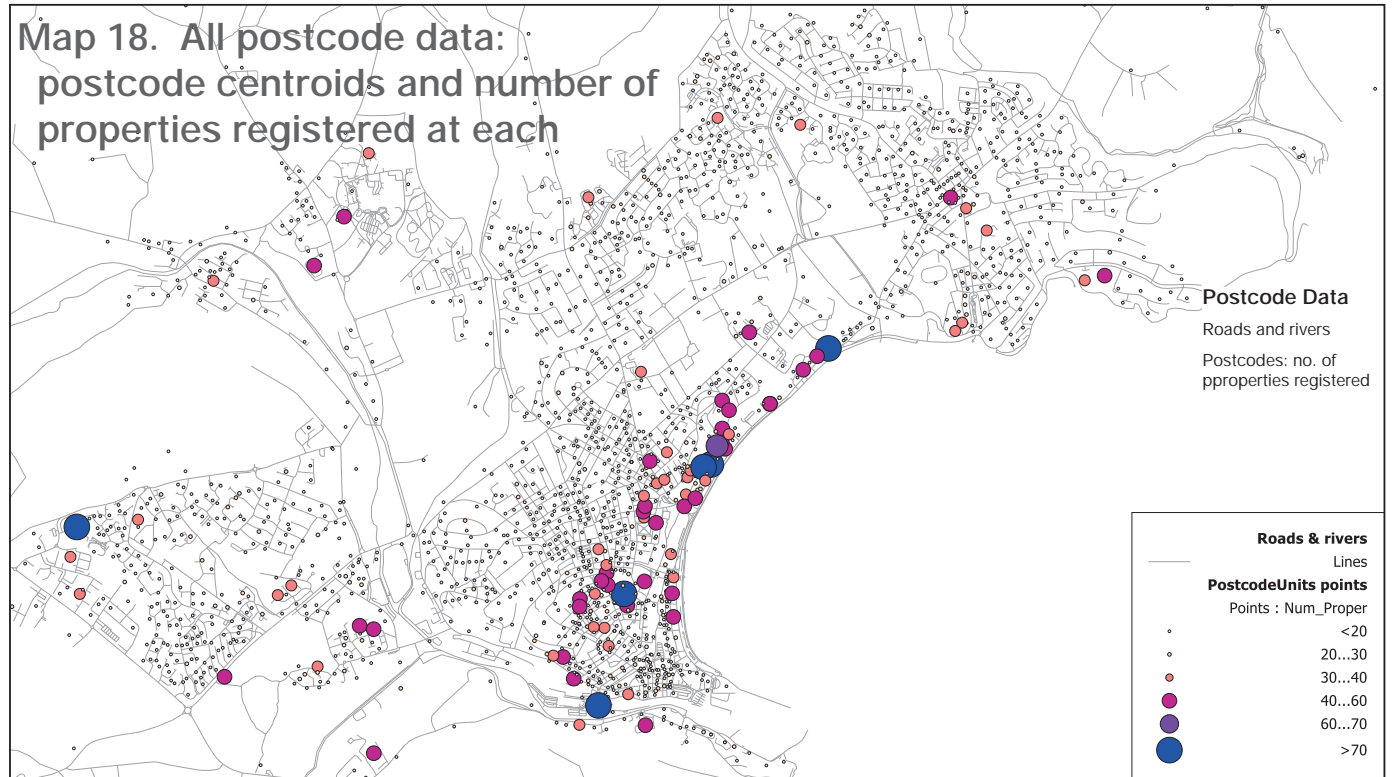
This map shows that shops are concentrated in Douglas town centre, further highlighting its importance as a major trip generator. As people walking and cycling tend to spend more at the shops than car-borne shoppers, this further strengthens the case for improving active travel routes to the shops and providing cycle parking rather than increasing car parking.

Superstore

Supermarkets and general stores have the potential to be key generators of active travel. Located on Lake Road, Tesco is the largest superstore in Douglas.

Leisure trip generators

National Sports Centre has indoor and outdoor sports facilities and activities including a swimming pool, and hosts many events which will attract people from around the island. Encouraging people to travel there actively will help meet some of the objectives of various Sport and Health policies as well as the active travel strategy.



Postcode Data

Map 14 data on page 75 shows commuter's home postcodes and has been used in journey analysis of commutes to and from work and school.

In Map 18, all postcodes (both residential and business) for Douglas have been plotted. The number of properties registered to each postcode is shown.

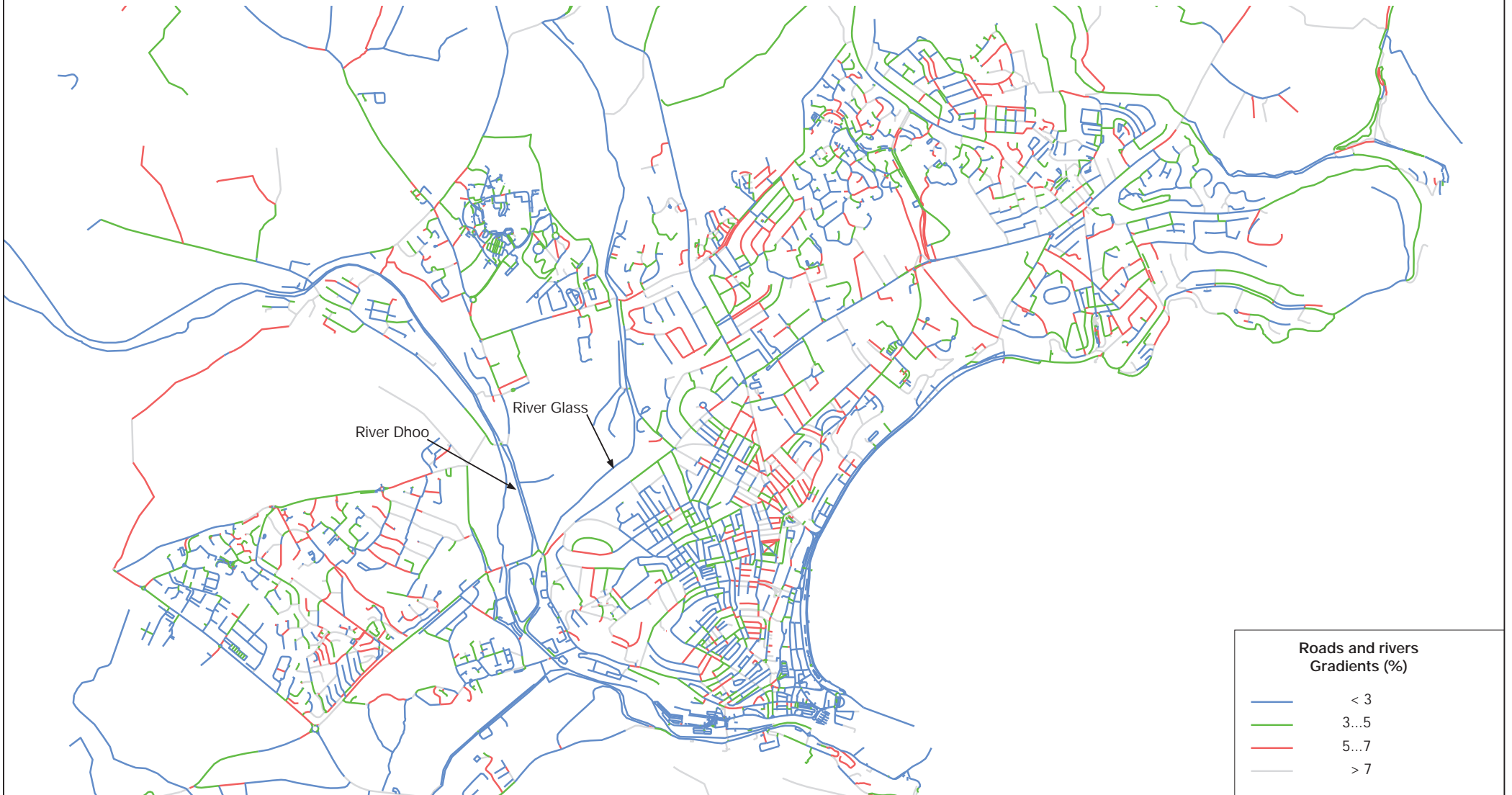
This broader dataset in Map 18 is more applicable than Map 14 data when considering start and destination points for active travel journeys to places other than work and school, such as shops and places of recreation, although similar patterns in property density can be seen in both Map 14 and Map 18.

The central shopping region of Douglas has a high concentration of

properties, suggesting there is potential for high volumes of short journeys by foot here.

This is discussed further in section 11 Network Planning - Walking.

Map 19. Road Gradients



Gradient of Road and Path Network

Douglas's topography presents a challenge for delivering active travel routes, but there are also significant opportunities.

The dramatic coastal landscape that characterises the town means that much of the built environment lies on undulating hillsides and in steep glens which can prove difficult to traverse, but create a varied landscape with wooded valleys and water courses immediately alongside people's homes and businesses.

Steep gradients will naturally deter many people from walking and cycling and for some people it could prevent them entirely. For cycle routes, a maximum gradient of 3 per cent is recommended but this can rise to 5 per cent over a distance of up to 100 metres. Where it is unavoidable, a gradient of up to 7 per cent over a distance of no more than 30 metres is acceptable (LCDS).

The gradients of all roads and paths in Douglas and Onchan have been mapped, left. Alongside the modelling of homes and trip generators, this helps to identify where routes and other cycling and walking interventions might be directed to best respond to the ability of people to move through the landscape. Many roads and paths in Douglas and Onchan are steep with gradients over 7 per cent (1 in 14) which requires more effort on cycles without electric assistance.

The map shows that there are a number of corridors and areas that benefit from relatively flat or shallow gradients that would be suitable for walking and cycling.

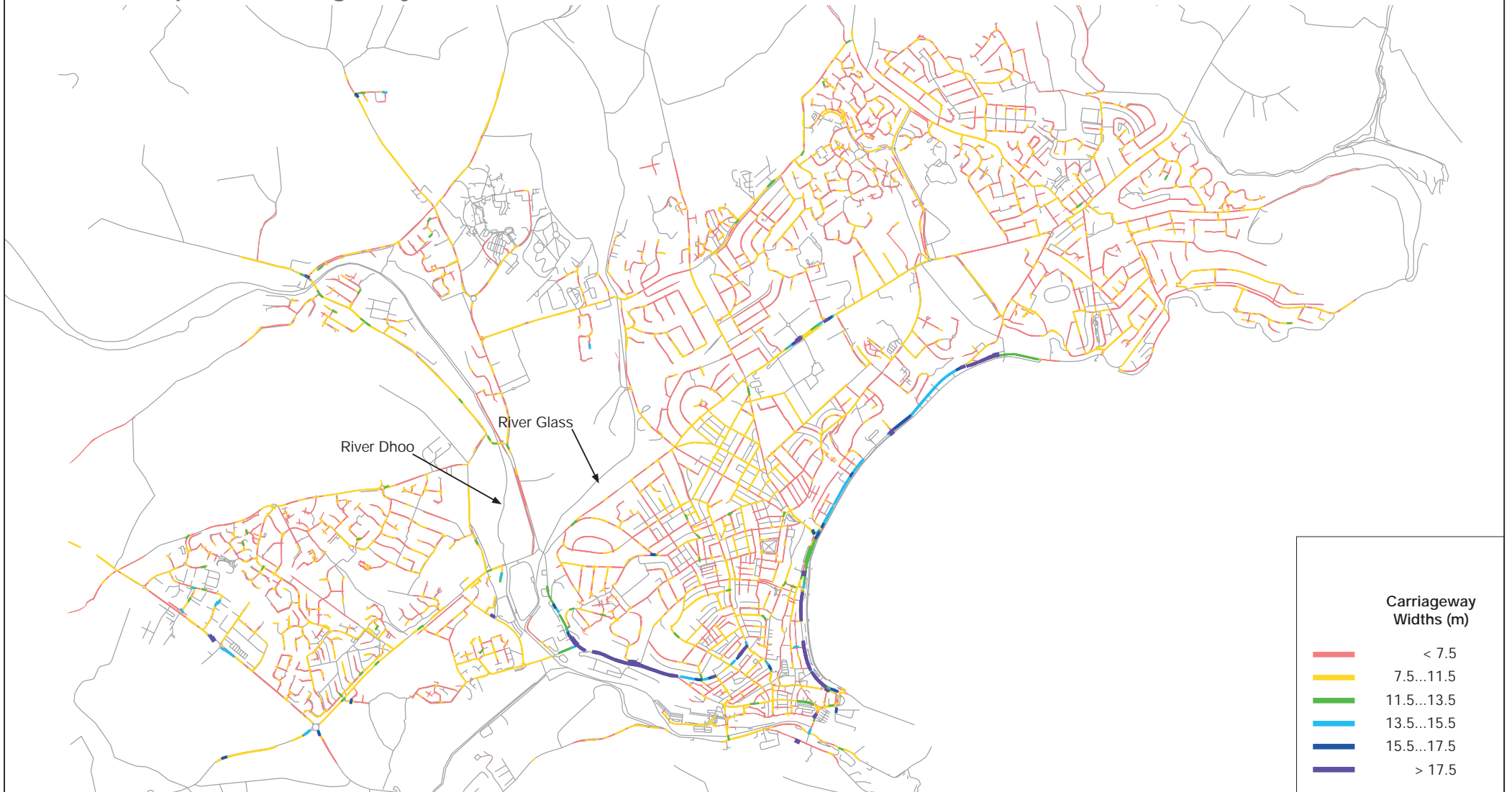
The valley formed of the River Glass also provides a crucial flat corridor which has the potential to link residential areas, employment sites and the town centre. The Steam Heritage Trail is one example of this, with the former railway line now converted to a multi-user path which follows the river valley, connecting Union Mills to the north west with the main urban area of Douglas. From Quarter Bridge the former railway line has been severed and various businesses have developed along Peel Road.

The River Glass valley and parallel Tromode Road have the potential to perform a similar role, linking new and emerging communities and businesses in Strang and Braddan. Middle River also offers the opportunity to link major employers, as well as other towns and villages to the south.

Bookended by the imposing promontories of Douglas Head and Onchan Head, the long flat arc of Douglas Bay provides a fantastic, flat route that runs the length of the town and has the potential to connect communities from across the urban area. Along much of the bay, the land rises rapidly from the coast, making linking areas to the Promenade a challenge, however where these links can be achieved, the Promenade cycleway offers an excellent, flat, route into the town centre.

The gradient mapping also demonstrates that much of the more densely populated areas of Douglas particularly west of Woodbourne Road, is relatively flat, becoming steeper only as it enters the town centre, such as Prospect Hill and St Georges. There is therefore the potential for large proportions of the population to be connected to walking and cycling routes, provided the topographical constraints are well managed.

Map 20. Carriageway Widths



Carriageway and Path Widths

Carriageway widths

This distance between road kerbs has been mapped using data from Master maps and is shown on Map 10 Carriageway widths opposite. It shows a wide range of road widths from less than 7.5m (pink lines) to over 17.5m (purple lines) wide along part of Peel Road and The Promenade.

From a cycle network design point of view, cyclists require protected cycle lanes along busy roads while other measures are needed on other roads – traffic reduction through road closures, speed reduction through 20mph limits and speed reduction measures etc to encourage people to cycle.

Cross sections showing footways, cycle lanes, buffer zones and traffic lanes have been drawn up using the guidance for residential and mixed priority roads from the Manx Manual for Roads, and recommended widths for protected cycle lanes from the Welsh Active travel guidance.

These show that for protected bike lanes a road needs to be 11.5m wide between kerbs, while with parking on one side requires 13.6m of road as shown on Figure 46.

Looking at Map 10, sections of the Central and Queens Promenade, the A2, and Peel Road appear wide enough to accommodate protected bike lanes. This requires further investigation on site to see if there are other constraints, and modelling to see if they are on desire lines.

Off-Road route path widths

Shared-use paths – for traffic-free routes alongside roads, old railway lines, promenades, canal towpaths or through parks - Sustrans' design guidance recommends a 3.0m wide shared-use path on main routes with 2.5m wide paths on links and 2.0m in rural areas.

Segregated paths - If routes are to be segregated then 4.5m is an acceptable minimum with 2.0m for pedestrians and 2.5m for people cycling.

If routes are busy and space permits, both shared and segregated routes can be wider than these minimum as shown in Table 3 and 4.



Protected Cycle Lanes - No parking - 11.5m carriageway width

Figure 46. Above and below: Illustrations of highway width requirements for protected cycle lanes with & without parking



Protected Cycle Lanes - Parking one side - 13.6m carriageway width

Table 3. Recommended minimum widths, unsegregated shared use, off-road (Sustrans Design Manual Chapter 5, 2014)

Nature of route	Min. effective path width
Urban traffic free	3.0m on all main cycle routes, secondary cycle routes, major access paths and school links; wider on curves and steep gradients. Where high usage is expected, or significant demand to ride two abreast, a width of 4.0m is preferred and segregation between cyclists and pedestrians considered. 2.5m possible on access routes and links with low use
Urban fringe/ semi rural traffic free	3.0m on all main cycle routes, major access paths and school links 2.5m possible on lesser secondary cycle routes and access links
Rural traffic free	2.5m on all main routes, major access paths and school links 2.0m possible on lesser routes and links

Table 4. Recommended minimum widths where segregation is provided, off-road (Sustrans Design Manual Chapter 5, 2014)

	Cyclists	Pedestrians	Total
Preferred minimum	3.5m	3.5m	7.0m
Acceptable minimum	2.5m	2.0m	4.5m
Absolute minimum for short lengths	2.0m	1.5m	3.5m

Appendix E

Finding the Optimum Report

Appendix F

Improving Access for Local Journeys Report

Appendix G

Onchan, Douglas and Union Mills

PERS Studies (by SYSTRA)

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Registered Charity No. 326550 (England and Wales)
SC039263 (Scotland)

VAT Registration No. 416740656

For more information regarding this report, please
contact:

Mark Robinson (Head of Design and Engineering)

mark.robinson@sustrans.org.uk

0113 245 0006

Sustrans Ltd
Leeds Bridge House
Hunslet Rd
Leeds
LS10 1JN