HIGHLAND COUNCIL

Committee: Economy and Infrastructure

Date: 2 February 2023

Report Title: Active Travel Prioritisation and Funding Bids

Report By: Executive Chief Officer Infrastructure, Environment & Economy

1 Purpose/Executive Summary

1.1 Officers have prepared a prioritised list of active travel infrastructure for delivery, based on an objective, evidence-led approach that follows a multi-criteria assessment of potential routes identified to deliver a Highland-wide Active Travel Network. This paper summarises the methodology, potential funding streams and major opportunities that this work can deliver for the region.

2 Recommendations

2.1 Members are invited to:-

   i. **Note** the evidence-led approach used to set out how to prioritise the delivery of Active Travel infrastructure across Highland; and
   ii. **Agree** that officers proceed with the delivery of this network, following the processes and prioritisation explained in sections 5 and 6 of the report

3 Implications

3.1 **Resource** – The Active Travel Team is comprised of two permanent full-time posts and four temporary posts, with a range of external, joint external and seconded post funding models. Current staff time fully allocated with the committed projects already underway. Therefore, the applications detailed in Table 1 include a revenue cost component to ensure the necessary staff resources are provided to support the projects. The purpose of prioritising infrastructure delivery is to ensure limited staff resources are best directed to maximise delivery of highest impact routes in a time of significantly increased external funding potential.

3.2 **Legal** – Future stages of individual infrastructure projects may require Compulsory Purchase Order; however, these would be subject to separate committee decisions, and all efforts would be made to avoid this. Weighting to prioritised projects factors in where third-party land access is anticipated.

3.3 **Community (Equality, Poverty, Rural and Island)** – Relevant impact assessments are included in the appendices of the paper. Further assessment will progress in line with individual projects.

3.4 **Climate Change / Carbon Clever –** The paper sets out tangible ways to decarbonise transport in Highland, and therefore offers positive implications for the Climate and Ecological Emergency. Officers will continue to work with the Climate & Energy teams and with 'Highland Adapts' to maximise co-benefits.

3.5 **Risk** – Risk Registers are included in both reports in **Appendices 1 and 2**.

3.6 **Gaelic** – None arising from this report.

4   Background: Active Travel

4.1 The Scottish Government has committed 10% of the annual Transport budget to Active Travel by 2024/25, expected to be £320m per year, and it has set a national target to reduce car kilometres by 20% by 2030. The Highland Council has already secured £10.6m for the Inverness City Active Travel Network; £1.6m for Cycling, Walking and Safer Routes for 2022/23, and £109M for transport through the City and Region Deal; as well as initial funding of £2.7m to unlock up to £50m for public transport, through the Bus Partnership Fund.

4.2 The Council's Road Safety Team is working on a pioneering approach to deliver settlement-wide 20mph speed limits across settlements in Highland, funded and supported as a Scottish Government pilot. The £650k Capital Programme funding allocated for Active Travel Transformation for 2022-23 has been committed to deliver a range of short-term improvements across the, and an additional £860k has been awarded to the Council from the UK Shared Prosperity Fund to support delivery of active travel infrastructure.

4.3 Competitive Scottish Government Funding programmes (Places for Everyone and the Active Travel Transformation Project) remain the major source of capital funding for the Council to be able to invest in the network necessary to support a transition to a low carbon transport network, officers continue to pursue funding from these streams, as explained below.

4.4 The Scottish Government published the National Transport Strategy in 2020; in doing so it places *people* at the top of the hierarchy for travel, and private cars at the bottom (Fig. 1). December 2022 saw the publication of the Strategic Transport Projects Review 2 (STPR2), identifying a requirement for widespread local interventions to decarbonise transport over a 20-year period to drive the change we need to reach the Scottish Government's net zero goals, stating:

"The era where catering for unconstrained growth in private car use is well and truly over. The majority of the [STPR2's] 45 recommendations contribute directly towards achieving emissions reduction […] Delivering the level of investment set out in STPR2 will enhance accessibility for residents, visitors and businesses; improve connectivity with sustainable, smart and cleaner transport options; and highlight the vital contribution transport can make to Scotland's economic growth."

4.5   Transport Scotland's Active Travel Transformation Project (ATTP) is a wide-ranging review of how delivery partners can most effectively utilise the committed major increase in national active travel budget and includes determining how funds should be distributed locally. Reporting of this work is expected in early 2023; with a pilot funding process (ATTP Fund) announced in late December 2022.
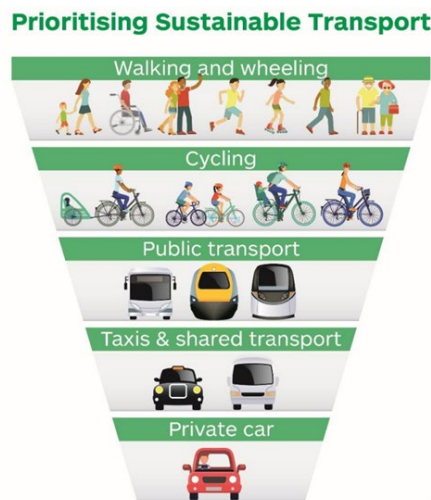

Figure 1: Sustainable Travel Hierarchy

4.6   Over three years ago THC declared a Climate and Ecological Emergency; identifying action to respond remains a priority. Transport contributes 37% of Scotland's greenhouse gas emissions[1] and prioritising ways to reduce this will deliver a strong response to the Emergency. The Active Travel team are working closely with colleagues in the Climate team and in Highland Adapts to ensure the multiple benefits of decarbonising the transport network can be realised.

4.7   Physical activity supports good physical and mental health. The Covid-19 pandemic transformed how people lived their lives. One of the few positive aspects was people's increased appreciation of local natural and built environments, and walking, wheeling[2] and cycling for daily exercise. These positive lifestyle changes are welcome but in Scotland around half of men and three-fifths of women do not meet recommended levels of physical activity, with lower levels in older people and those in deprived areas[3]. The population of the Highlands is also ageing, and those residents will need to have access to non-car options for continuing transport independence. Being more active for everyday journeys is a key factor in increasing physical activity, and this work aims to deliver these benefits.

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[1] National Transport Strategy, Scottish Government (2020)
[2] "Wheeling" refers to people using a wheelchair or mobility scooter.
[3] Adults - ScotPHO

4.8   Along with the climate emergency and wellbeing factors, active and sustainable travel modes are generally less expensive than private vehicle use and can therefore support households and organisations to access goods and services they need through increasingly challenging financial times, improving transport independence and reducing transport poverty. This is particularly crucial for residents of rural areas.

4.9   The Local Transport Strategy provides the foundation for decisions about how we manage, maintain and improve the entire transport network. It was last published in 2010 and is now under review, a report on the progress of this review will be brought to a future meeting of this committee in the coming months.

4.10   As explained in 2.1 above, THC has been successful in securing funding for active travel, which has enabled the delivery of infrastructure projects as well as network master planning, supported by HiTrans. Detailed Active Travel Masterplans are now in place for a range of settlements across Highland. These masterplans therefore support the development of a Highland-wide active travel network delivery plan.

5   Multi-year planning of infrastructure delivery

5.1   It is essential that THC has a clear, consistent and evidence-led methodology to prioritise the delivery of its active travel network, both within and between communities, particularly given the emerging context of significantly increased national funding.

5.2   Drawing on in-house skills and expertise of Officers, the team appointed Transport consultants ARUP to develop two Multi-Criteria Assessment methods to prioritise infrastructure delivery for:-

        1.   all of the Highland settlements with Active Travel Masterplans, and
        2.   the between-settlement network in the Inner Moray Firth area. The rationale for this focus is that it is the most populated sub-region of Highland with the greatest settlement inter-dependence, and therefore potential for transition from car to active travel for everyday journeys.

5.3   The methods involved applying weighted scores to a range of factors to identify what routes will deliver the greatest impact, based on: potential volume of users; anticipated level of modal shift; deprivation; health benefits; enhancement of the existing network; benefits and costs; and deliverability. Full details of the methodologies are explained in **Appendices 1 and 2**, including the list of prioritised routes, which form the basis of the second recommendation in this paper.

5.4   Whilst the outcome of these two processes proposes the future direction for the team to prioritise delivery of active travel, including short-term improvements and comprehensive new infrastructure, they do not exist in isolation, but rather sit alongside other work, as explained in Table 1 below:-

Workstream	Summary	Timescale
Live and committed projects	A suite of projects is underway and well advanced in the pipeline. Officer resource and external funding is committed, and these projects will progress to conclusion. Examples include Wick High Street; Academy Street, Inverness; Dalfaber Drive junction, Aviemore. Further applications were submitted to Places for Everyone in Dec 2022 for interventions in Culbokie and Kingussie. Work is underway to update feasibility studies for the A82 (Ft. Augustus to Inverness) and Beauly to Inverness potential Active Travel routes. Major funding was awarded to the Cairngorm National Park Authority (CNPA) through the Heritage Horizons fund. A key focus of this funding is transport decarbonisation and CNPA has appointed dedicated officer resources to progress this work. As Roads Authority, THC will remain a key stakeholder in the process and officers from both roads operations and active travel will continue to liaise with CNPA as this project progresses.	Ongoing
Community-led projects	Community aspiration for projects can emerge at any time and can often generate funding support externally. A range of such projects exist, and more are likely to emerge. The work programme of the Active Travel Team will therefore be flexible, within the resources available, to provide appropriate Officer support. An example is Munlochy – Avoch, where a community-led application was submitted to Scottish Government's Places for Everyone fund in Dec 2022 for a project officer external to the Council to progress the project.	Ongoing
Masterplan prioritisation	10 masterplans identify active travel networks for the settlements of Alness & Invergordon; Aviemore; Dingwall; Fort William; Inverness; Nairn; Portree; Tain; Thurso and Wick. Short-term improvements are identified, followed by three phases of prioritised interventions across settlements, based on impact. Funding is sought for short-term improvements and construction of Academy Street.	Application submitted to ATTP Fund Jan 2023 for Short-term projects. Bids for other funding to follow.
Inner Moray Firth Network prioritisation	Between-settlement improvements throughout the Inner Moray Firth Area identified across multiple phases. Major funding sought to secure multi-year funding to deliver the first phase.	Application submitted to Places for Everyone fund Jan 2023 for concept design funding.

Table 1: Active Travel Team Workstreams

6   Next Steps

6.1   Table 1 explains the major funding applications under consideration by Scottish Government. A bulletin paper will be presented to a future meeting of this Committee detailing the outcome of these applications. If they are successful, officers will progress with developing concept designs and delivering short-term infrastructure projects. Reports on individual projects will be presented to relevant Area Committees as they progress.

ARUP

The Highland Council / HITRANS

Highland-wide Active Travel Masterplan Prioritisation

Summary Report

Reference: REP / 001

Draft 1 | 20 December 2022

Job number 285204-30

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Introduction

Arup has been commissioned by The Highland Council (THC) and HITRANS to develop a Highland-wide Active Travel Network Delivery Plan, based on the actions within the Active Travel Masterplans for the main settlements in the THC area.

1.1 Project Background

Settlement Active Travel Masterplans (ATMs) have previously been delivered by Arup and other consultants between 2019 – 2022. These include:

- Portree (2022)

- Alness and Invergordon (2021)

- Dingwall (2021)

- Inverness (2021)

- Nairn (2021)

- Tain (2021)

- Thurso (2020)

- Wick (2020)

- Fort William (delivered by AECOM, 2019)

The ATMs identified a series of interventions to support the essential transition to low carbon transport. The proposed interventions were a starting point to enable THC to identify funding to develop detailed feasibility and design of potential options, to undertake public and stakeholder consultation, and implement these interventions.

The purpose of this commission is to develop a robust and evidence-led Multi-Criteria Assessment (MCA) to prioritise the list of recommended interventions in the ATMs and active travel routes identified in the Inner Moray Firth Local Development Proposed Plan 2022 (IMF LDP). The prioritised list identifies the tiered order in which the interventions should look to be implemented and has been packaged into delivery phases that THC and HITRANS can use to assign future funding.

1.2 Report Structure

This report summarises the methodology of the Multi-Criteria Assessment and the recommended prioritised delivery of interventions.

1. Introduction

2. Multi-Criteria Assessment Methodology

3. Prioritisation

4. Summary

2.   Multi-Criteria Assessment Methodology

The following chapter outlines the evidence-led methodology undertaken to analyse and prioritise the long list of 135 interventions from the ATMs and IMF LDP.

It was agreed with THC / HITRANS that a data led MCA was the most appropriate method to compare the long list of interventions which vary in location, type and scale. A MCA allowed for a consistent and transparent approach to comparing and prioritising the interventions, which involved both quantitative and qualitative evidence. The stages of the development of the MCA, prioritisation and packaging can be seen in Figure 1.

Data Collection / Compilation	→	MCA Questions & Criteria	→	Evidence-led Scoring	→	Weighting	→	Prioroitisation & Packaging

Figure 1: Project Stages

2.1   Data Collection / Compilation

Prior to the analysis and comparison of each intervention, data was collected and compiled to understand the current transport, demographic and economic context of each ATM settlement. Data was sourced from a variety of publicly available open sources, existing ATMs and from the THC.

Interventions from the ATMs and IMF LDP were mapped in ArcGIS Pro along with any spatial data collected. Table 1 outlines the data that has informed the MCA.

Table 1: Data sources

Type of Data	Source
Intervention type	ATMs by Arup and AECOM
Extent	ATMs by Arup and AECOM
Cost	ATMs by Arup and AECOM
SIMD (Scottish Index of Multiple Deprivation)	Open source (SIMD)
Car/van Ownership	Open source (Census 2011)
Transport Expenditure	Open source (STPR2)
Population	Open source (Census 2011)
Public Transport	Open source (NaPTAN)
Safety/Accidents	Open source (DfT Road Safety Data)
Future Developments	The Highland Council
Key Amenities	Open source (OS Open Map)
National Cycle Network	Open source (Sustrans)
Core Paths	Open source (Spatial Hub)
Employment	Open source (Google Maps/Streetview and Highland Council Open Map Data)

There are a small number of other data sources that were considered in the early stages of the project that were not used. These are detailed below along with the rationale for not using.

- STRAVA data was discounted as a data source as it cannot be used to determine users for non-route based interventions.

- DfT traffic data was discounted as it is only available on main arterial routes and therefore could not be used for all interventions.

- VivaCity data was discounted as a data source as it is only available within Inverness City Centre.

- Quantitative landownership and road adoption data was discounted as it was not available in a consistent format. Qualitative data was used instead.

- Perceived risk/safety was discounted as a data source as it was not available in a consistent format.

2.1.1   ArcGIS Pro

An ArcGIS Pro database was set up for the project. Any spatial data utilised was collated into this database, to allow visual mapping of data alongside the interventions from the ATMs for scoring purposes.

Data such as SIMD; public transport; existing infrastructure; future developments; employment; accident data (including its severity) & key land use amenities was mapped. In some cases, buffers have been used to easily visualise distances between the interventions and key land uses. For example, how far an intervention is from a public transport hub (train

station, bus station, taxi rank). In this example, buffers of 100m and 400m were applied to each public transport hub.

Figure 2 below is an example of how buffers were used to determine the proximity of interventions to public transport hubs, it shows a 400m buffer from Inverness Bus Station.
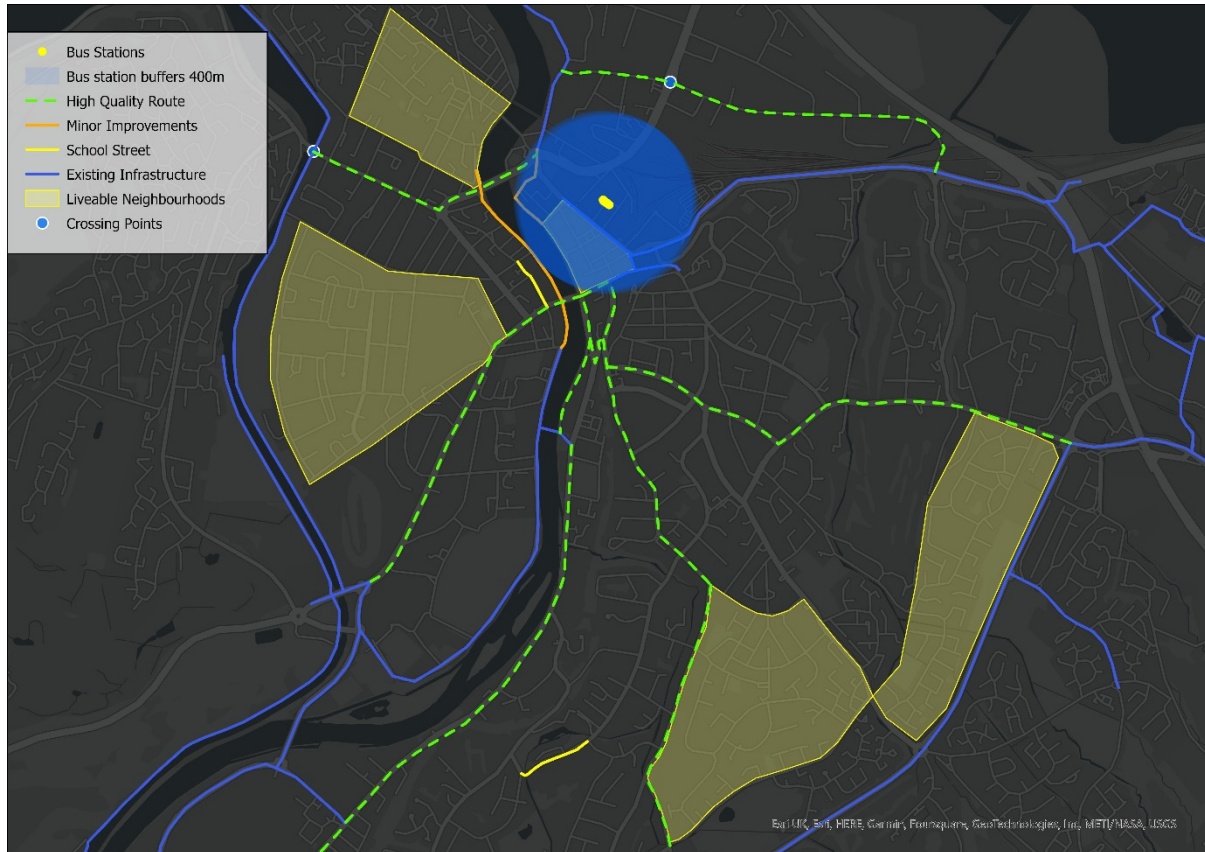
Figure 2: Inverness ATM with bus station buffer of 400m

Other open-source data such as SIMD was downloaded and imported in the Arc GIS database. This allowed the level of deprivation surrounding an intervention to be mapped and assigned a criterion by determining the lowest ranked (1 being the lowest and 10 being the highest) area an intervention passed through or was located in. Figure 3 shows an example of the masterplan interventions been mapped against SIMD area ratings to determine whether the route will have an impact on those areas that are more deprived.
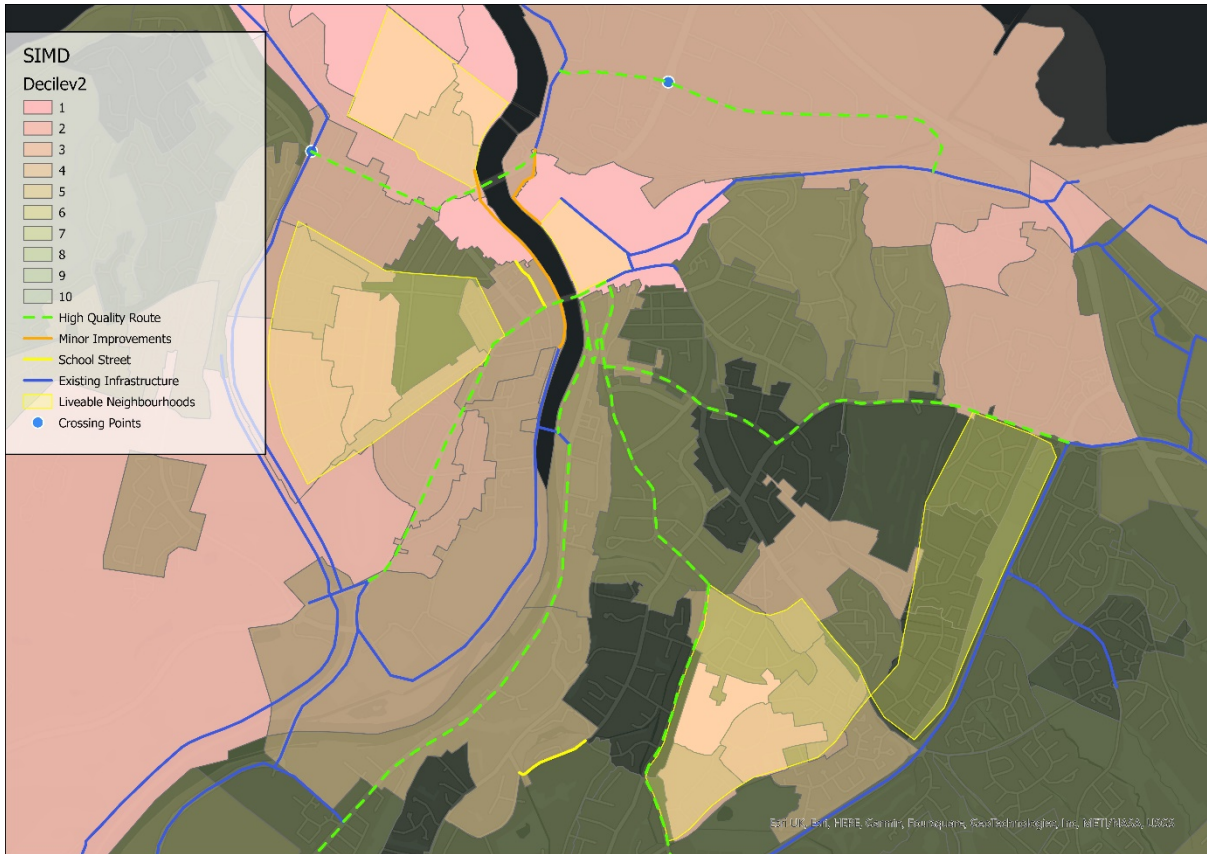
Figure 3: Inverness Masterplan with SIMD layers

2.2   Cost

The cost of interventions in the ATMs were developed using the following resources:

- Typical Costs of Cycling Intervention report by DfT, 2017

- SPONS

- Transport for Greater Manchester's 'Greater Manchester Cycling Design Guidance & Standards'

- Arup's Quantity Surveying Team and project experience

Given that the costs for the masterplans were developed over the last 4 years, it was agreed with THC / HITRANS that a factor would be applied to account for inflation and the increase in cost for materials and construction work. Arup undertook an exercise to investigate what this factor should be. Discussions were held internally with Arup's Quantity Surveying team and the Office for National Statistics Construction Output Indices (OPIs) was considered. Both indicated that an uplift between 10% and 20% would be most appropriate.
It was agreed with the client team in a workshop that an increase of 20% was to be added to original intervention costs in the ATMs. The cost numbers have only been used for scoring if an intervention is a low, medium or high cost, and are not intended at this stage as detailed cost estimates for the future implementation of interventions.

2.3 Questions & Criteria

Upon review of the various data sources collated and discussions with the THC and HITRANS, nine high-level themes were identified to inform the development for the MCA. These are shown below in Figure 4.
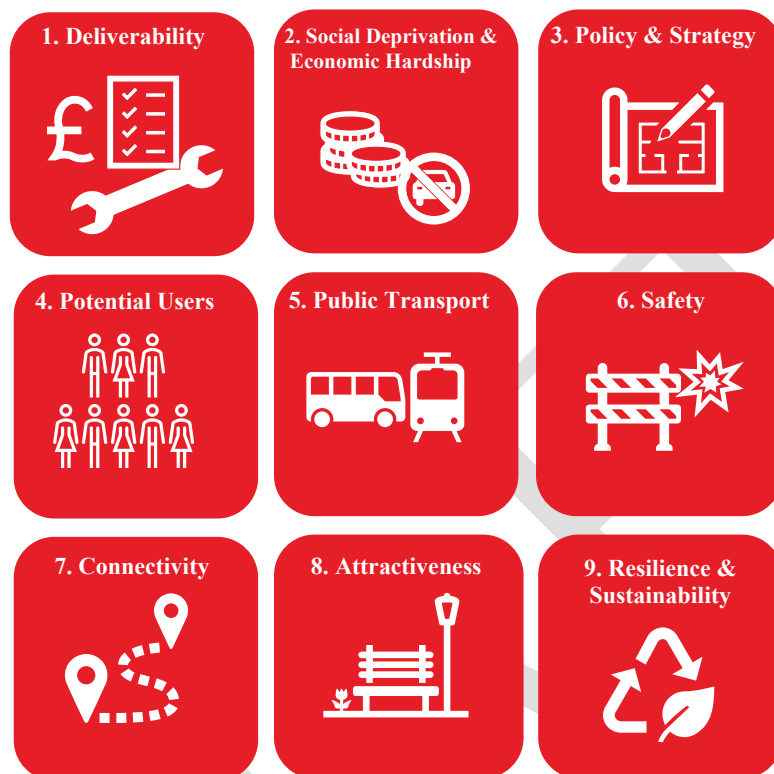
Figure 4: MCA themes

For each of the nine themes, questions and criteria were drafted to assess the impact of interventions on each theme.

Refining the questions and their associated criteria was an iterative process dependant on usability and relevance of the data and input from THC and HITRANS.

The scoring rationale of each question is as detailed as possible to remove any subjectivity from the scoring. Where questions have been subjectively scored / without the use of data, detailed rationale has been provided in the MCA workbook.

Table 2 below shows the MCA questions, criteria and scoring rationale that all 135 interventions were individually scored against.

2.4 Scoring Method / Weighting

All nine questions and associated criteria have been analysed according to a High/Medium/Low (5/3/1) scoring process. In conversation with THC and HITRANS, it was agreed to apply weightings to the nine questions in order to influence priority.

Figure 5 below shows the weightings that were agreed and applied to each question. Q1 Deliverability, Q2 Social Deprivation & Economic Hardship and Q7 Connectivity were given the highest weighting.

The weighted score for each intervention can be found in the Results Table in the appended MCA workbook.

Figure 5: Weightings
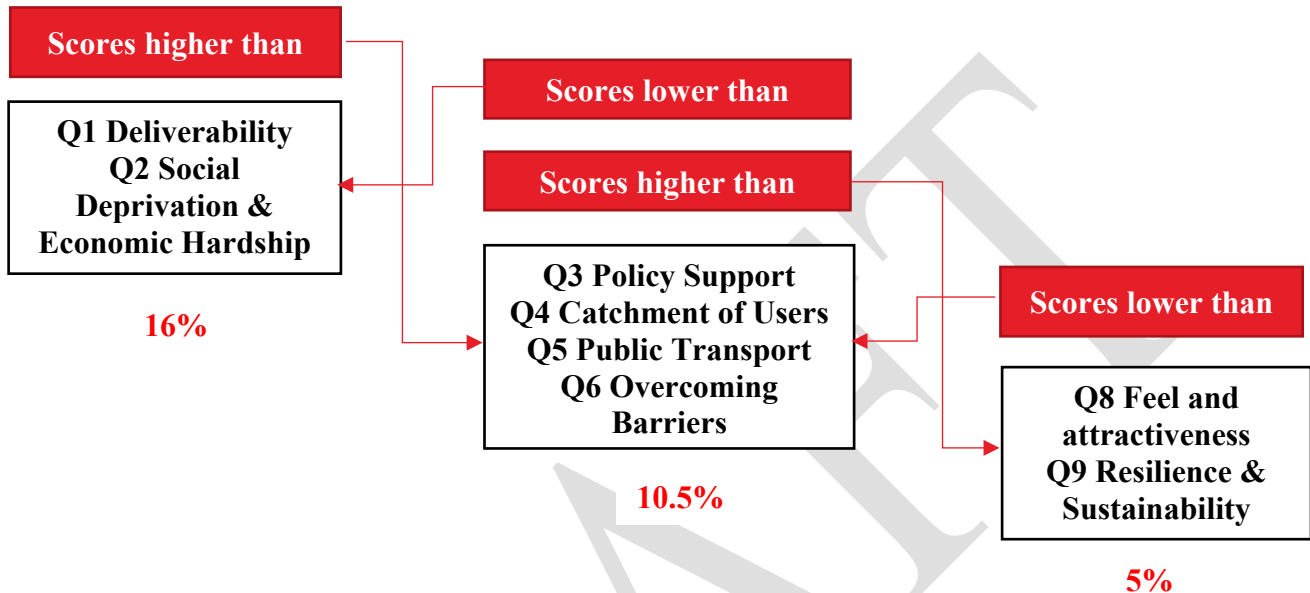
2.5 Collaboration

As mentioned previously in this chapter, the development of the MCA was an iterative process which involved a collaborative process with the client team to refine and finalise the final methodology. In addition to an online inception meeting, a number of calls hosted on Teams were set up with the client team on a regular basis to discuss project progress and emerging findings.

In addition to the virtual calls, an in-person workshop was held with the client team on Thursday 3rd November in Inverness at THC headquarters. The purpose of this workshop was to discuss project work to date and facilitate a discussion around the development of the MCA questions, the scoring method, weighting and packaging of options, which resulted in an agreed methodology.

Table 2: Multi-criteria Assessment Scoring Criteria

Theme	Question	Criteria	Low score =1	Medium score =3	High score =5
1. Deliverability	Q1 How deliverable is the intervention?	1.a Land-ownership	Over 50% of the intervention is outwith The Highland Council road adoption or land ownership area, and / or requires multiple other landowner agreements	Over 50% of the intervention is within The Highland Council road adoption or land ownership area, and / or requires at least 1 other landowner agreement	The intervention is 100% within The Highland Council road adoption or land ownership area
		1.b Permissions	The intervention requires planning / technical approvals through external bodies, that will require considerable work and time to resolve	The intervention requires planning / technical approvals through The Highland Council, or one other body but likely to be resolved quickly with minimal work.	The intervention does not, or is unlikely to, require planning / technical approvals.
		1.c Cost	The intervention is high cost (>£500,000)	The intervention is medium cost (£50,000 - £500,000)	The intervention is low cost (<£50,000)
		1.d Funding	The intervention requires multiple sources of funding, or there are no identified funding sources	The intervention requires securing funding from an external source	The intervention requires no external funding/only The Highland Council, HITRANS, or existing community funding source
		1.e Maintenance	The intervention will require a high level of new and ongoing maintenance, in addition to existing regimes (resurfacing, road markings, operational requirements etc.)	The intervention will require a medium level of ongoing maintenance (cutting / clearing vegetation etc.) that can be added to existing regimes easily.	The intervention will require a low level of maintenance, and no additional requirements on top of existing regimes.
		1.f Level of support	The intervention has a low or unknown level of support from the community / stakeholders as no engagement has been carried out	The intervention has a medium level of support from the community / stakeholders.	The intervention has high level of support from the community / stakeholders.
2. Social Deprivation & Economic Hardship	Q2 How well does the intervention help address social deprivation and economic hardship?	2.a SIMD	The SIMD rating reflects low deprivation (8-10), or relative affluence, in the areas the intervention is in/ passes through	The SIMD rating reflects some areas of high-medium deprivation (4-7) in the areas the intervention is in/ passes through	The SIMD reflects high deprivation (1-3) in many areas the intervention is in/ passes through
		2.b Car or van ownership	The intervention is in an area with higher car/van ownership (10%-12% without vehicle) therefore the impact of active travel improvements will be lower in terms of economic hardship	The intervention is in an area with medium car/van ownership (13%-14% without vehicle) therefore the impact of active travel improvements will be medium in terms of economic hardship	The intervention is in an area which has low car/van ownership (15%-16% without vehicle) therefore the impact of active travel improvements will be higher in terms of economic hardship
		2.c Transport expenditure	The intervention is in an area with low transport expenditure (9%-12%), therefore, the impact of active travel improvements will be lower in terms of economic hardship	The intervention is in an area with medium transport expenditure (13%-16%), therefore, the impact of active travel improvements will be medium in terms of economic hardship	The intervention is in an area with high transport expenditure (17%-20%), therefore, the impact of active travel improvements will be higher in terms of economic hardship
3. Policy & Strategy	Q3 How many policy themes does the intervention support?		The intervention offers supports 1-2 of the policy themes	The intervention supports 3-4 of the policy themes	The intervention supports all 5 of the policy themes
4. Potential Users	Q4 Potential catchment of users?		The potential catchment of users is <5,000 people	The potential catchment of users is between 5,000-10,000	The potential catchment of users is >10,000

Theme	Question	Criteria	Low score =1	Medium score =3	High score =5
5. Public Transport	**Q5** Does the intervention help in connecting people to public transport?		The intervention is >400m of a public transport hub	The intervention is between 100-400m of a public transport hub	The intervention is <100m of a public transport hub
6. Safety	**Q6 What added benefits will be provided – perception of overcoming barriers?**	**6.a Does the intervention help overcome barriers to active travel?**	The intervention will provide minor benefits to overcoming barriers to active travel in the local area (lack of cycle parking, lack of signage)	The intervention will provide moderate benefits to overcoming barriers to active travel in the local area (lack of road crossing facility, narrow footway)	The intervention will provide major benefits to overcoming barriers to active travel in the local area (river, major road with no footway or cycleway, complex junction reconfiguration)
		6.b Will the intervention minimise the risk for accidents?	The intervention is not located in/or near an accident cluster (no accidents)	The intervention is located within 200m of an accident cluster (1-3 number of slight or serious accidents)	The intervention is located in or at an accident cluster (3+ number of slight or serious, or any fatal accidents)
7. Connectivity	**Q7 How well does the intervention link with key amenities, future developments and existing infrastructure?**	**7.a Future development**	The intervention will not benefit future development site(s) or is not within a close enough distance(400m) to provide any direct benefit	The intervention may be of benefit to future development sites(s) as it is within 400m	The intervention will largely benefit future development site(s) as it is adjacent to or within a development site.
		7.b Key amenities	The intervention is located 100+m away from key amenities and will provide minor or no direct improvement to connectivity	The intervention is located 50m-100m away from key amenities and will provide moderate improvements to connectivity	The intervention is located within 50m from key amenities and will provide major improvements to connectivity
		7.c Existing infrastructure	The intervention is located 800+m away from existing infrastructure	The intervention is located 600+m away from existing infrastructure	The intervention is within 400m from existing infrastructure
		7.d Other committed transport projects	The intervention would have little to no impact on other committed transport projects within the local area	The intervention will indirectly link with other committed transport projects within the local area	The intervention will directly complement and link with other committed transport projects within the local area
		7.e Employment	The intervention is located over 400m from employment areas and will not provide benefits to employees	The intervention is located within 400m to employment areas and will provide benefit to some employees	The intervention is located next to employment area sand will provide benefit to all employees
8. Attractiveness	**Q8 Does the intervention enhance the feel and attractiveness of active travel and the surrounding area by creating a welcoming place of interest?**		The intervention will have a minimal impact if any, on the feel and attractiveness of the local area	The intervention could positively impact and enhance the feel and attractiveness of a small part of the local area	The intervention could significantly enhance the feel and attractiveness of the local area and / or have a transformational effect on the wider area
9. Resilience & Sustainability	**Q9 How resilient and sustainable is the intervention, how can it adapt over time to ensure it maintains attractiveness for users?**		The intervention is not flexible and is unlikely to easily evolve or adapt over time with changing travel pattern demands	The intervention is somewhat flexible and able to evolve and adapt in part over time with changing travel pattern demands	The intervention is very flexible and is able to easily evolve and adapt over time with changing travel pattern demands

3.   Prioritisation

All interventions have been assigned a score of 1, 3 or 5 for each of the 9 questions (and sub-questions) in the MCA Scoring Table. These scores were totalled and weighted to create a list of prioritised interventions.

The interventions total weighted scores range between 49 to 97. The interventions scoring 90 and above (of which there are 10) have been selected as top tier interventions and are presented in the Table 3 below, with their associated scores (in descending order).

Other medium-high scoring actions which scored between 85-90 (of which there are 22) have been considered as second tier interventions. Any that fall within close proximity or are complementary to the top scoring interventions have been considered for packaging together. The second-tier interventions are also presented in Table 3 below.

Table 3: Masterplan Intervention Prioritisation and potential packaging

Masterplan	Intervention ID	Route/Section/Location	Description/Type	Short term action?	Weighted Score	Packaged with (Intervention ID*)	Rationale
			Top Tier (10)				
Inverness	I15	Queens Gate, Union Street and Post Office Avenue	Pedestrianise and filter streets to provide a safe and traffic free or reduced traffic routes within the city centre	No	97.505		
Thurso	TH2	Ormlie Road	Mixed Strategic infrastructure – mixed strategic cycleway/footway	No	95.515	TH1 TH3 TH4 TH5	Intervention TH2 could be packaged with TH1 and TH4 which also score in the top tier. Additionally, TH3 (Thurso train station junction improvements) and TH5 (Ormlie Road/Janestown Business Park mixed strategic cycleway/footway) could be packaged with intervention TH2 and TH1 to create a longer strategic active travel corridor along the B874. This would connect schools, the train station, retail, residential areas, North Highland College, the hospital, and residential areas to the west such as Janetstown.
Inverness	I16	School streets on Drummond Rd and King St	Filtered streets during school drop-off and pick-up to create safer environment for children to walk and cycle to school, potential to include further schools following trial at Duncan Forbes School	Yes	93.305		
Dingwall	D9	High Street, between Tulloch Street and Newton Road	Pedestrianise the High Street to provide a safe and traffic free route for pedestrians and cyclists as well as more outside space for businesses to operate	No	93.085	D5	Intervention D9 could be packaged with D5 (improvements to public realm on high street).
Nairn	N5	The Brae, between the High Street and the A96	Pedestrianise The Brae to provide a safe and traffic free route for active travel users on a narrow section of road.	No	92.975	N7	Intervention N5 could be packaged with N7 (one-way on Mill Road) to connect with N1. This would provide a connection link for pedestrians and cyclists between the two proposed segregated active travel routes.
Thurso	TH4	Ormlie Road High School/College	Crossing	Yes	91.315	TH2	Intervention TH4 could be packaged with TH2 to allow pedestrians and cyclists to cross safely and with priority
Thurso	TH1	Princes Street	Mixed Strategic infrastructure – segregated cycleway and placemaking	No	90.985	TH2 TH3	Intervention TH1 could be packaged with TH2 to create a long strategic active travel corridor through the centre of Thurso. TH3 (Thurso train station junction improvements) could also be packaged along with TH1 and TH2. This would connect schools, the train station, retail, residential areas, North Highland College, the hospital, and residential areas to the west such as Janetstown.
Inverness	I5	Old Edinburgh Road, Annfield Road, Damfield Road and Culcabock Road	Introduction of a cycle street on one-way part of Old Edinburgh Road	No	90.765	I2 I4	Intervention I5 could link up with I2 and I4 to create a high-quality active travel route that connects the city centre with the east.
Nairn	N7	Mill Road, between the High Street and B9090, and George Street to provide link to the train station	One-way vehicle movements on Mill Road	No	90.655	N5	Intervention N7 could be packaged with N5 (pedestrianisation of The Brae) to connect with N1. This would provide a connectivity link for pedestrians and cyclists between the two proposed segregated active travel routes
Thurso	TH5	Ormlie Road (Janetstown)	Mixed Strategic infrastructure – segregated cycleway and placemaking	No	90.655		

Masterplan	Intervention ID	Route/Section/Location	Description/Type	Short term action?	Weighted Score	Packaged with (Intervention ID*)	Rationale
			Second Tier (22)				
Inverness	I3	Ness Bank, between Castle Road and the Infirmary Bridge	Introduction of a cycle street on Ness Bank, where cars must give-way to cyclists with opportunity for bidirectional cycleway with the removal of parking on one side	Yes	88.775	I2	Intervention I3 could be packaged with I2 (reinstate active travel infrastructure on Castle Road and Castle Street).
Inverness	I14	Douglas Row, Glebe Street and Chapel St	One-way on Douglas Row to allow for safer cycle street and high quality active travel route on Glebe Street and Chapel Street including safe crossing points at desire lines, acting as gateway to city	No	88.775		
Dingwall	D5	High Street, between Newton Road and Tulloch Street	Improvements to the public realm including seating, secure cycle parking, parklets and other active travel amenities	Yes	88.665	D9	Intervention D5 could be packaged with D9 (pedestrianisation of the High Street).
Inverness	I2	Castle Road and Castle Street, creating a loop around Inverness Castle	One-way on Castle Road and Castle Street to allow for segregated active travel infrastructure looping the castle including safe crossing points at desire lines	No	88.555		
Nairn	N13	School streets on Lodgehill Road and Millbank Crescent	Filtered streets during school drop-off and pick-up to create safer environment for children to walk and cycle to school. Potential to include further schools following trial at Duncan Forbes Primary School in Inverness.	Yes	88.555		
Inverness	I7	Hilton and Drakies neighbourhoods	Liveable neighbourhoods including filtered streets and placemaking to more pleasant environment for pedestrians and cyclists	No	88.335	I1 I2 I4 I5	Interventions I7 (liveable neighbourhoods) could be packaged alongside interventions I1, I2, I4 and I5 to create high quality active travel routes from the majority of the proposed liveable neighbourhoods.
Nairn	N1	A96 through Nairn, from Balmakeith Industrial Estate to Delnies Wood Caravan Park	Segregated active travel infrastructure where possible, including safe crossing points at desire lines.	No	88.335		
Inverness	I17	Huntly Street, Ness Walk and Ardross Terrace	Minor improvements including signage, wayfinding, removal of street clutter and reallocation of parking	Yes	87.115		
Fort William	F1	Fort William wide route signing strategy	There is currently a reasonable provision of routes but signage is sporadic and not comprehensive. This measure would have a big impact for both new and regular users.	Yes	86.895		
Thurso	TH9	Mount Pleasant Primary School	Crossing	Yes	86.785		
Thurso	TH18	Link to Ellan Bridge	Quiet Street	Yes	86.565		

Inverness	I13	Longman Road, at Harbour Road	Toucan or parallel crossing for pedestrians and cyclists to safely cross Longman Road	Yes	86.455		
Tain	T3	Area within Academy Street, Tower Street, Geanies Street, Stafford Street, Cadboll Place, Queens Street, Manse Street and Hill Street	Improvements to the public realm including seating, secure cycle parking, parklets and other active travel amenities	Yes	86.455		
Wick	W2	Staxigoe to George Street	Low Traffic Neighbourhood	No	86.345		
Dingwall	D3	Craig Road, Newton Road and Greenhill Street, between cottages to the north east and Dingwall Mart	Segregated active travel infrastructure where possible, including safe crossing points at desire lines	No	86.345		
Inverness	I4	Culduthel Road, between Castle Street and the A8082	Segregated active travel infrastructure where possible, including safe crossing points at desire lines	No	86.345	I2 I5	Intervention I4 could be packaged with I2 and I5 to create active travel route links to the city centre from the south east and east of the city.
Thurso	TH11	Castlegreen Rd	Low Traffic Neighbourhood	No	86.345		
Thurso	TH3	Ormlie Road Train Station	Junction remodelling	No	86.235		
Inverness	I1	A82, between Ness Bridge and Tommahurich Roundabout (including Ness Bridge)	Segregated active travel infrastructure where possible, including safe crossing points at desire lines and improvements to pedestrian and cycle provision on Ness Bridge.	No	86.235	I2	Intervention I1 connects with I2.
Alness & Invergordon	AI1	B817, between Invergordon and Alness from Woodsdie Gardens to Teaninich Avenue	Segregated active travel infrastructure where possible, including safe crossing points at desire lines	No	86.125		
Thurso	TH10	Castlegreen Rd	Mixed Strategic infrastructure	No	86.125	TH11	Intervention TH10 could be packaged with TH11 (low traffic neighbourhood).
Fort William	F9	Fort William towards Annat (Outer Orbital Route)	This route has a number of trip attractors along its length, both for leisure and utility purposes and is likely to be one of the primary and most popular routes in the town.	No	85.905		

*Intervention IDs can be found in the MCA Workbook.

3.1   Short term actions

There are a number of interventions that have been identified as short-term actions, for example cycle parking, crossings, school street, street art, signage etc. Table 3 above also indicates which of the interventions in the top and second tier are regarded as short-term actions.

Of the long list of other interventions that are not within the top two tiers (of which there are 103), it is recognised that despite having a lower weighted score, some of these interventions that are badged as a short-term action could be considered for packaging with the interventions in the top two tiers if they are complementary. These are listed in Table 4 below:

Table 4: Short-term actions

Masterplan	Intervention ID	Route/Section/Location	Description/Type	Weighted Score	Packaged with (Intervention ID)	Rationale
Dingwall	D12	Identified sites at the industrial estate to the west and retail park on Tulloch Street	High quality, sheltered cycle parking	84.575	D3 D5 D9	Intervention D12 could be packaged when delivering D3, D5 or D9 to encourage cycling on the active travel route (D3) and active and sustainable travel into the town centre.
Alness & Invergordon	AL7	Alness railway station	Improvements to the public realm at the station, including seating, cycle repair stand, lockers, sheltered cycle parking, information board and neighbourhood mobility hub	67.675	AL1	Elements of intervention AL7 (public realm improvements) could be packaged with AL1 to encourage active travel to/from the railway station with longer term aspirations to create a neighbourhood mobility hub.
Alness & Invergordon	AL8	Invergordon railway station	Improvements to the public realm at the station, including seating, cycle repair stand, lockers, sheltered cycle parking, information board and neighbourhood mobility hub	69.995	AL1	Elements of intervention AL8 (public realm improvements) could be packaged with AL1 to encourage active travel to/from the railway station with longer term aspirations to create a neighbourhood mobility hub.
Alness & Invergordon	AL12	Identified sites at the Teaninich Industrial Estate and Inverbreakie Industrial Estate	High quality cycle parking that is sheltered	77.615	AL1	Intervention AL12 could be packed with AL1 to encourage cycling on the active travel route for public, visitors and commuters.
Fort William	F2	Fort William-wide	Introduction of cycle parking at locations throughout Fort William	82.035	F9	Intervention F2 could be packaged with F9 to encourage cycling on the active travel route which links to the town centre and a number of trip attractors.
Nairn	N14	Identified sites at the Falconers Lane Car Park and Balmakeith Industrial Park	High quality, sheltered cycle parking.	82.145	N1 N5	Intervention N14 could be packaged with N1 to encourage cycling on the active travel route which links east to west of the town via the town centre and/or N5 to encourage active travel into the town centre.
Tain	T11	Identified sites at the Blarliath Industrial Estate and Tain railway station	High quality cycle parking that is sheltered	72.865	T3	Intervention T11 could be packaged with T3 to increase the availability of cycle parking and encourage active travel between the town centre, the industrial estate and railway station.
Wick	W3	Noss Primary School	Safe crossing point	82.145	W2	Intervention W3 could be packaged with W2 to support the creation of a low traffic neighbourhood.

4.   Summary

The prioritisation exercise resulted in the identification of 10 top tier interventions, and 22 second tier interventions.

Several intervention themes are recurring in the top scoring interventions:

- Pedestrianisation

- Filtered streets

- Active travel routes

- Crossings

- Minor improvements

- Cycle streets / Quiet streets

It is important to note, that the prioritised list of interventions have been scored and prioritised with data relevant to Oct/Nov 2022 and so results are reflective of this point in time. As and when new and updated data becomes available, this can be input into the user-friendly ArcGIS database and MCA Workbook to provide an updated list of prioritised interventions.

HITRANS in partnership with The Highland Council | Issue Rev A | January 2023 | 285204-10

Inner Moray Firth Active Travel Network Development
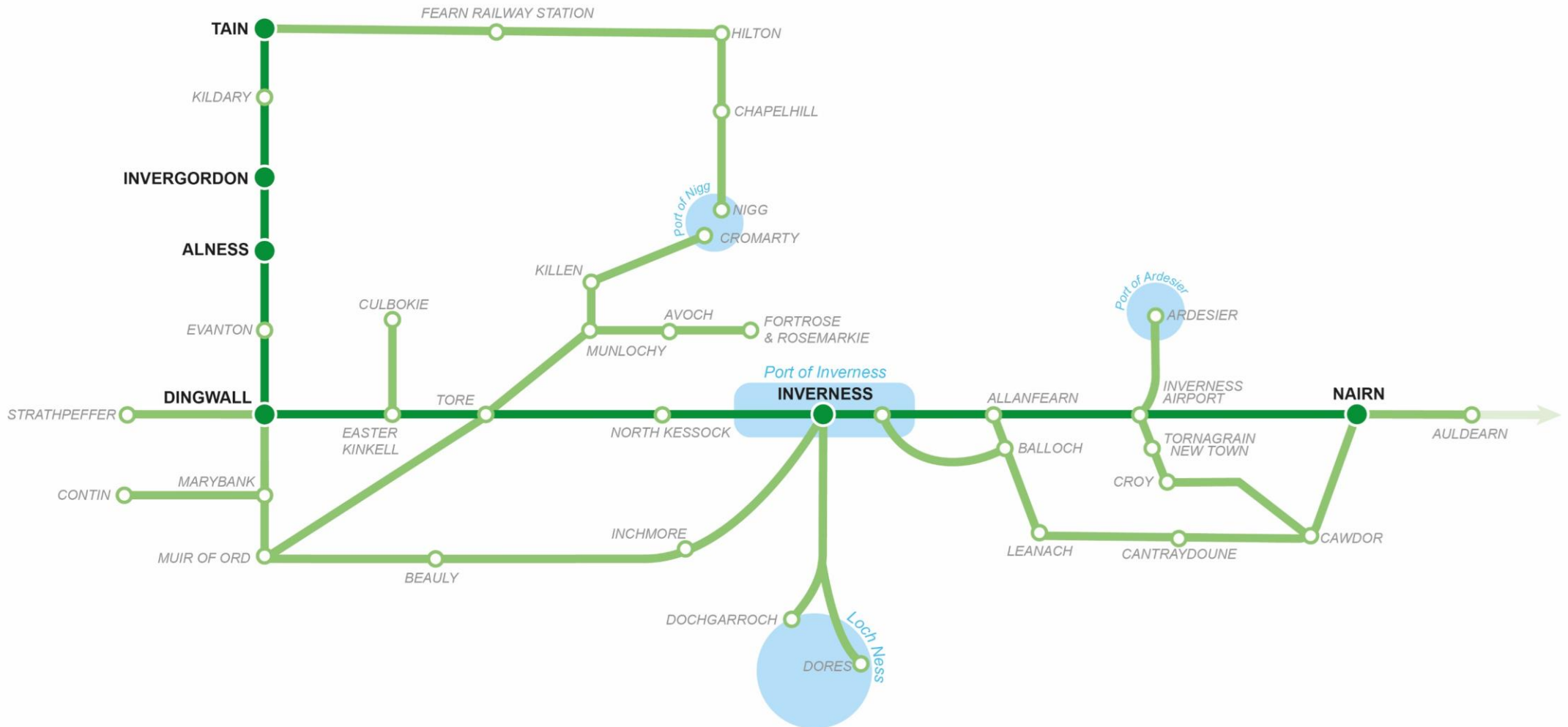
Contents

Appendices in separate document

The Inner Moray Firth (IMF) Active Travel Network is a comprehensive plan to create a region-wide walking and cycling network between settlements in the IMF area.

The ultimate goal of the project is to provide a safer, more attractive network of routes for walking, wheeling and cycling. This active travel network is designed to transform walking and cycling within the Inner Moray Firth Region by connecting the City of Inverness, towns, villages and public transport hubs via a strategic active travel network.

A high-level summary of the key benefits can be seen outlined below.
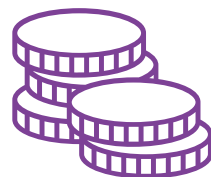
The network will see a return of over £94M in benefits for the Inner Moray Firth Region*

Over 300km of accessible, high quality active travel routes
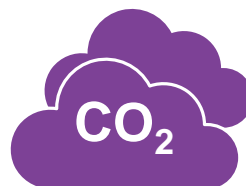
Modal shift resulting in reduction of **carbon emissions** within the region

*The benefits reported are for the delivery of all routes within the network.

Executive Summary

Executive Summary

The graphic below shows an indicative network for the Inner Moray Firth Area.
The following pages outline the proposed phased delivery programme.
This phasing is derived from an evidence-based prioritisation exercise.
The prioritisation framework and sifting methodology is explored later in the document.
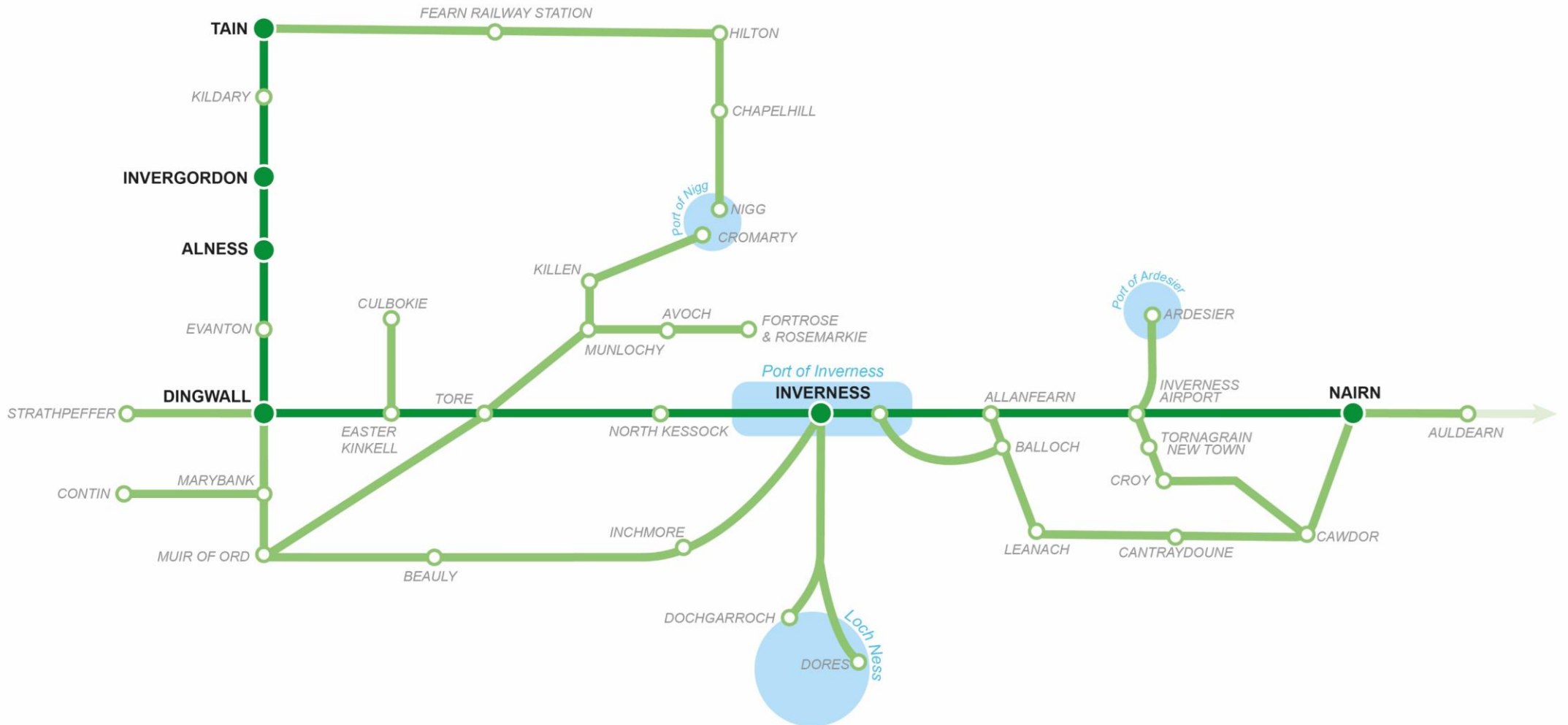
1. Executive Summary
Results

SIFT 1 : Short-term projects

From a long list of route options, there were a number of sifts in developing the final list of preferred routes and phasing. Sift 1 involved the removal of routes that could be delivered as 'short-term projects', meaning the route would only require minor improvements to form part of a future regional active travel route. These were typically either existing NCN routes, shared-use paths and single track road quiet routes. Below are a list of the routes that were removed at this stage and can be delivered in the short term and at a lower cost. The routes are presented in order of their MCA score based on the benefits they would deliver; it is therefore recommended that they are delivered in this order.

Route 25, Munlochy to Avoch, is currently being developed and is therefore not included within the sifts or prioritisation/phasing plans.

Route number	Route Type	Code	Origin	Destination	Length (km)	Existing Infrastructure	MCA Score
12	Primary-Secondary	Dingwall-Maryburgh	Dingwall	Maryburgh	2.9	Single Carriageway (existing shared-use)	22
8	Primary-Secondary	Alness-Evanton	Alness	Evanton	6.3	Existing NCN Off-road	20
5	Primary-Secondary	Tain-Kildary	Tain	Kildary	9	Existing NCN On-road/ Single Track Road	18
2B	Secondary-Secondary	Hill of Fearn-Hilton (POPULAR)	Hill of Fearn	Hilton	9.8	Existing NCN On-road	16
3	Secondary-Secondary	Hilton-Chapelhill	Hilton	Chapelhill	5.1	Existing NCN On-road	16
14	Secondary-Secondary	Maryburgh-Tore	Maryburgh	Tore	9.05	Existing NCN On-road/Off-road	14
19	Secondary-Secondary	Tore-North Kessock	Tore	North Kessock	7.55	Existing NCN On-road/Off-road	14
34	Primary-Secondary	Inverness Airport-Ardersier	Inverness Airport	Ardersier	6.75	Single Track Road	13
38	Secondary-Secondary	Balloch-Leanach	Balloch	Leanach	2.9	Existing NCN On-road	7
39	Secondary-Secondary	Leanach-Cantraydoune	Leanach	Cantraydoune	5.2	Existing NCN On-road	5
40	Secondary-Secondary	Cantraydoune-Cawdor	Cantraydoune	Cawdor	7.3	Existing NCN On-road	5

1. Executive Summary
Results

SIFT 2 : Excluded routes (not preferred)

Strava data identified two options for some of the routes, a 'Popular' route and a 'Direct' route. The MCA assessment identified which of these options is preferred, a list of the options removed and a summary of the MCA scores for each compared to the preferred can be seen in the table below.

Route number	Route Type	Code	Origin	Destination	Length (km)	MCA Score Non-preferred Route	MCA Score Preferred Route Comparison
1B	Primary-Secondary	Invergordon-Hill of Fearn (POPULAR)	Invergordon	Hill of Fearn	9.8	19	31
2B	Secondary-Secondary	Hill of Fearn-Hilton (POPULAR)	Hill of Fearn	Hilton	9.8	19	27
4B	Secondary-Secondary	Chapelhill-Balnabruaich (POPULAR)	Chapelhill	Balnabruaich	7.1	17	25
9B	Secondary-Primary	Evanton-Dingwall (POPULAR)	Evanton	Dingwall	10.3	25	29
15A	Secondary-Secondary	Maryburgh-Contin (DIRECT)	Maryburgh	Contin	9.3	27	30
22A	Secondary-Secondary	Tore-Killen (DIRECT)	Tore	Killen	10.4	15	17
23B	Secondary-Secondary	Tore-Munlochy (POPULAR)	Tore	Munlochy	6.6	13	19
24B	Secondary-Secondary	Killen-Cromarty (POPULAR)	Killen	Cromarty	18.4	23	25
27A	Secondary-Secondary	Beauly-Inchmore (DIRECT)	Beauly	Inchmore	8.3	21	25
29B	Primary-Secondary	Inverness-Dochgarroch (POPULAR)	Inverness	Dochgarroch	8.1	27	33
37A	Secondary-Secondary	Inverness-Balloch (DIRECT)	Inverness	Balloch	7.4	23	27
41B	Secondary-Secondary	Nairn-Auldearn (POPULAR)	Nairn	Auldearn	6.6	19	25
42B	Secondary-Secondary	Auldearn-Brodie (POPULAR)	Auldearn	Brodie	10.2	15	23
43B	Secondary-Secondary	Ardersier-Nairn (POPULAR)	Ardersier	Nairn	17	17	27

1. Executive Summary
Results

Phasing Delivery Plan

Below is a list of the final routes after sifting, this does not include the short-term projects and developing routes but these should be delivered in tandem with the routes below. The routes have been ordered and assigned a phase based on their MCA results, this provides a recommended order for delivering the routes. Full details of the optioneering, sifting and MCA assessment can be found in Appendix B.

Route	Code	Length (km)	Overall Score Sift 2&3	Phase
7	Invergordon-Alness	5	35.00	
20B	North Kessock-Inverness (POPULAR)	4.6	35.00	
28	Inchmore-Inverness	11.5	33.00	
29A	Inverness-Dochgarroch (DIRECT)	7.5	33.00	
30	Inverness-Dores	13.2	33.00	
1A	Tain-Hill of Fearn (DIRECT)	6.2	31.00	
6	Kildary-Invergordon	10	31.00	
31B	Inverness-Allanfearn (POPULAR)	8.2	31.00	1
15B	Maryburgh-Contin (POPULAR)	17.4	30.00	
9A	Evanton-Dingwall (DIRECT)	10.1	29.00	
16	Maryburgh-Muir of Ord	7.4	29.00	
32	Allanfearn-Inverness Airport	8.4	29.00	
13	Dingwall-Strathpeffer	7.2	27.00	
37B	Inverness-Balloch (POPULAR)	8.1	27.00	
2A	Hill of Fearn-Hilton (DIRECT)	7.1	27.00	
43A	Ardersier-Nairn (DIRECT)	9.5	27.00	
4A	Chapelhill-Balnabruaich (DIRECT)	5.7	25.00	
10	Maryburgh-Easter Kinkell	5.5	25.00	
17	Muir of Ord-Beauly	3.9	25.00	
27B	Beauly-Inchmore (POPULAR)	8.4	25.00	
41A	Nairn-Auldearn (DIRECT)	4.4	25.00	2
18	Muir of Ord-Tore	9	25.00	
24A	Killen-Cromarty (DIRECT)	17.2	25.00	
36	Cawdor-Nairn	8.7	25.00	
11	Easter Kinkell-Culbokie	4.8	23.00	
26	Avoch-Fortrose	3	23.00	
42A	Auldearn-Brodie (DIRECT)	6.3	23.00	
35	Croy-Cawdor	5.4	21.00	3
23A	Tore-Munlochy (DIRECT)	4.8	19.00	
22B	Tore-Killen (POPULAR)	13.8	17.00	
33	Inverness Airport-Croy	2.7	14.00	

*For Route 22B it is understood there is a short section from Tore Roundabout heading approx. 350m that is being improved by Transport Scotland as it was identified as a missing link. It should also be noted that these routes have been identified through the methodology but alternate routes linking the same destinations can be looked at during the feasibility stage.

1. Executive Summary
Indicative phasing

PHASING (DELIVERY PLAN)

INNER MORAY FIRTH REGIONAL ACTIVE NETWORK DELIVERY PLAN

Legend:
- No requirements identified at this time
- Phase 0 (Short term projects)
- Phase 1
- Phase 2
- Phase 3

TAIN — FEARN RAILWAY STATION (6 KM) — HILTON (7 KM)

KILDARY

HILTON — CHAPELHILL (6 KM)

INVERGORDON (10 KM)

CHAPELHILL — NIGG (6 KM)

ALNESS (5 KM)

NIGG

EVANTON

CROMARTY — (17 KM)

CULBOKIE

KILLEN

AVOCH — FORTROSE & ROSEMARKIE (3 KM)

MUNLOCHY

ARDESIER

DINGWALL (10 KM) — EASTER KINKELL (6 KM) — TORE (7 KM) — NORTH KESSOCK — **INVERNESS** — ALLANFEARN — INVERNESS AIRPORT — **NAIRN** — AULDEARN (4 KM)

STRATHPEFFER (7 KM)

MARYBURGH

ALLANFEARN (8 KM)

BALLOCH

TORNAGRAIN NEW TOWN

CONTIN (17 KM)

CROY (5 KM)

INCHBERRY (11.5 KM)

LEANACH (3 KM)

CANTRAYDOUNE

CAWDOR (9 KM)

BEAULY (4 KM)

INCHMORE (8 KM)

MUIR OF ORD

(9 KM)

(5 KM)

(9.5 KM)

DOCHGARROCH (7.5 KM) — DORES (13 KM)

'**No requirements identified at this time**' refers to segments already at an adequate standard, or already being progressed. Segments already being progressed should continue to be supported through to delivery to ensure the full network can be realised.

1. Executive Summary
Indicative capital costs

Rough Order of Magnitude for Phases

Below is a Rough Order of Magnitude (ROM) for each of the four phases of the Inner Moray Firth Network. This provides an indication of the potential funding required to develop the network within the phases identified although it should be noted that no design or feasibility work has been undertaken to inform these. These are based on average published typical costs of active travel infrastructure per km (with an adjustment to reflect recent price increases) and should be revisited at future stages including feasibility, concept, detailed and technical design.

Phase	ROM Approx Figures
Short-term projects	£1M - £1.5M
1	£55M - £100M
2	£30M - £55M
3	£10M - £25M

ARUP

Rationale

2. Rationale

The Inner Moray Firth (IMF) Active Travel Network is a comprehensive plan to create a region-wide walking and cycling network.

The ultimate goal of the project is to provide a safer, more attractive network of routes for walking, wheeling and cycling. This active travel network will transform walking and cycling within the Inner Moray Firth Region by connecting cities, towns, neighbourhoods, settlements and public transport hubs.

The need and commitment to deliver a strategic active travel network has been identified in national, regional and local policy.

Strategic Transport Projects Review 2 (STPR2) by Transport Scotland references **Connected Neighbourhoods, Active Freeways, Village-town active travel connections, Connecting towns by active travel, and Long-distance Active Travel Network** as actions required to help improve safety and resilience within our transport network, improve the health and wellbeing of the population, address inequalities and accessibility, tackle climate change and support sustainable economic growth. NTS2 sets out the government's commitment of a national 20% reduction of vehicle km by 2030 and puts pedestrians and cyclists at the top of the transport hierarchy.

The IMF Network aims to achieve all of the recommendations noted for active travel within STPR2 by connecting the main settlements within the region with smaller feeder settlements, creating high-quality connections between population areas and creating a longer distance network through connections to the National Cycle Network.

HITRANS Regional Transport Strategy seeks to improve community connectivity and support active communities and social inclusion which includes plans to grow opportunities for walking and cycling to constitute an increasing share of the transport system, something the IMF Network aims to help achieve.

The Highland Council's Local Development Plan for the Inner Moray Firth Region identifies a commitment to improve active travel connections within and between settlements in the region, enabling people to make healthier, low carbon travel choices. The development plan has been used in this instance to develop classifications, in identifying primary and secondary settlements.

Recommendation	01	Connected neighbourhoods
Recommendation	02	Active freeways and cycle parking hubs
Recommendation	03	Village-town active travel connections
Recommendation	04	Connecting towns by active travel
Recommendation	05	Long-distance active travel network

Climate Accessibility Health Economy Safety

STPR 2 (2022), Transport Scotland

IMF Local Development Plan (2022)

HITRANS RTS (2017)

2. Rationale

An active network for the Inner Moray Firth Region

The Inner Moray Firth region has a high percentage mode share by car (travel to work) of approximately 62%, as can be seen adjacent.

Currently the car is the most convenient mode of travel for the majority of people living within the region. This highlights a need to provide better connections to public transport and fill the gaps where public transport coverage is poor.

Despite the high car mode share, 24% of people living within the region do not have access to a car and are therefore reliant on other forms of transport.

Having safe walking and cycling routes within the region will provide a viable and affordable form of transport for people as well as providing connections to public transport for longer distance journeys.
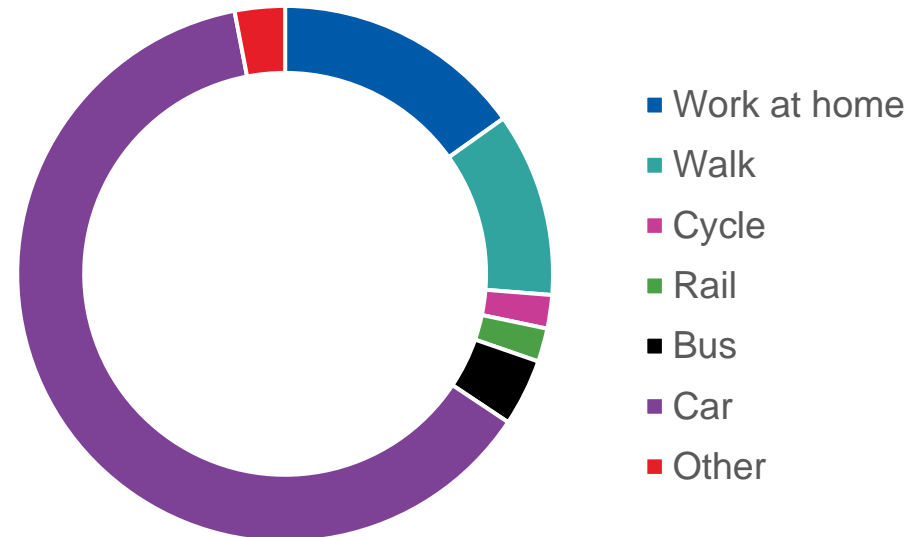
As can be seen adjacent approximately 16% of people living in the region are travelling less than 5km by car and 37% are travelling between 5km and 10km by car to a place of work. This highlights the opportunity to influence those currently travelling within these relatively short distance by car to either walk or cycle.

24% of people in the Inner Moray Firth region do not have access to a car

Scotland Census (2011)

Highlands and Islands Travel to Work Mode Share

Legend:
- Work at home
- Walk
- Cycle
- Rail
- Bus
- Car
- Other

Scotland Census (2011)

Distance	Public transport	Driving car or van	All other modes
30km or over	18	36	46
10km to less than 30km	12	77.5	10.5
5km to less than 10km	59	37	4
Less than 5km	2	16	82

■ Public transport ■ Driving car or van ■ All other modes
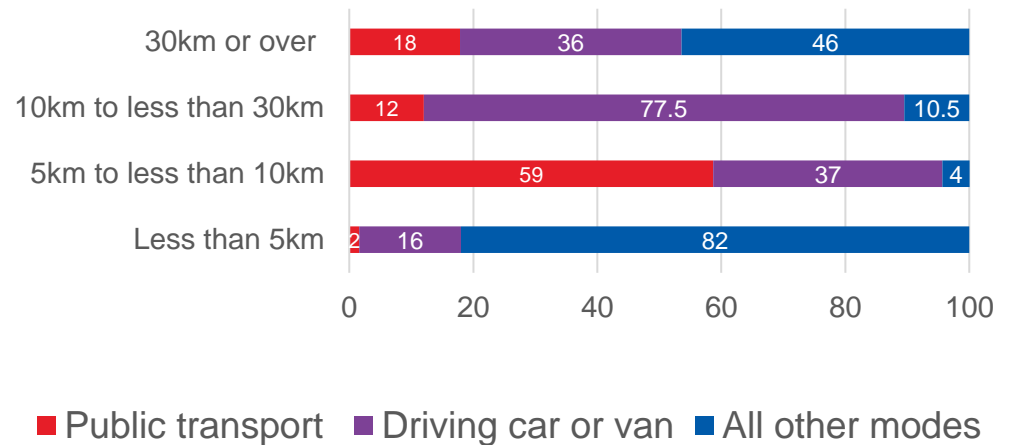
Scotland Census (2011) The Highland Distance travelled to work or study by Mode (%)

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2. Rationale

An active network for the Inner Moray Firth Region

The region: SIMD

Scottish Index of Multiple Deprivation

1	Least Deprived
2	
3	
4	
5	
6	
7	
8	
9	Most Deprived
10	

- - - On-road Active Travel

——— Off-road Active Travel

● Primary Settlement

● Secondary Settlement

As can be seen adjacent, the current active travel network does not reach areas of higher SIMD including areas near Kildary, Invergordon, Alness, South Inverness and Nairn. It has been ensured that the proposed network addresses these existing gaps.
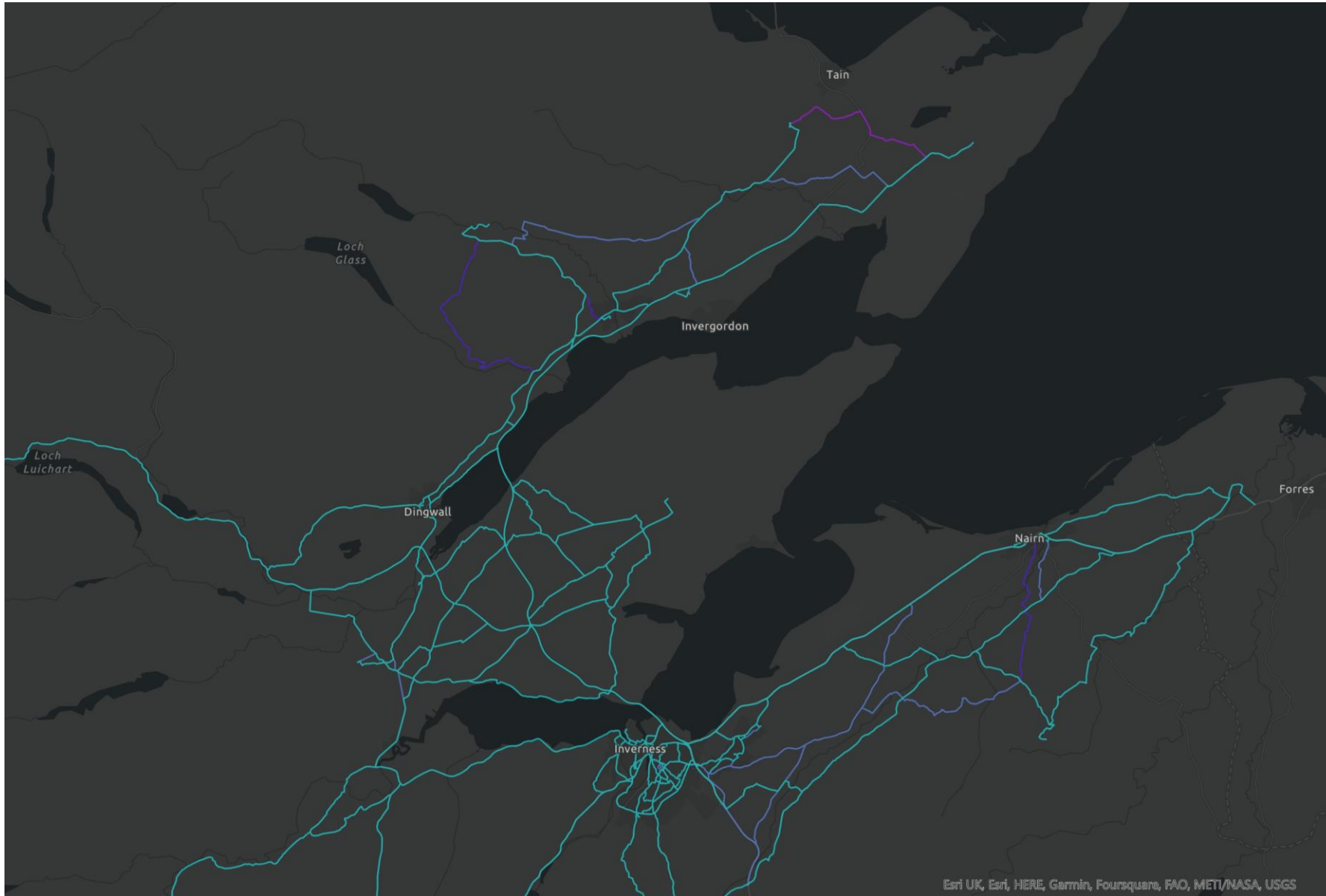
13

2. Rationale

An active network for the Inner Moray Firth Region

The region: Commute trips for all modes using 2011 census data

Number of Trips

— <25
— 25 - 85
— 86 - 200
— 201 - 400
— >400

The adjacent map highlights the number of trips of people commuting using all modes of transport between locations throughout the region.

It highlights the key desire lines for people commuting which has been used to inform the development and prioritisation of the network.

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2. Rationale

An active network for the Inner Moray Firth Region

The region: Public Transport Expenditure

Transport Expenditure (%) - 2018

9 - 10%	13 - 14%	17 -18%
11 - 12%	15 -16%	19 - 20%

STPR2 (2022): transport expenditure
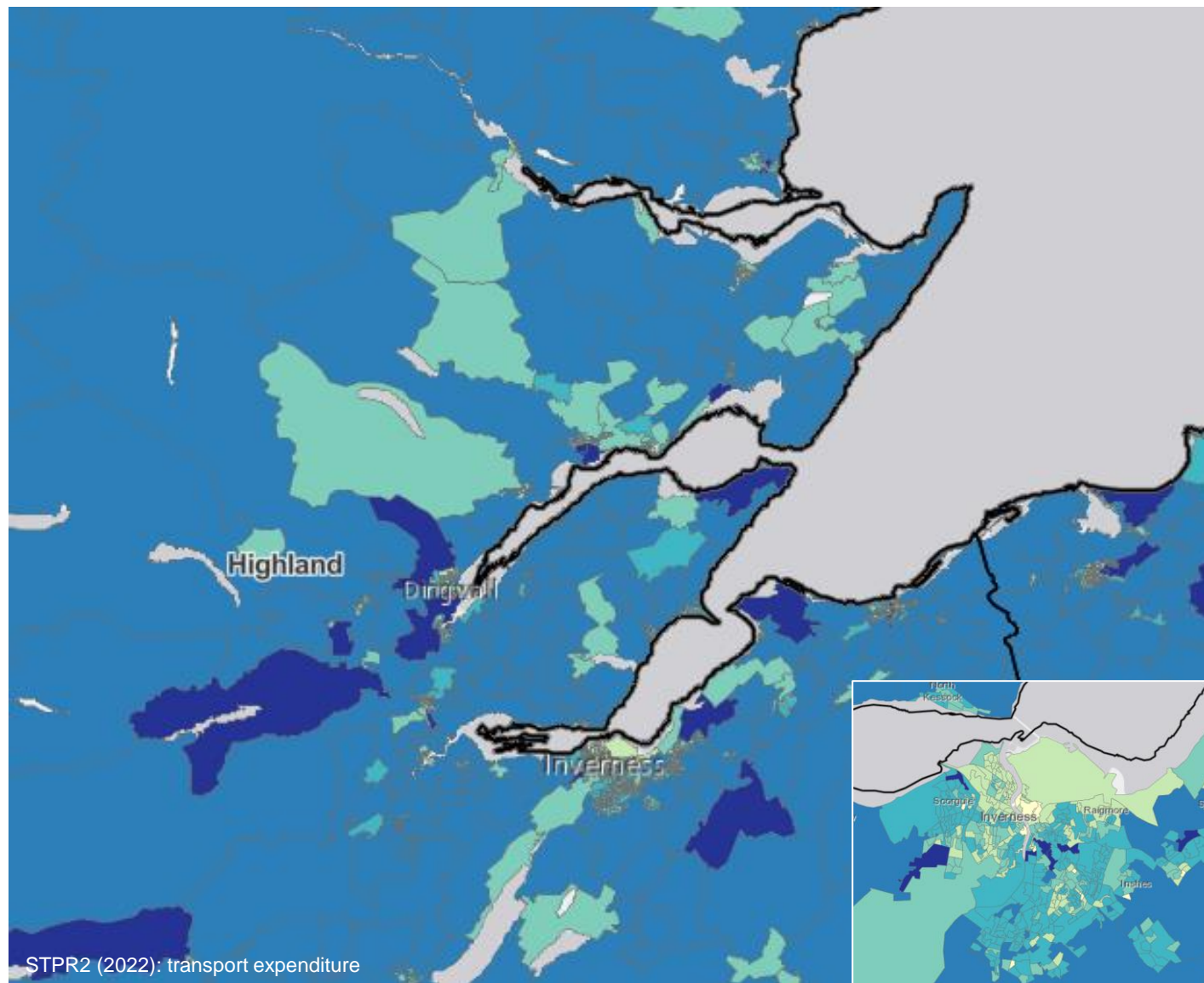
The map adjacent illustrates the amount of money, in percentage of salary, that areas within the Inner Moray Firth region spend on public transport. As can be seen, there are areas of the region such as Dingwall that are spending approximately 19-20% on public transport, with the majority of the region spending approximately 17-18% of their salary on public transport. The Scottish average for this is approximately 14%, highlighting that people do spend more on public transport within the region than other areas in Scotland.
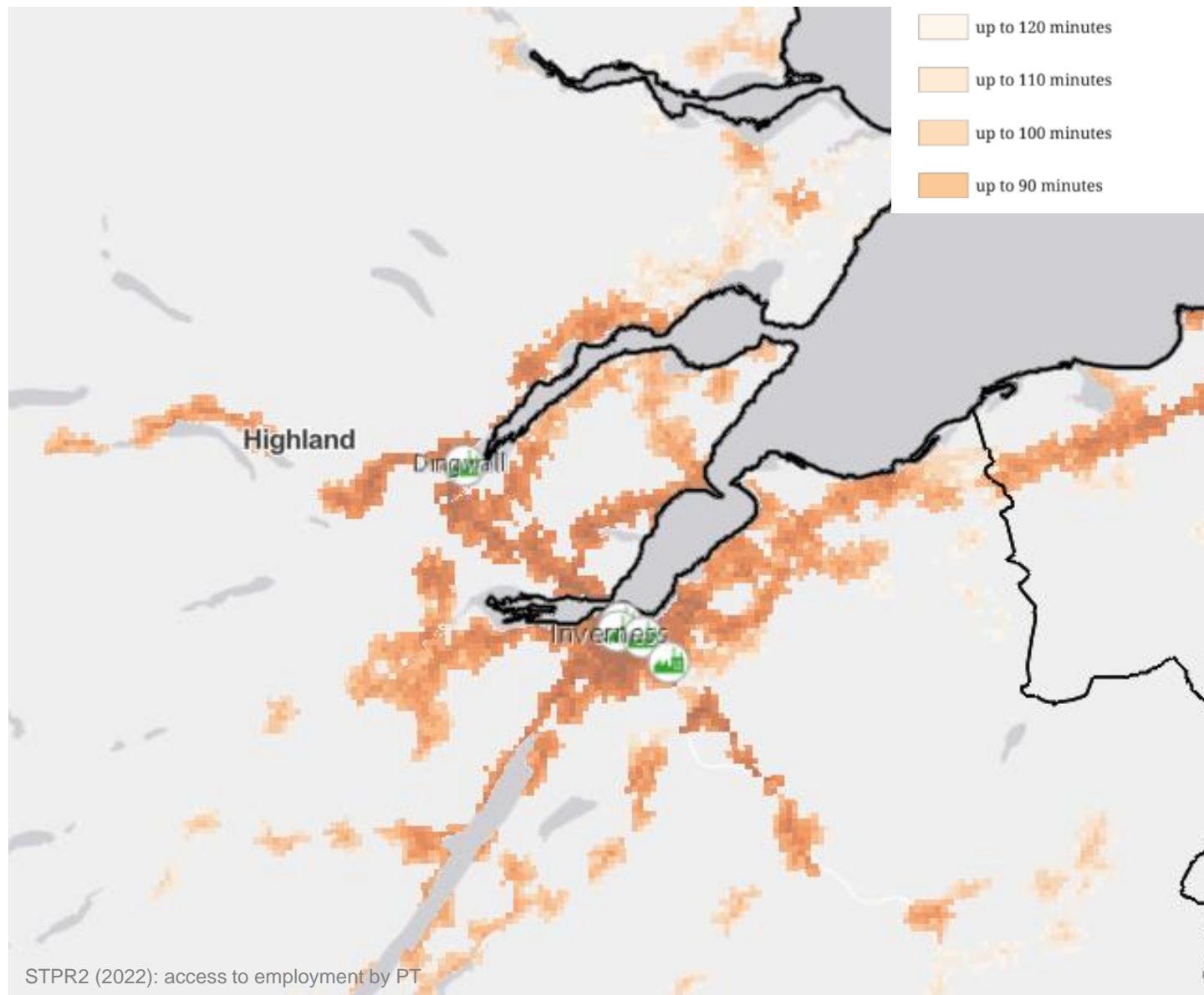
With the cost of living continuing to increase, it is important that people have a cheaper, alternative form of transport. Walking and cycling can fill this gap.

Ensuring that the IMF network links into key employment areas, education and other key every day facilities will provide a viable alternative for people, for all or part of their journey.

2. Rationale

An active network for the Inner Moray Firth Region

The region: Access to Employment by Public Transport

Access to Employment

Employment Locations - BRES - Destination	up to 80 minutes	up to 40 minutes
up to 120 minutes	up to 70 minutes	up to 30 minutes
up to 110 minutes	up to 60 minutes	up to 20 minutes
up to 100 minutes	up to 50 minutes	up to 10 minutes
up to 90 minutes		

As can be seen in the map adjacent, public transport journey times to key employment areas from areas within the region can be more than 90 minutes.

In comparison car travel is less than 50 minutes at the most from anywhere in the region to these points. For the purposes of this exercise, the key employment areas have been highlighted as Dingwall and Inverness.

This highlights the need to better integrate transport options, including the integration of public transport and active travel.

The IMF Active Travel Network aims to fill the gaps where public transport coverage is either poor or frequency is low, with the aim of improving journey times and better connecting communities to sustainable modes of travel.

STPR2 (2022): access to employment by PT

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2. Rationale

An active network for the Inner Moray Firth Region

The region: Future Development
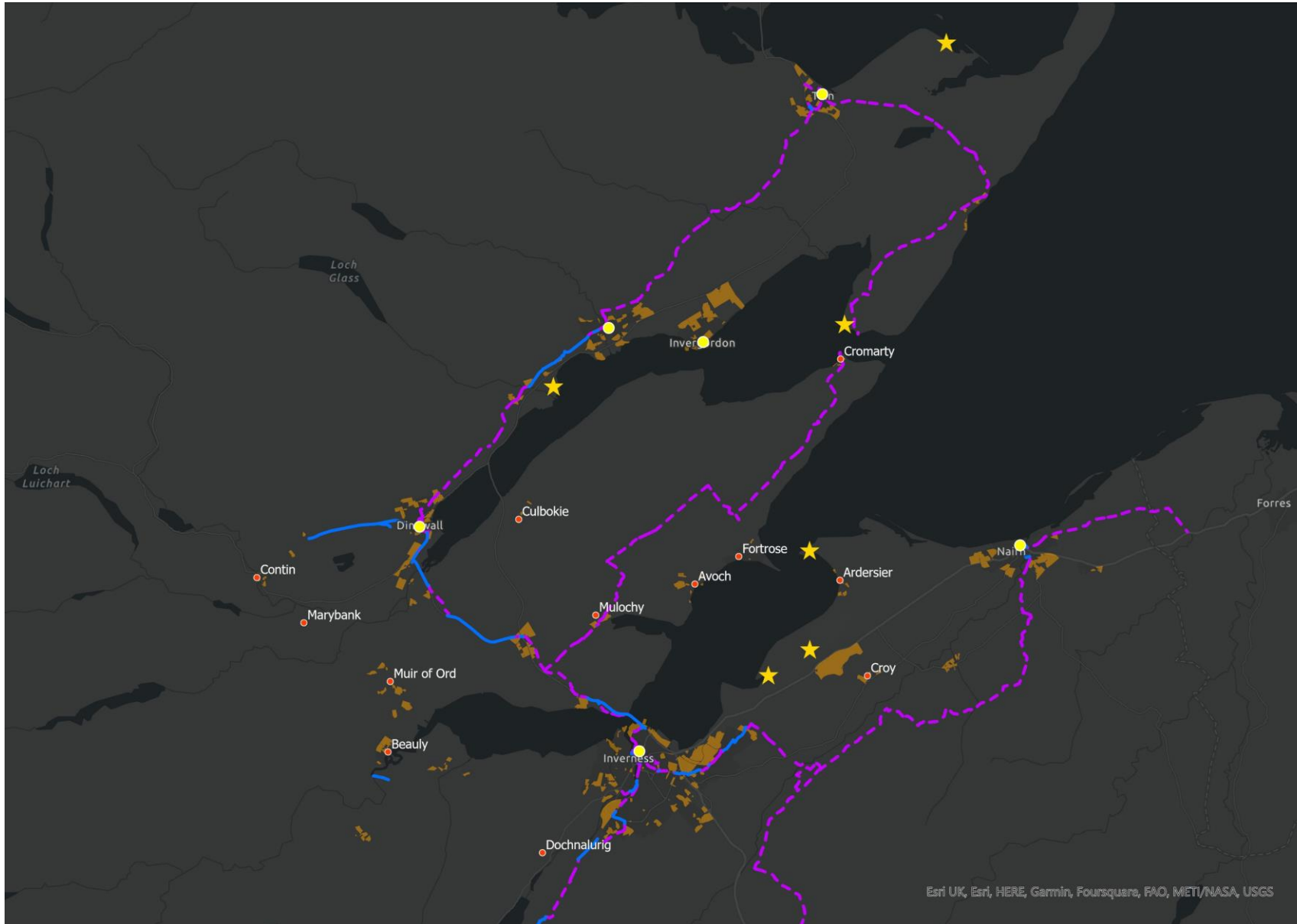
Planned Development

Off-road Active Travel

On-road Active Travel

Primary Settlement

Secondary Settlement

Economic development areas

The adjacent map highlights the planned future development locations taken from the IMF LDP as well as the existing active travel infrastructure within the region. This has been considered as part of the development of the network.

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2. Rationale

An active network for the Inner Moray Firth Region

The region: School Catchments

Below are snippets of the primary and secondary school catchments from THC's online ArcGIS web platform.

As can be seen below, the catchments for both secondary and primary schools within the region can be large and encompass a number of locations.

It is important that there are options available to pupils and their carers to access education facilities via active travel where feasible. This information has been considered in the development of the network to ensure catchment areas are served by a high quality active travel route.
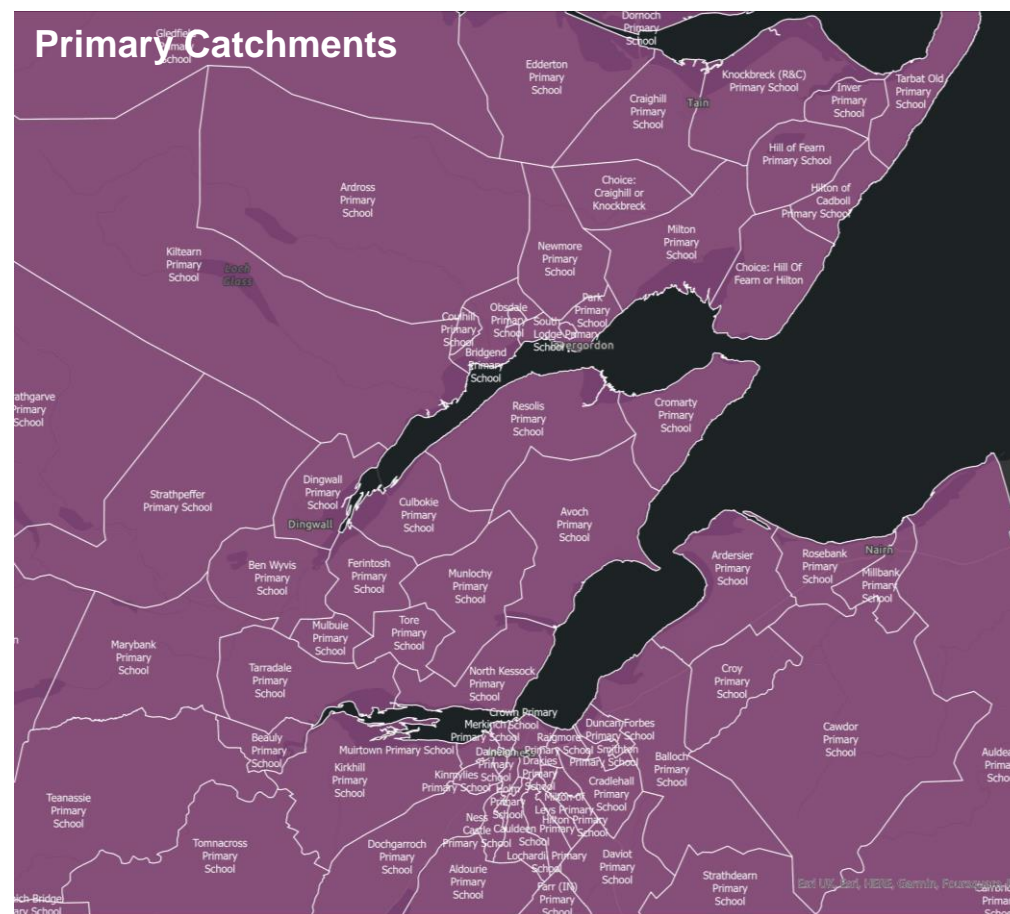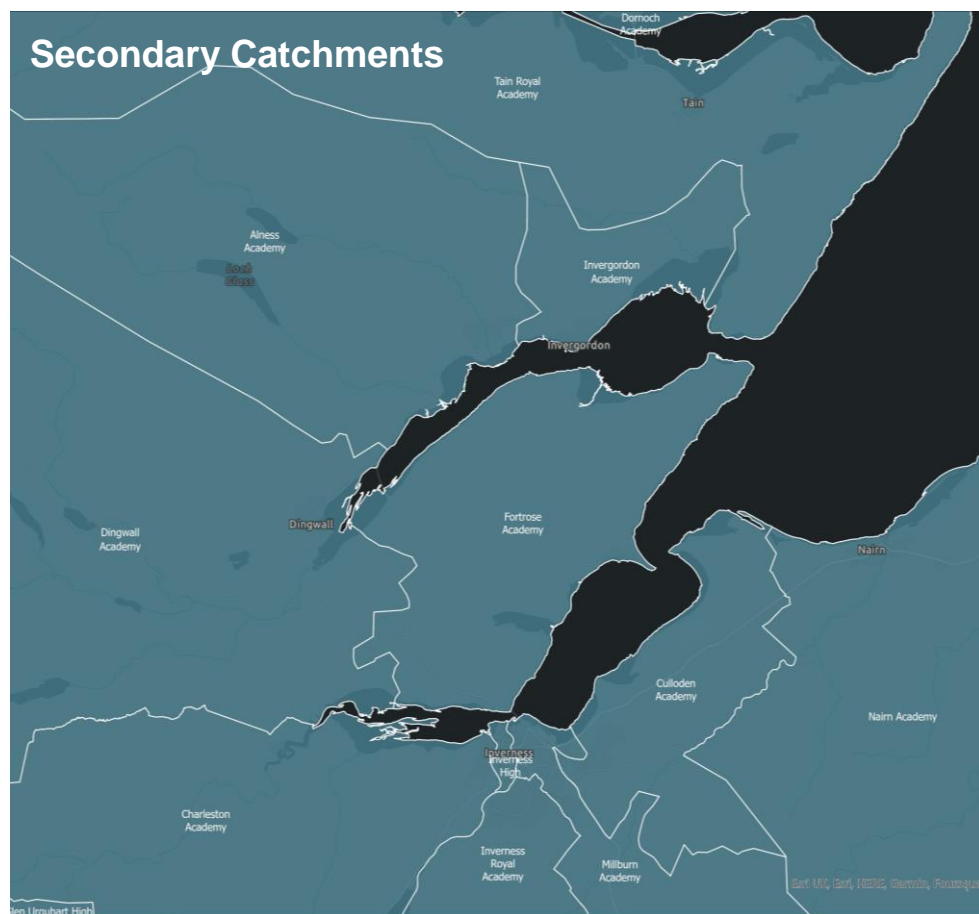
2. Rationale
Transport Baseline

Overall Transport Network and Gaps

Legend:
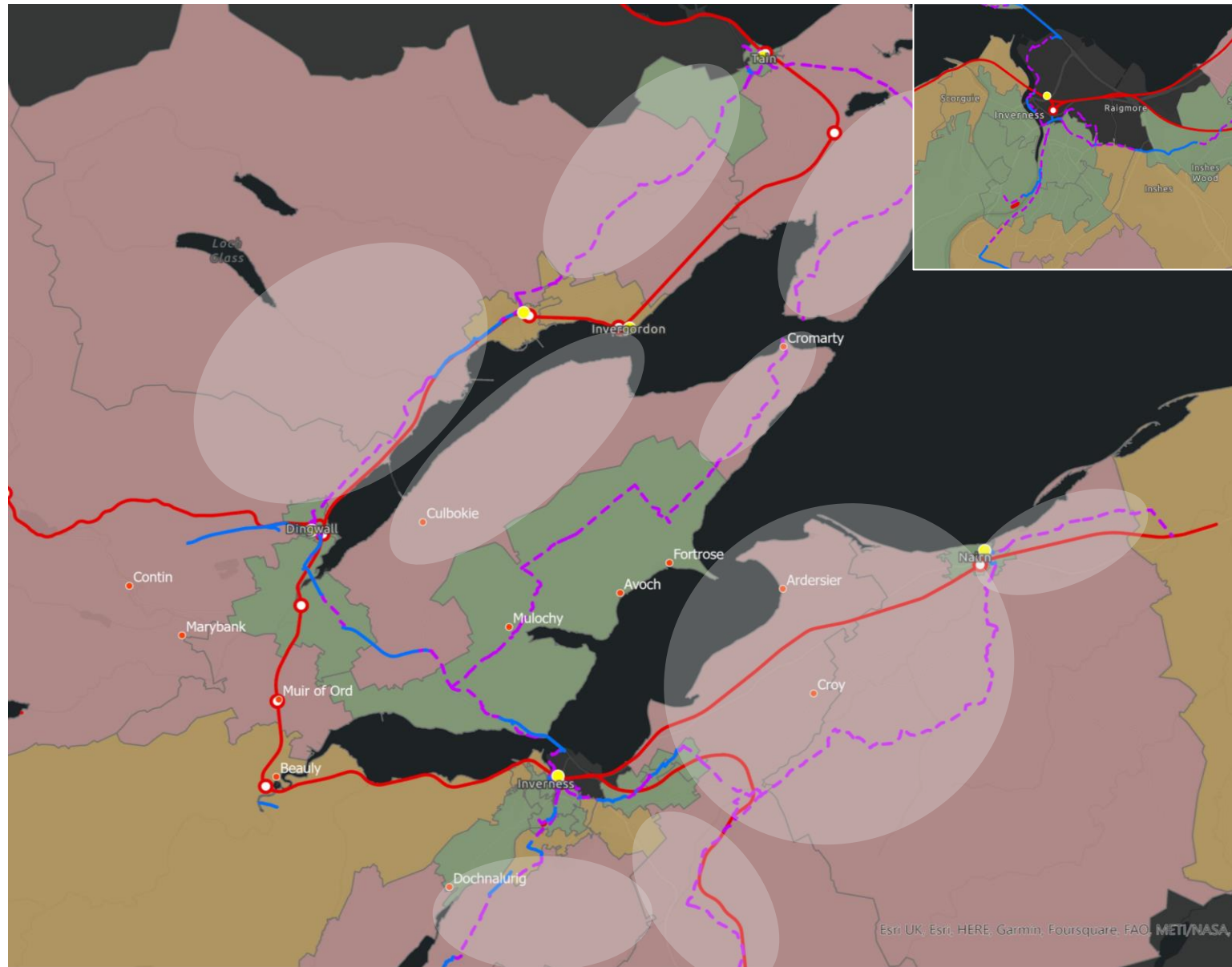
- Low Bus Frequency (1 every 2+ hours or none)
- Medium Bus Frequency (1 every 2 hours or less)
- High Bus Frequency (multiple in 1 hour)
- On-road Active Travel
- Off-road Active Travel
- Railway Line
- Railway Stations
- Primary Settlement
- Secondary Settlement

Gaps within the transport network where there is poor public transport coverage, and the active travel infrastructure is either on-road or non-existent, have been spotlighted in the adjacent map.

Many of those gap areas have low population density, however, there are areas where there is likely to be an increase in population as a result of development, such as Croy/Tornagrain and Alness/Invergordon.

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Methodology

3. Methodology
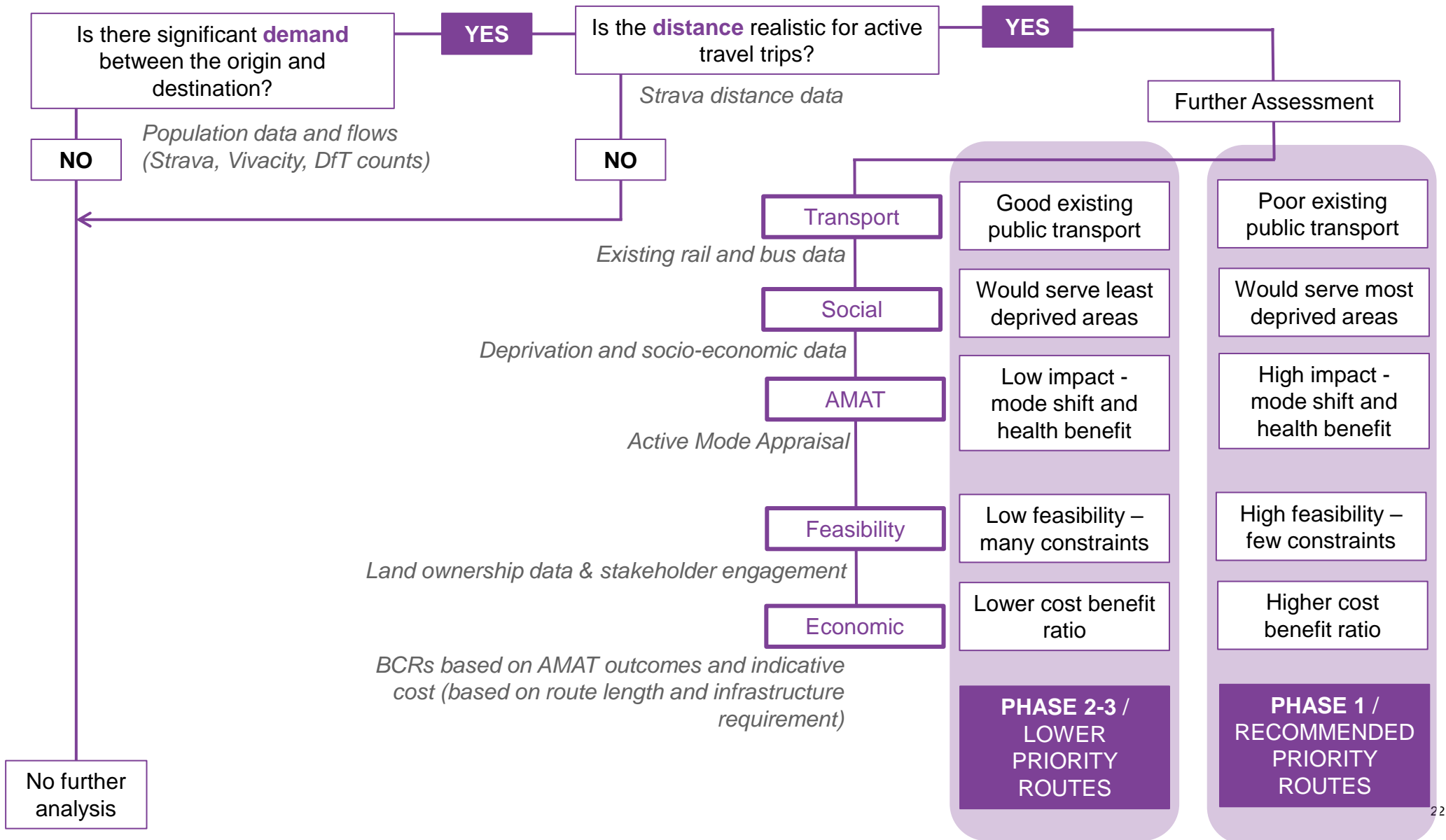## An evidence-led, people-centred network

The approach

[1] Examine Baseline

Data was collected to understand the current transport provision, population and geographic context
e.g. Movement data, Engagement insights (see Appendix A), Elevation and geospatial data, Current infrastructure

Places not mentioned or identified as significant settlements with poor active travel provision were **PARKED**.
If places were raised in engagement or identified as gaps in the network through the desktop evaluation, these **PROCEEDED** to Step 2.

[2] Indicative Routings

Routes identified in the early network development were mapped using insights from Strava data cross-checked against counter data available. Both popular and direct route choices were included.

Where distances and elevations were considered too high, these routing options were **PARKED**. Routes with reasonable distances and elevations **PROCEEDED** to Step 3.

[3] Route Analysis

Data on all routes were collected within a Multi-Criteria Assessment.
e.g. existing infrastructure, SIMD, schools, development sites, hospitals, green space, population within 1km of the route.

Routes where short-term projects (e.g. signage, linage and speed limit reductions) would be sufficient to create a quality link between Origin-Destination pairs were identified. These routes were **PARKED** for further analysis. Routes which would require more extensive interventions **PROCEEDED** to Step 4.

[4] Uplift Estimation

Using the Uplift Tool, the estimated increase in active travel users that would be achievable as a result of the routes being implemented was calculated.

All routes **PROCEEDED** to Step 5. The estimated uplifts were key inputs for Step 5.

[5] AMAT

Using the Active Mode Appraisal Tool (AMAT), the benefit-cost ratios (BCRs) of the various routes were calculated to inform prioritisation.
A sensitivity analysis was conducted to ensure the results are robust against changes in input data.

Routes were prioritised from 1 – 43. This informed the recommended phasing of the network.

3. Methodology
An evidence-led, people-centred network

The approach

Is there significant **demand** between the origin and destination?

YES

Is the **distance** realistic for active travel trips?

Strava distance data

YES

Further Assessment

Population data and flows (Strava, Vivacity, DfT counts)

NO

NO

Transport

Existing rail and bus data

Social

Deprivation and socio-economic data

AMAT

Active Mode Appraisal

Feasibility

Land ownership data & stakeholder engagement

Economic

BCRs based on AMAT outcomes and indicative cost (based on route length and infrastructure requirement)

No further analysis

Good existing public transport	Poor existing public transport
Would serve least deprived areas	Would serve most deprived areas
Low impact - mode shift and health benefit	High impact - mode shift and health benefit
Low feasibility – many constraints	High feasibility – few constraints
Lower cost benefit ratio	Higher cost benefit ratio
PHASE 2-3 / LOWER PRIORITY ROUTES	**PHASE 1 /** RECOMMENDED PRIORITY ROUTES

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3. Methodology
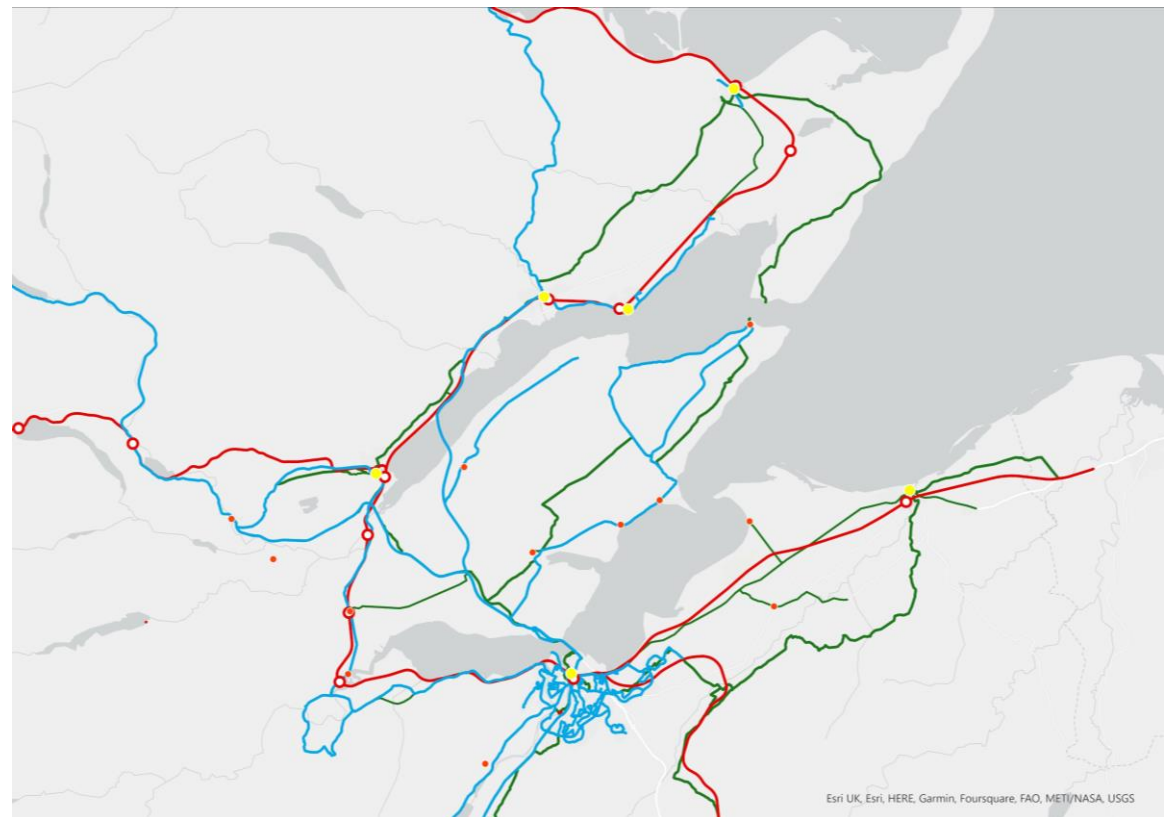# An evidence-led, people-centred network

The approach

[1]
Examine Baseline

Data was collected to understand the current transport, population and geographic context
e.g. Movement data, Engagement insights, Elevation and geospatial data, Current infrastructure

Places not mentioned or identified as significant settlements with poor provision were **PARKED**.
If places were raised in engagement or identified as gaps in the network through the desktop evaluation, these **PROCEEDED** to Step 2.

Our analysis included mapping existing rail, bus and cycle networks, and examining their quality. For bus and train this involved looking at frequency and journey times, and for cycling this involved looking at whether the infrastructure is broadly consistent with the high level principles of 'Cycling by Design'. The adjacent map is indicative of the type of infrastructure looked at in the study.

Esri UK, Esri, HERE, Garmin, Foursquare, FAO, METI/NASA, USGS

→ Existing bus stops & network
→ Existing rail stops & network
→ Existing cycle network (mixed quality)
● Primary settlements
● Smaller/intermediate settlements

3. Methodology
An evidence-led, people-centred network

The approach

[2] Indicative routings

Initial routes between places were mapped using Strava insights. Both popular and direct route choices were included.

Where distances and elevations were considered too high, routing options were **PARKED**. Reasonable distances and elevations **PROCEEDED** to Step 3.

Right: Example output from Strava Metro. For the O-D pair Tain-Hill of Fearn, two options were taken forward.
Blue (direct route) – 6.2km with 43m elevation.
Red (popular route) – 9.8km with 38m elevation.

Having alternatives to consider gives greater option for routing and proposed interventions based on existing infrastructure. Note that 'popular' routes are the most used by Strava users. Therefore, any 'popular' routes that were significantly longer or involved significantly more ascent were considered sport/recreational routes and not taken forward for further assessment for everyday trips.
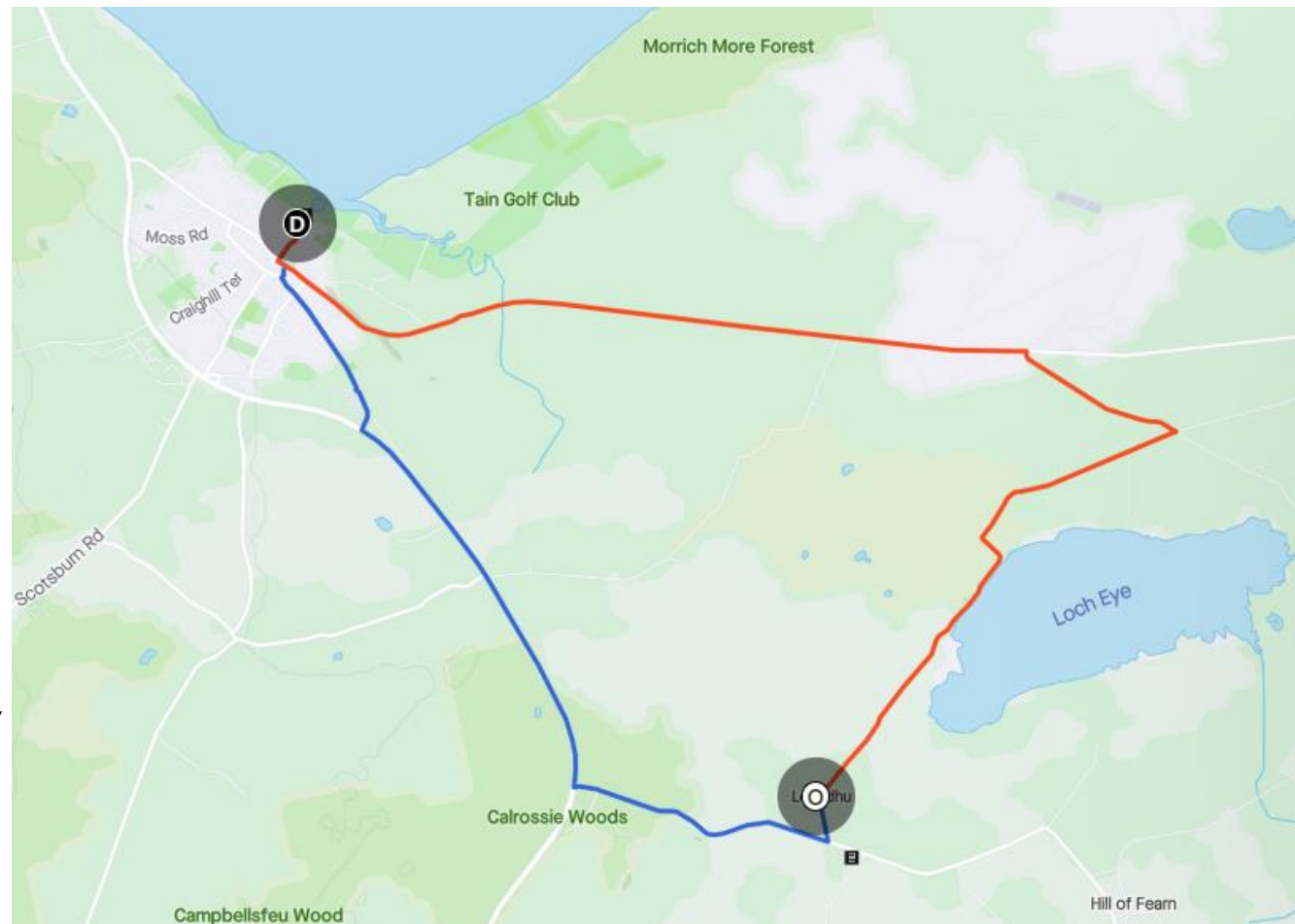

Source: Strava Metro (2022)

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3. Methodology
An evidence-led, people-centred network

The approach

[3] Route Analysis

Data on all routes were collected within a Multi-Criteria Assessment.
e.g. existing infrastructure, SIMD, schools, development sites, hospitals, green space, population within 1km of the route.

Routes where short-term projects (e.g. signage, linage and speed limit reductions) would be sufficient to create a quality link between O-D pairs were identified. These routes were **PARKED** for further analysis. Routes which would require more extensive interventions **PROCEEDED** to Step 4.
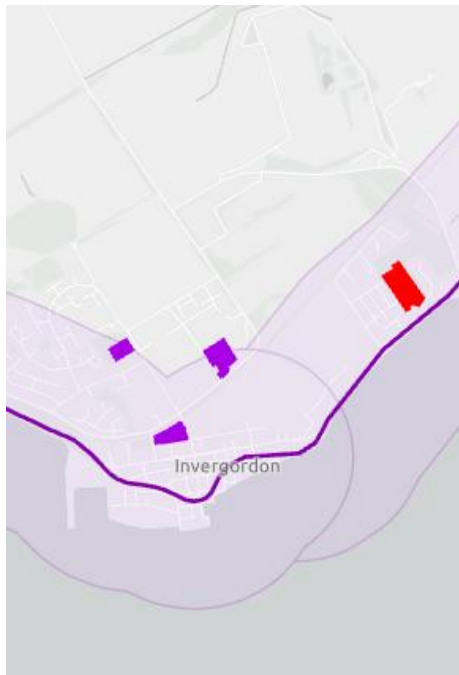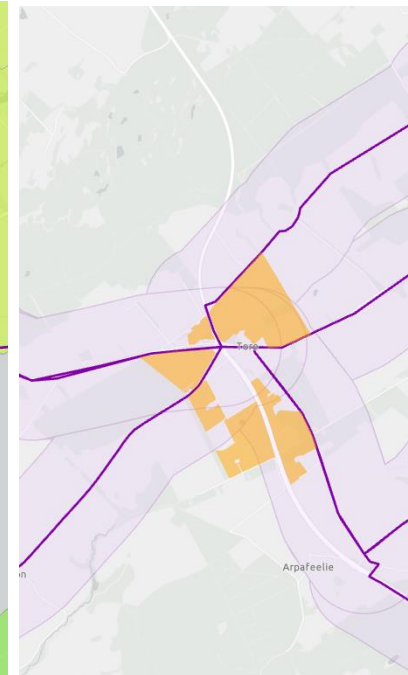

Access to services - Invergordon

→ Potential active route
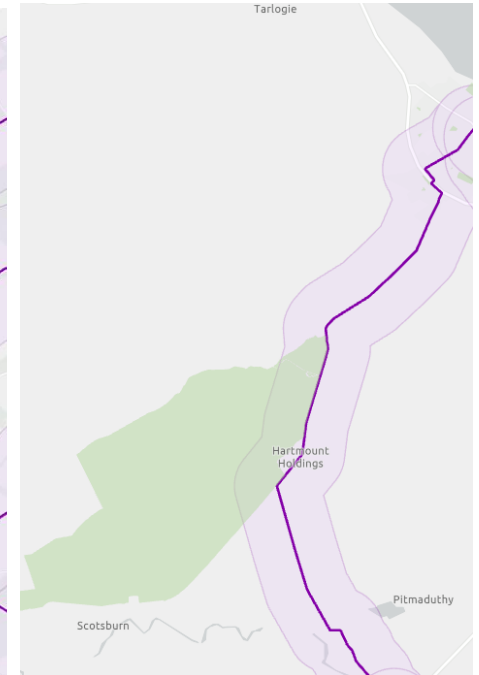1km catchment
■ Hospital
■ School/higher education
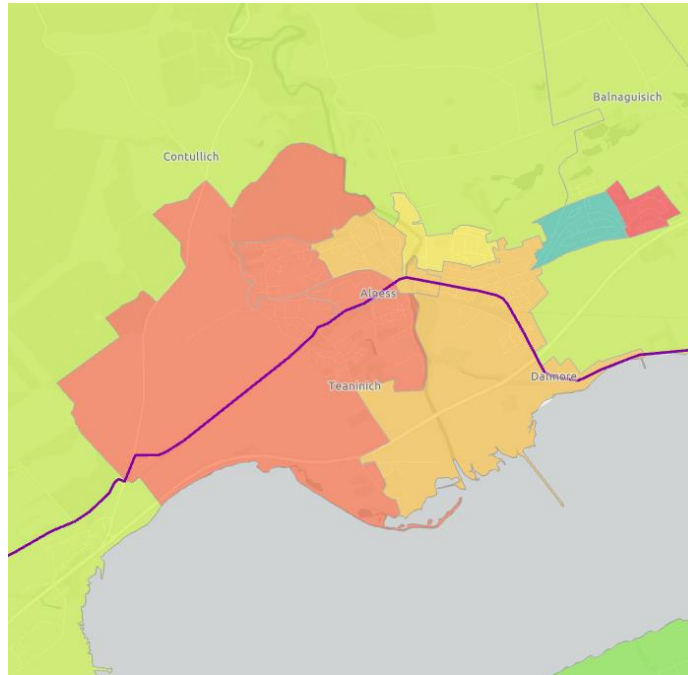
Transport for areas of higher SMID – e.g. Alness

■ SIMD – most deprived decline
■ SIMD – 2nd most deprived decline

Connection for development in Tore

■ Proposed development site

Providing access to greenspace between Tain and Kildary

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3. Methodology
An evidence-led, people-centred network

The approach

[4]
Uplift
Estimation

Using the Uplift Tool, the estimated uplift in walking and cycling trips was calculated for each of the potential routes on the network.

This required using existing walking and cycling trips to determine the uplift; STRAVA data was used to provide this baseline.

It is acknowledged that with STRAVA data there is a risk that it does not capture users that do not use the app and is heavily weighted to leisure trips.

Therefore, a cross check was carried out with the STRAVA data in comparison to published count data of Average Annual Daily Traffic Flows for Cycling and the Vivacity flows for walking and cycling within Inverness.

It was found that the STRAVA trip numbers tended to be lower than those on the DfT and Vivacity databases. However, the STRAVA data did accurately highlight routes where there existing walking and cycle trips are higher and where they are lower.

All routes **PROCEEDED** to Step 5. The estimated uplifts were key inputs for Step 5 when using the AMAT.

A screenshot of the uplift tool being used can be seen below, full details on how the uplift tool and AMAT work can be found at TAG Unit A5.1 - Active Mode Appraisal (publishing.service.gov.uk).

Estimated weekday cycling and walking trips with and without the scheme			
Scheme name	IMF Network Route 10		
Local authority	Tendring		
Estimated number of cycling and walking trips per weekday with and without the scheme			
Figures should be input into rows 32 and 33 (cycling) and 45 and 46 (walking) of the sheet 'User Interface Intervention' in the Active Mode Appraisal Toolkit			
	Cycling	**Walking**	
Intrinsic Cycling/Walking potential for the Local Authority (low/medium/high)	Low	Low	
Estimated number of trips per weekday in scheme corridor or area without the scheme	25	-	
Estimated number of trips per weekday in scheme corridor or area with the scheme	63	194	

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3. Methodology
An evidence-led, people-centred network

The approach

[5]

AMAT

Using the Active Mode Appraisal Tool (AMAT), the benefit-cost ratios (BCRs) of the various routes were calculated to inform prioritisation.

The main inputs into the AMAT were the indicative cost of the scheme, the key characteristics of the type of infrastructure being suggested for the route and the estimated uplift in walking and cycling numbers as a result of the route.

A sensitivity analysis was conducted to ensure the results are robust against changes in input data, this can be seen in Appendix B.

An example of the key outputs from the AMAT can be seen below. The BCR, health benefits and user uplift were fed directly into the MCA.

The routes were then scored out of a total of 45 possible points. This informed the recommended prioritisation of the network into 3 phases based on the benefit it would provide.

Full details and calculations carried out as part of the AMAT and MCA can be found in Appendix B.
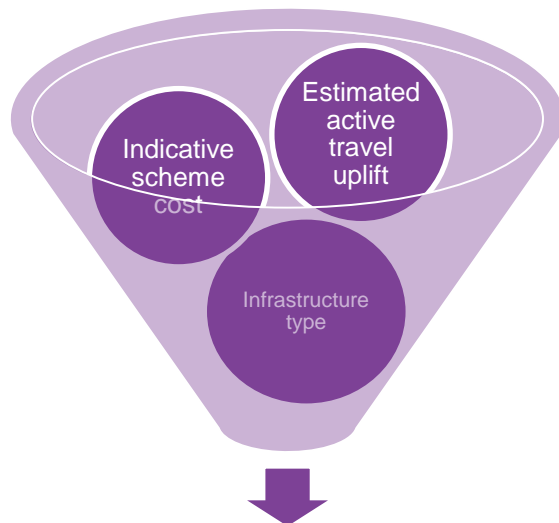
AMAT Results

Analysis of Monetised Costs and Benefits (in £'000s)		Benefits by type:		
Congestion benefit	0.19	Mode shift	0.22	0.7%
Infrastructure maintenance	0.00	Health	25.59	79.9%
Accident	0.03	Journey quality	6.24	19.5%
Local air quality	0.00			
Noise	0.00			
Greenhouse gases	0.05			
Reduced risk of premature death	21.60			
Absenteeism	3.99			
Journey ambience	6.24			
Indirect taxation	-0.06			
Investment costs	25.79			
Operating costs	0.00			
Private contributions	0.00			
PVB	32.04			
PVC	25.78			
BCR	1.24			

Benefits by type

■ Mode shift ■ Health ■ Journey quality

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The network from a user perspective

4. User Profiles & Detailed Assessment
Examples of routes and indicative users

Introduction

This section provides further detail on four select routes which had been agreed with THC and HITRANS. These routes fall under the various stages of phasing outlined within this report, these are as follows:

- Inchmore to Inverness
- Avoch to Fortrose
- Inverness Airport to Croy
- Invergordon to Alness

This section outlines future requirements and considerations for each of these routes. There have also been a number of example user profiles developed to depict the typical everyday usage and benefit the network would see within the region. These user profiles are not based on real people and have been developed to portray a range of different users with different needs and requirements.
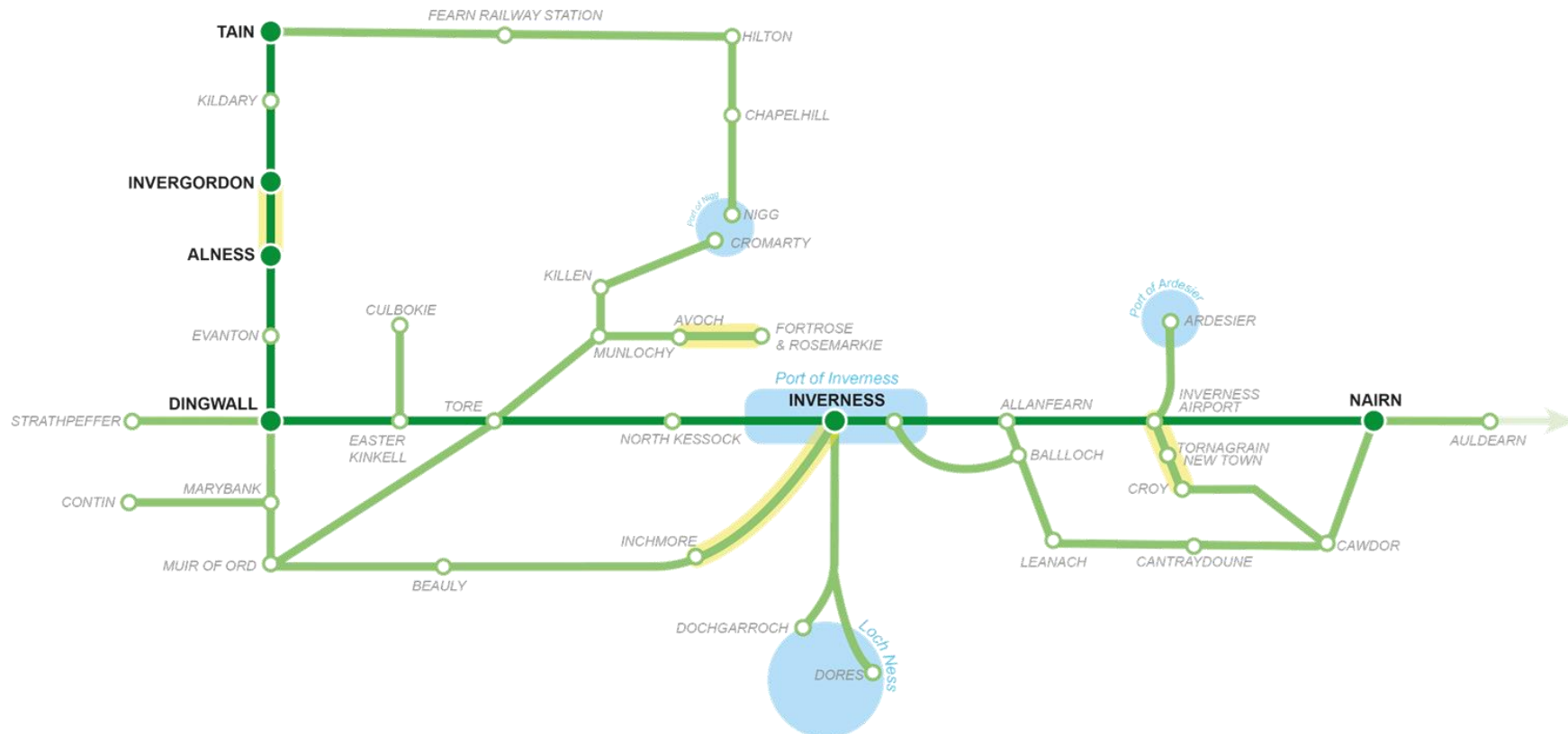
4. User Profiles & Detailed Assessment
Examples of routes and indicative users

Inchmore to Inverness

Route Name	28: Inchmore to Inverness
Length	11.5 km
Elevation	43 m
Benefits*	SIMD, health benefits, high volume of expected users and overcoming barriers
Constraints*	£££ Beauly Firth and limited road or verge space
Support	Community and political support
Delivery timescale	Long term

Information required	Engagement	Surveys	Land ownership	Other useful data
Complete	Engagement through the IMF Masterplans project	Vivacity surveys within Inverness	n/a	n/a
Required Next	Co-design process with local community	Topographic & Utilities	Conversations with local landowners	Traffic flows, Road adoption plans / land ownership data

4. User Profiles & Detailed Assessment
Examples of routes and indicative users

Inchmore to Inverness

User Name	Margaret
Age & Gender	>65 years old, Female
Location	Margaret lives in a cottage situated between Inchmore and Inverness
Position	Retired
Travel Expenditure	n/a (free bus travel)
Trip Purpose	Margaret needs to travel into Inverness regularly for hospital appointments and to visit family members
Problem	Margaret usually takes the bus into Inverness, her nearest bus stop is just over a 500m walk from her home but requires her to use the A862 which has no footway (see images below)
Solution	The network would allow Margaret to safely reach the bus stop on a dedicated footway that provides separation from fast moving vehicle traffic

© Google Maps

© Vikki Trelfer

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4. User Profiles & Detailed Assessment
Examples of routes and indicative users

Avoch to Fortrose

Route Name	26: Avoch to Fortrose
Length	3 km
Elevation	2 m
Benefits*	Modal shift and overcoming barriers
Constraints*	£££ Moray Firth and limited road or verge space
Support	Community support
Delivery Timescale	Long term

Information required	Engagement	Surveys	Land ownership	Other useful data
Complete	Engagement through the IMF Masterplans project	Vivacity surveys within Inverness	n/a	n/a
Required Next	Co-design process with local community	Topographic & Utilities	Conversations with local landowners	Road adoption plans / land ownership data

4. User Profiles & Detailed Assessment
Examples of routes and indicative users

Avoch to Fortrose

User Name	Jack
Age & Gender	<18 years old, Male
Location	Jack lives in Avoch
Position	Student at Fortrose Academy
Travel Expenditure	n/a
Trip Purpose	Jack travels 3km from Avoch to Fortrose to go to High School.
Problem	His parents currently drive him as he likes to take part in after school activities and therefore the school bus doesn't suit, Jack has to miss the after school activities when his parents are busy. Currently his parents wouldn't let him walk or cycle as there is no safe route (see below)
Solution	The network would allow Jack to safely cycle the 3km distance (approximately a 9 minute cycle) from his home to school and back meaning he can always go to the after school activities

© Google Maps

© Google Maps

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4. User Profiles & Detailed Assessment
Examples of routes and indicative users

Inverness Airport to Croy

Route Name	33: Inverness Airport to Croy
Length	3 km
Elevation	6 m
Benefits*	Modal shift and overcoming barriers
Constraints*	£££
Support	Community support
Delivery timescale	Short term (underway)

Information required	Engagement	Surveys	Land ownership	Other useful data
Complete	Engagement through the IMF Masterplans project		n/a	n/a
Required Next	Co-design process with local community	Topographic & Utilities	Conversations with local landowners	Road adoption plans / land ownership data, plans for current work undertaken

4. User Profiles & Detailed Assessment
Examples of routes and indicative users

Inverness Airport to Croy

User Name	Ben
Age & Gender	25-35 years old, Male
Location	Ben lives in Croy
Position	Employed at Inverness Airport
Travel Expenditure	17-18% of income
Trip Purpose	Travel to work
Problem	Ben has recently got a new job at Inverness Airport. He doesn't drive as owning and running a car would take up a large part of his income. The bus times are not well-suited with his shifts, so he is reliant on lifts from other people, reducing his independence.
Solution	The network would allow Ben to safely cycle the 3km distance (approximately a 9 minute cycle) from his home to work and back, allowing him greater flexibility without having to own a car.

© Google Maps

4. User Profiles & Detailed Assessment
Examples of routes and indicative users

Invergordon to Alness

Route Name	7: Invergordon to Alness
Length	5 km
Elevation	3 m
Benefits*	Modal shift and overcoming barriers
Constraints*	£££
Support	Community support
Delivery timescale	Medium term

Information required	Engagement	Surveys	Land ownership	Other useful data
Complete	Engagement through the IMF Masterplans project		n/a	n/a
Required Next	Co-design process with local community	Topographic & Utilities	Conversations with local landowners	Existing walking and cycling flows, Road adoption plans / land ownership data

4. User Profiles & Detailed Assessment
Examples of routes and indicative users

Invergordon to Alness

User Name	Avril
Age & Gender	35-50 year old, Female
Location	Avril lives in Invergordon
Position	Works part time / single parent
Travel Expenditure	13% to 14% of income
Trip Purpose	Travel to grocery store
Problem	Avril does not drive as she cannot afford a car. She would like to use the large supermarket in Alness for weekly grocery shopping but the bus route is convoluted and there is not a stop at the supermarket.
Solution	Avril could use the network to do her grocery shopping using a cargo bike. This would take her around 15 minutes (faster than the bus) and she would be able to do this when convenient, including on Sundays.

© Google Maps

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Case studies

5. Case Studies
Examples of regional networks

SEStran Strategic Network, Scotland

The SEStran Strategic Network presents a framework for coordinated development of cross boundary active travel routes connecting cities, towns, neighbourhoods, settlements and public transport hubs in the SEStran region.

An optimal network has been identified and prioritised according to predicted current and future journeys made in the region, with the aim of helping shift focus away from delivery of one-off active travel projects or investments to a more shared vision of a comprehensive, region-wide strategic active travel network.

Delivery of this network will provide significant new opportunities for enabling walking and cycling and in particular cross boundary trips and links to public transport hubs. The Strategic Network provides clear recommendations and a phased project bank which when implemented will deliver the vision for a high quality regional active travel network.

Work has started on the network to deliver in section, feasibility studies and concept design proposals are being produced for phase 1 of the network. Some examples of which can be seen adjacent.

This section provides a summary of existing, or regional networks currently in development. Case studies in Scotland (SEStran Network), England (Devon), and Sweden (Kattegattleden) have been highlighted as having elements relevant for a future Inner Moray Firth Network.
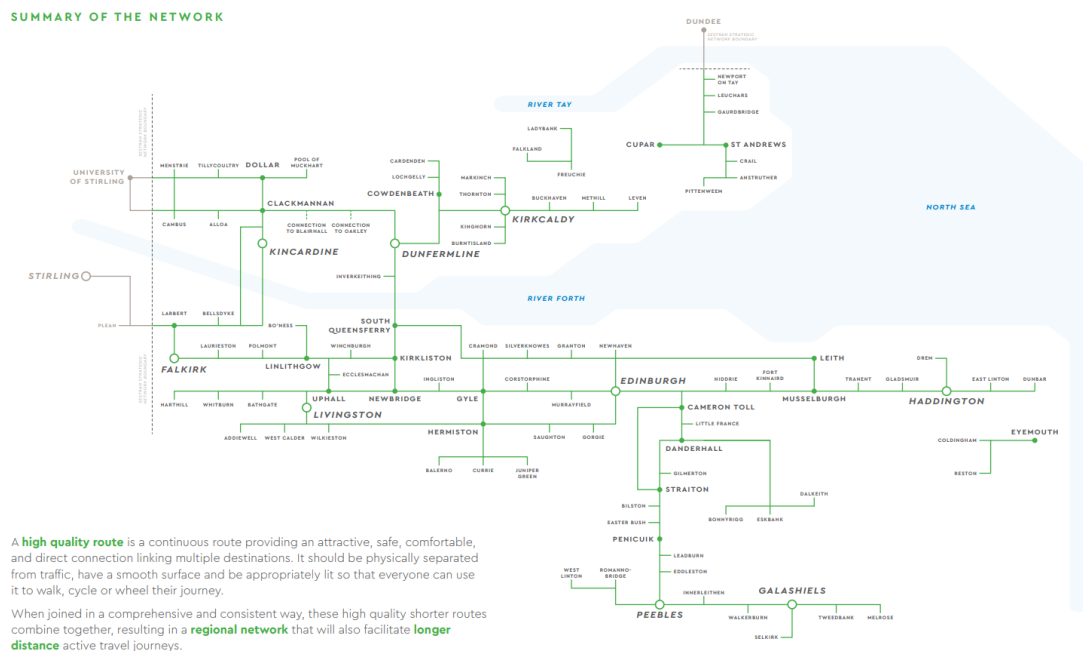
5. Case Studies
Examples of regional networks

Devon, UK

The Exe Estuary Trail is part of the NCN and follows both sides of the River Exe Estuary, linking the seaside resort of Dawlish Warren to Exmouth. The 26km network follows the river for much of its length, offering expansive views across the water and provides access to exceptional wildlife.

The route connections a range of settlements, including Exeter, Exmouth and Dawlish, and also passes through a range of commuter villages.

The route connects up with several train stations either side of the river, allowing for multi-modal trips using the rail network as well as walking and cycling.

The majority of the route is wide shared-use paths and there is good signage throughout to indicate the distances to destinations.

There are cycle hire opportunities along the route, as well as cycle parking facilities throughout. High quality bridges have been installed, wide enough for all types of bikes to cross comfortably.
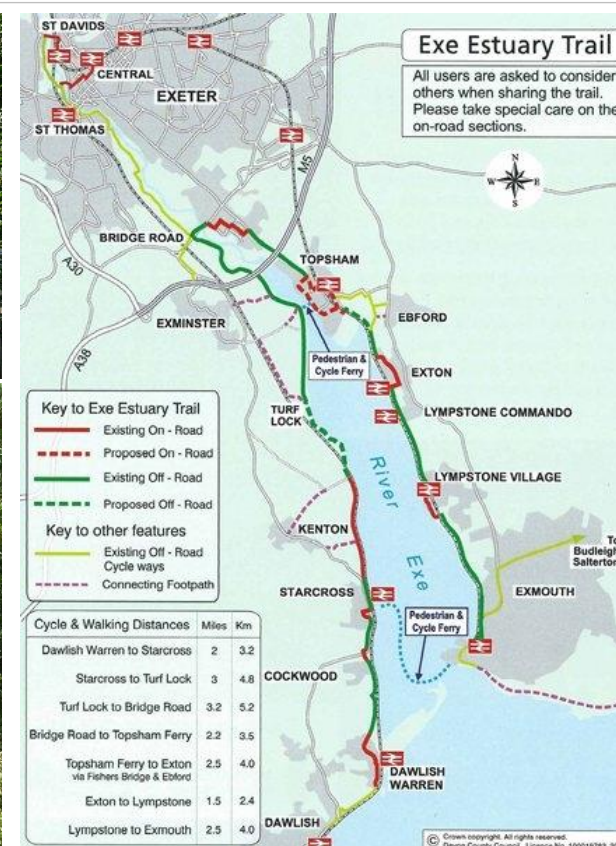

© Visit South Devon

© Visit South Devon

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Exe Estuary Trail
All users are asked to consider others when sharing the trail. Please take special care on the on-road sections.

Key to Exe Estuary Trail
— Existing On - Road
--- Proposed On - Road
— Existing Off - Road
--- Proposed Off - Road
Key to other features
— Existing Off - Road Cycle ways
--- Connecting Footpath

Cycle & Walking Distances	Miles	Km
Dawlish Warren to Starcross	2	3.2
Starcross to Turf Lock	3	4.8
Turf Lock to Bridge Road	3.2	5.2
Bridge Road to Topsham Ferry	2.2	3.5
Topsham Ferry to Exton via Fishers Bridge & Ebford	2.5	4.0
Exton to Lympstone	1.5	2.4
Lympstone to Exmouth	2.5	4.0

© Dawlish Warren Council

5. Case Studies
Examples of regional networks

Kattegattleden, Sweden

This is a ~400km network across Southern Sweden, used by locals and visitors alike. The route was voted 'Cycle Route of the Year in Europe' in 2018 and connects sizeable towns and cities including Helsingborg, Halmstad and Göteborg. This could be similar to an IMF network, where there would be a central spine network, complemented with local networks (e.g. within Inverness).

The network varies from segregated infrastructure to small lanes and quiet roads.

The route is split into 8 sections, for the purpose of efficient monitoring and management, as well as for leisure cyclists going on cycle tours. The route captures a range of local businesses and greenspaces.

The route has consistent branded signage throughout to make navigation easy.

© The Natural Adventure

© The Natural Adventure

Capability Statement

6. Capability Statement

The Highland Council has a strong, constructive and long-standing partnership with Hitrans. Combined, the two organisations bring a broad range of skills and expertise that deliver complex, multi-modal transport projects across diverse geographical areas.

THC has a dedicated Active Travel Team, with officers specialising in community engagement; supporting groups with protected characteristics; Spatial and Strategic Planning; Project Management and technical design. Coupled with this THC draws on the resource and expertise from the wider organisation, with Chartered Civil and Transport Engineers, Equalities Officers, Landscape Architects, conservation specialists and a dedicated communications team. Similarly, the partnership with Hitrans brings with it expertise in transport; strategic planning; community engagement and project management.

Provided the resourcing of projects is secured, these skills can be utilised to deliver the scale of change necessary to meet Scottish Government targets for transport decarbonisation. A broad range of small, medium, and strategic-scale projects in Highland provide evidence of this strong and committed skillset, including the Inverness West Link project, including new bridge and swing bridge infrastructure; the Raigmore Active Travel Link ramp; Black Park Road in Fort William; Inshes Park Phases 2 and 3; Stoneyfield Active Travel Bridge and delivery of segregated cycle infrastructure on Cavell Gardens. Beyond this, a dedicated Road Safety Team is delivering the expansion of 20mph speed limits to communities across Highland, as well as an ambitious programme of road safety interventions to ensure we provide safe routes to schools.

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