



Tayside and Central Scotland
Transport Partnership

Active Travel Audit

Executive Summary: Montrose

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This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

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1 Introduction

Montrose is a town of approximately 12,000 residents, located on the eastern coastal boundary of the local authority area of Angus Council on the North Sea coast. It is a town with a considerable international sea trading history, taking advantage of its natural harbour setting at the mouth of the River South Esk. Inland of the main town there exists a prominent tidal lagoon, the Montrose Basin, which at 3 miles in diameter forms an important natural habitat. Montrose Beach lies adjacent to the study area, with its associated leisure facilities. GlaxoSmithKline is now the major employer at the town's southern boundary with around 450 workers, with further employment including around the Forties Business Park in the north. Continued port-related employment is supported by the town's proximity to the sea, particularly for oil and gas purposes. The study area includes the existing adjoining villages of Hillside and Ferryden. Montrose is a semi-linear settlement, around a prominent north-south retail core (High Street). The town has its own rail station. Green spaces in the town include St Peter's Park and the coastal links.

Active Travel is one of the key sub-strategies within the TACTRAN Regional Transport Strategy Refresh (2015 – 2036). Specifically, Action AT6, Audit, identifies that *“Where opportunities arise, locally focused active travel audits will identify priorities for future investment in developing the regional walking and cycling network”*, and this Active Travel Audit for Montrose seeks to support this action and will assist in delivering Angus Council's Active Travel Strategy.

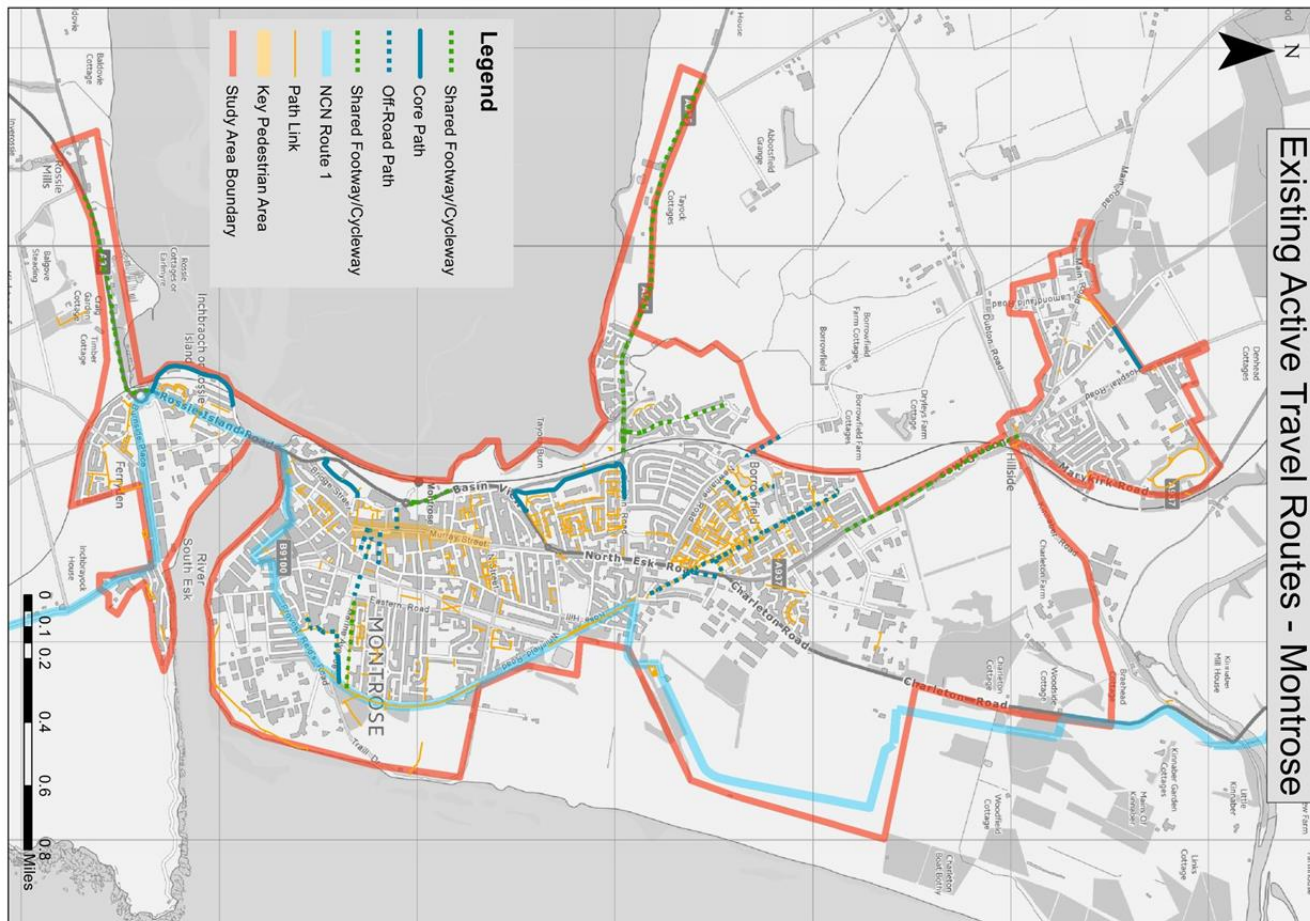
The aims of the Active Travel Audit are to provide:

- Up-to-date information of existing active travel networks to include an account of infrastructure and facilities for walking and cycling;
- Information and mapping of potential active travel networks of Montrose to include an account of recommended infrastructure and facilities needed within Montrose; and,
- A proposal for investment in active travel infrastructure in Montrose, with an indicative action plan, to help guide and secure potential future active travel investment.

2 Information on existing active travel networks

A multi-stage approach to data gathering has been followed. The approach combines the use of available secondary data with site visits, audits and observations and local insight and knowledge through stakeholder interviews to give a comprehensive understanding and record of the existing active travel network. The information collated resulted in a baseline report. Figure 1 shows the existing active travel network identified through this process. Throughout the data gathering exercise four aspects of active travel quality have been analysed (comfort, accessibility, safety and information).

Figure 1 – Existing Active Travel Networks



As Figure 1 displays, there are currently gaps in the active travel network in Montrose. Existing infrastructure does not always join up and as a consequence an active travel user is presented with a series of intermittent routes rather than a complete network. It is these gaps in which the focus lies moving forward as areas for potential interventions and upgrading. Further details are available in a Baseline Report on the Tactran website.

3 Information and mapping of potential active travel network

A series of high-level aims and objectives have been identified in response to the identified issues and barriers to achieving a comprehensive and high quality active travel network in Montrose. The aims and objectives were generated from a review of the existing active travel network. This process involved identifying key active travel routes between everyday activity destinations, and the level of service provided by the current active travel network. The spatial coverage of the current network was reviewed against key existing and future land uses.

Strategic desire lines to provide for key east-west and north-south movements within the study area were identified. This forms the principle active travel network around which actions are based. In these locations upgraded or new protected infrastructure would serve or potentially generate a demand for active travel. Example movements include routes to and from schools and the academy (located in multiple sites across the town), centres of employment (located to the south in the town centre and Montrose Port, in Forties Business Park and neighbouring premises, and seasonally within fruit farms around Hillside), and centres of retail and tourism (around the High Street, its beach to the east, and the rail station arrival point). Attractive green spaces include Mid-Links Park and Montrose Basin, which is of wildlife interest. Particular attention has been given to enhancing east-west links across the central town 'grid', given the dominant linear layout of much of the town funnelled between the coast and Montrose Basin, whilst acknowledging the key north-south links that exist including with Hillside and Ferryden. Linking the NCN from the River South Esk to the High St/beach area has proved a particular challenge with a gap currently existing in the formal NCN map at this location. Significant development areas in the north of the town around Sunnyside Royal Hospital and the airfield to the east have also been taken into account, alongside providing strategic active travel routes to and from existing residential neighbourhoods.

The proposed measures highlighted in Figure 2 were subject to two forms of analysis/modelling:

1. Multi-criteria assessment (MCA) considering all aspects of the active travel network, such as accessibility, safety, attractiveness, delivery; and,
2. Spatial Dynamic Network Analysis (sDNA) used to assess network connectivity and completeness and to predict potential usage.

This analysis allowed for the performance of individual active travel actions to be reviewed and ranked. Figure 3 illustrates the resulting potential strategic active travel network.

Figure 2 – Location of proposed active travel infrastructure measures

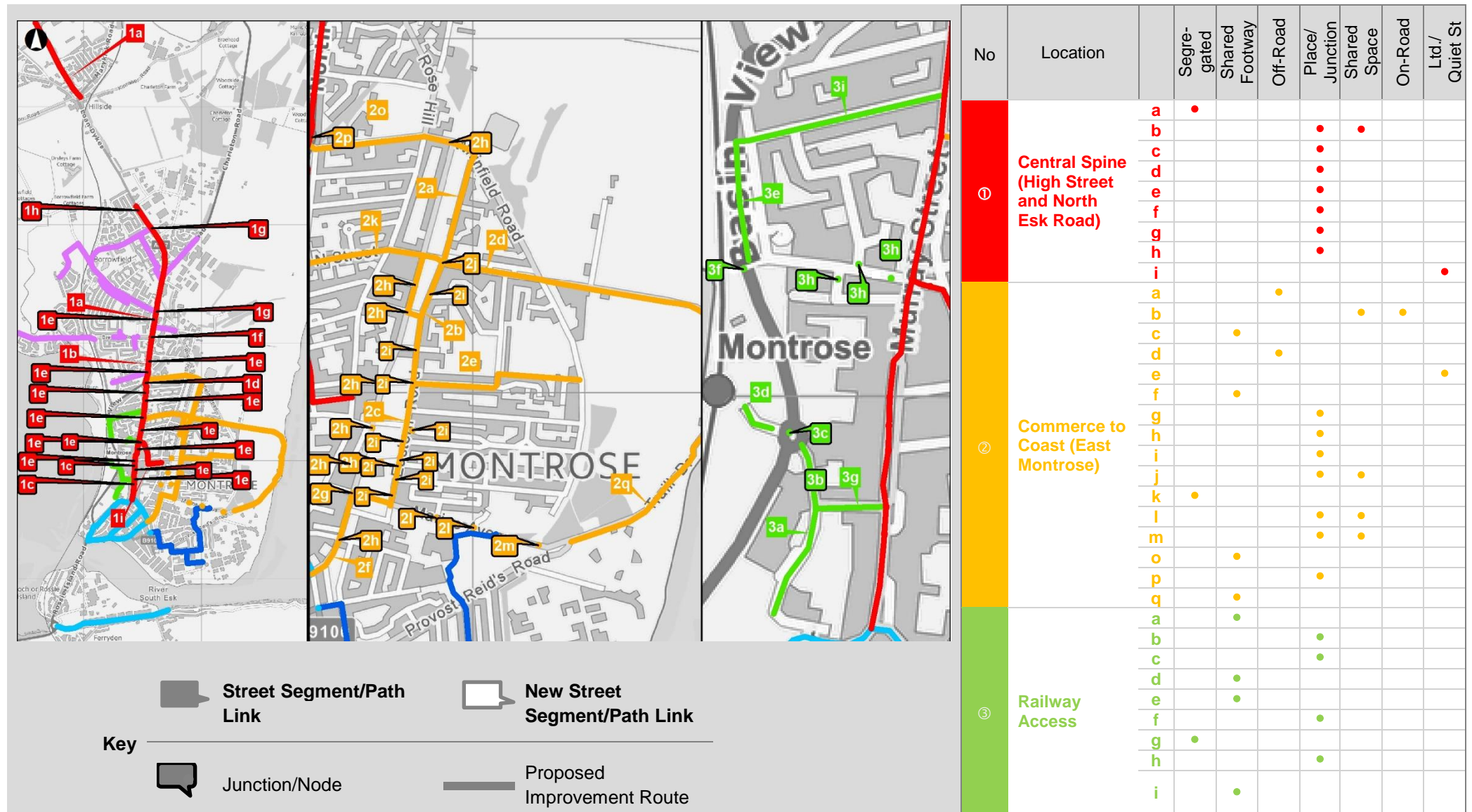
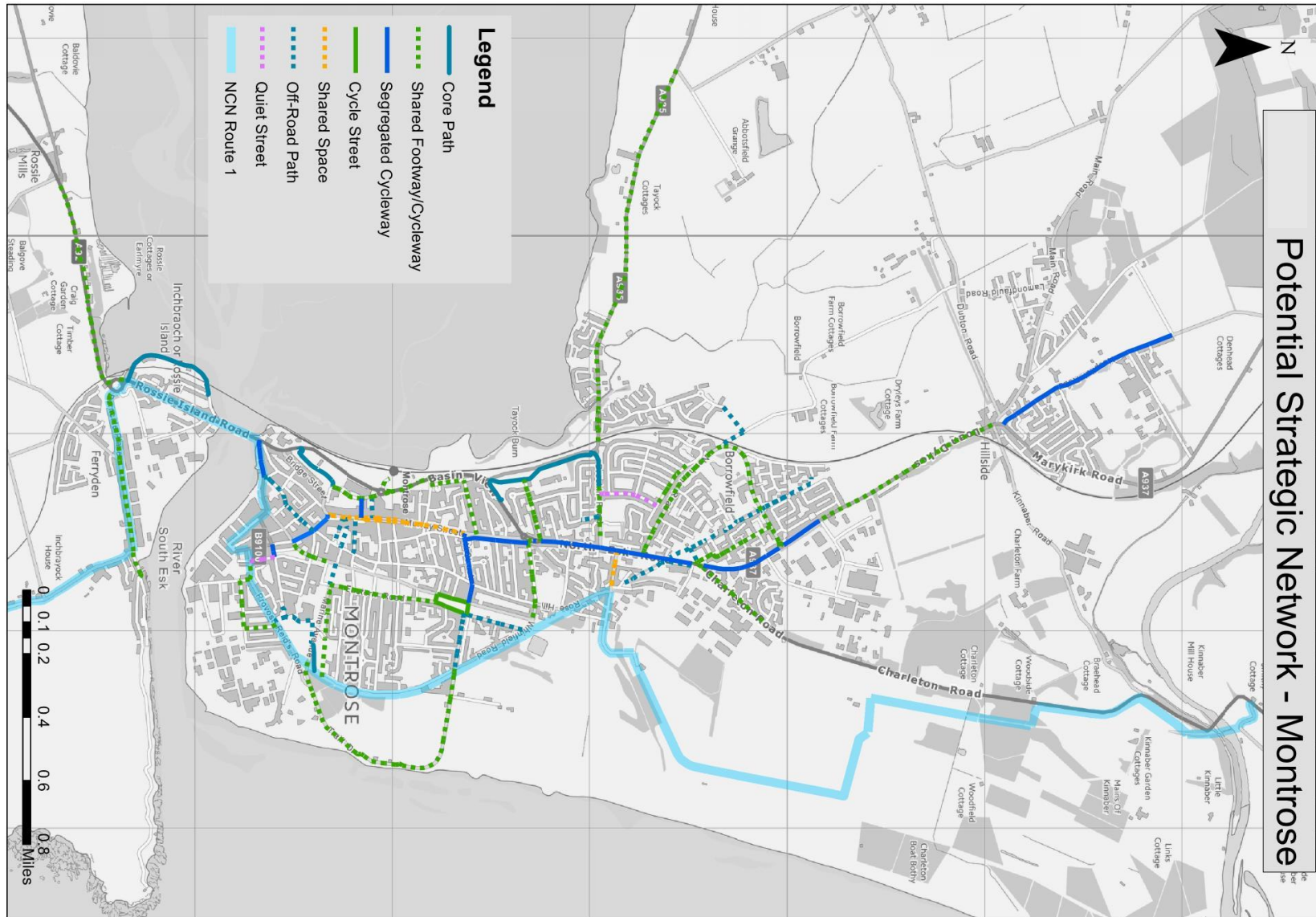


Figure 3 - Potential strategic active travel network



4 Opportunities for investment

The infrastructure action plan (Table 1) provides a description of proposed active travel infrastructure for Montrose, required to deliver the Potential Strategic Active Travel Network, covering:

- The type of infrastructure/intervention proposed, accompanied by a brief explanatory description;
- Approximate lengths of infrastructure (based on GIS measurements);
- Approximate duration of work (from feasibility to opening, assuming political and funding support);
- Indicative order of magnitude of cost.

Table 1 - Proposed action plan of active travel measures in Montrose

Proposal		Delivery					
Action Ref.	Location	Type of action* Junction On-road cycle lanes Shared footway/cycleway <i>Fietsstraat</i> - Cycle street with no overtaking Shared space Quiet street	Supporting information	Extent (number/length of path (m))	Duration of work required (Short <1yr/ Medium <2yrs/ Long >2yrs)	Approx. scale of cost (£) Q - <£50k L - £50k-£150k M - £150k-£500k H - £500k-£1M S - £1M-£2.5M U - £2.5M-£5M	
T1	Action 1: Central Spine (High Street and North Esk Road) (Ranking 1, indicative cost £2.5M-£5M)						
T1	a	High Street, Murray St, North Esk Road, Coronation Avenue	Segregated cycle lanes and extended footway	Continuous bi-directional cycleway on west side of street, reallocating road space and relocating/removing car parking where needed	3408	L	>£1M
T1	b	High Street and Murray St	Pedestrianisation	Castle Place to Hume St: Conversion of carriageway west of central reservation to public plaza, with two way traffic on east side of central reservation	290	L	>£1M
T1	c	High Street	Crossings (2)	Streetscene improvements, gateways and legibility measures to draw a link between Railway Close and High Street and Queen's Close and High Street	2	L	£50k-£150k
T1	d	A92/North Esk Road	Crossing	Relocate toucan crossing eastwards to provide direct link along North Esk Road for active travel	1	M	<£50k
T1	e	High Street, Murray St, North Esk Road, Coronation Avenue	Crossings	Continuous footways/cycleway cross-overs at: Hume St Victoria St Lower Hall St (west) Redfield Road Redfield Crescent Nursery Road Little Nursery Distillery View Continuous footways at: New Wynd Lower Hall St (east) King St John St Raised table at: North St	13	M	£150k-£500k
T1	f	Brechin Road/North Esk Road	Junction	Significant junction remodelling for active travel in all directions linking to facilities on Brechin Road	1	M	£150k-£500k

T1	g	Newhame Road/North Esk Road	Junctions (2)	Significant junction remodelling for active travel in all directions linking to facilities on Newhame Road. Covers both interfaces of Newhame Road loop with North Esk Road and Coronation Avenue	2	M	£150k-£500k
T1	h	Coronation Avenue	Crossing	Toucan crossing between Newhame Road (north) and shared facility on east side of Coronation Avenue	1	S	<£50k
T1	i	Upper Hall St, Market St, Chapel St	Quiet Street	Local improvements to narrow footway width and signage to acknowledge high modelled walking flows from High St to George St via Baltic Street	342	S	<£50k
T2		Action 2: Commerce to Coast (Ranking 2, indicative cost £1M-£2.5M)					
T2	a	Warrack Terrace	Shared Path/Off-Road Path	Whinfield Road to Dorward Road: New shared path within park around its eastern perimeter from Whinfield Road to Montrose Tennis Club New shared path around verge on eastern perimeter of Montrose Tennis Club New shared path within park between Montrose Tennis Club and Dorward Road accompanied by new raised table north-south across centre of Dorward Road between Warrack Terrace and Provost Scott's Road	386	M	<£50k
T2	b	Wellington Gardens, Provost Scott's Road	Cycle Street	Dorward Road to Reform St: Introduction of one-way circulation system around park block bounded by Dorward Road and Reform St, to counter width limitations and frontage parking currently along both Wellington Place and Provost Scott's Road through this section Cycle streets introduced on Wellington Gardens and Provost Scott's Road to encourage slow traffic speeds and discourage overtaking of cyclists, e.g. signage and surface treatments	431	M	<£50k
T2	c	Wellington Place, Union Place and Eastern Road	Shared footway/cycleway	Reform St to Marine Avenue: Widening of existing footway on western side of street (alongside eastern perimeter of park) to provide shared facility. Removal of car parking on eastern side of street where necessary to allow sufficient space, e.g. curvature in road alignment	540	M	£50k-£150k
T2	d	Dorward Road	Off-Road Path	Provide a sympathetically-designed green corridor with active travel facilities through the green space along Dorward Road between Warrack Terrace and existing off-road path alongside Whinfield Road. Enhance the natural character of the corridor with biodiverse planting, sculpture and seating (e.g. <u>Warwick St park</u> , Newcastle)	283	M	<£50k
T2	e	Union St	Signage	Sign E-W walking route between High Street and Coast via John St, Union Road, Union St, cut-through path between Union St and Whinfield Drive immediately to south of rugby training ground, and proposed new surfaced path between Whinfield Road and Trail Drive (below)	504	S	<£50k
T2	f	Panmure Place	Shared footway/cycleway	Convert existing footway on west side of carriageway to shared use between George St and E-W path through park running between Marine Avenue and Museum Street	379	S	£50k-£150k
T2	g	Provost Scott's Road	Crossing	Provide raised table and zebra crossing in heritage/high quality materials between park path and Museum Street, highlighting east-west connectivity between town centre/museum and towards coast	1	S	<£50k
T2	h	Provost Scott's Road	Crossings	Provide build outs and reduce radii at:	8	M	£150-500k

				<p>New Wynd (with significant new public plaza with seating and information on south side) with zebra crossing linking to Melville Road</p> <p>Provide zebra crossings across Provost Scott's Road at: North side of St Peter's Road South of Union Road (with footway extension) to John St With zebra crossing from Provost Scott's Road to north side of Rosehill Road to access NCN path to the north</p> <p>Provide continuous footways across: Panmure St (with signage to High St via Baltic St/Queen's Close) Reform St Carnegie St Bow Butts (interfacing with proposed shared footway along Panmure Place)</p>			
T2	i	St Peter's Place and Eastern Road	Crossings	<p>Provide build outs and reduce radii at: Marine Avenue with crossing between cycle paths on each side adjacent to St Peter's Place and academy St Peter's Road Raised table at Union St/Union Road Wellington St, emphasising E-W movement between path through park to west and football ground to east Wellington Park</p> <p>Provide continuous footways across: Paton's Lane Christie's Lane India St India Lane</p>	9	S	£150k-500k
T2	j	Dorward Road/Wellington Gardens/Warrack Terrace	Junction	Raised table and slow speed entry feature across junction with high quality materials and prioritised active travel movement from south side of Dorward Road (west) and proposed green route along centre of Dorward Road (east) (e.g. Gordon Square, London)	1	S	£50k-£150k
T2	k	North St and Dorward Road	Segregated cycleway	Bi-directional cycleway on south side of carriageway between Wellington Gardens and Murray St	398	M	£150k-£500k
T2	l	Marine Avenue	Crossings (2)	Raised tables to provide greater prominence across road for paths at Williams Philips Drive and Frank Wood Way	2	S	£50k-£150k
T2	m	Traill Drive	Crossing	Raised table to provide greater priority to NCN alignment	1	S	<£50k
T2	o	Rosehill Road	Shared footway	Convert existing footway on north side of carriageway to shared use to provide link between Mount Street and North Esk Road	416	S	£50k-£150k
T2	p	Rosehill Road/North Esk Road	Crossing	Toucan crossing linking to proposed segregated cycleway on North Esk Road at Grove Fish Shop, with removal of cycle prohibition on path leading behind the Grove to facilitate desire line north-eastwards via Wishart Avenue/Wishart Gardens (via cut through adjacent to garages)	1	M	<£50k
T2	q	Traill Drive	Shared footway	Potential shared footway between Whinfield Road and Marine Avenue to encourage family friendly cycling	1348	S	£150k-£500k
T4		Action 4: River South Esk/Ferryden to Central Montrose (Ranking 3, indicative cost ££500k-£1M)					

T4	a	Wharf St	Segregated cycle lanes and extended footway	Segregated bi-directional cycleway on south side of footway between A92 and Apple Wynd Extension of footway eastwards through current gravelled area	185	M	£50k-£150k
T4	b	Wharf St/Apple Wynd	Junction	Toucan crossing across Wharf St opposite Grog House pub, with placemaking/raised carriageway scheme crossing Wharf St between RNLI and Grog House and including Apple Wynd/Wharf St/Shore Wynd junctions Shared footway on west side of Apple Wynd around Grog House Tiger crossing of Apple Wynd between Grog House and school site	1	M	£50k-£150k
T4	c	Apple Wynd	Shared footway/cycleway	Potential reallocation of land around perimeter of Southesk Primary School to provide shared footway on south side of Apple Wynd	191	M	<£50k
T4	d	Apple Wynd	Shared footway/cycleway	Shared footway/cycleway on south side of Apple Wynd/South Esk St facilitated by potential conversion to one way of South Esk St (e.g. southbound only) accompanied by traffic management review and scheme in broader area (e.g. mini-Holland/filtered permeability approach)	189	L	<£50k
T4	e	Bridge St (A92)	Shared footway/cycleway	On east side of road linking into facility to the south on east side of Rossie Island Road (bridge over River South Esk), and to the north a shared footway to the north side of Bridge St	136	S	<£50k
T4	f	Bridge St/Castle St	Segregated cycleway	Bidirectional segregated cycleways on west side of carriageway to provide prominent corridor into the centre of town, following current priority which extends from Bridge St onto Castle Place Tiger crossing across southern end of Bridge St to provide access to northward cycleway on west side of Bridge St	425	S	£150k-£500k
T4	g	Wharf St/Hill St	Shared footway/cycleway	On north side of Wharf St to junction with River St (recent NCN route)	179	S	<£50k
T4	h	Hill St	Quiet Street	On road cycling with potential one-way with cycling contraflow between Ramsay Street and Ferry St to counter street width restriction	198	S	<£50k
T4	i	High St/Castle Place/George St	Junction	Segregated cycleway running east-west on north side of Castle Place at junction with High St (around north of Monument via Toucan crossings across High St) Alternate signalisation of traffic flows through single lane at eastern junction of George St with High St to provide bidirectional cycle lane on north side of George St (precedent at north end of High St at Murray St)	1	M-L	£50k-£150k
T4	j	George St	Segregated cycleway	Removal of car parking on north side of George St and provision of segregated bi-directional cycleway to junction with Baltic St	118	M-L	£50k-£150k
T4	k	George St/Baltic St/South Esk St/Bow Butts	Junction	Toucan crossing across George St to the south of S Esk St/Bow Butts, connecting shared footway on southern side of S Esk St with shared space on Bow Butts Stopping up of Bow Butts with continuous footway/plaza outside Sharkey's [Newcastle Example] and shared spaces cycling link through to Bow Butts	1	M	£50k-£150k
T4	l	George St/Ferry St	Segregated cycleway	Provision of segregated bi-directional cycleway from junction with Baltic St to Erskine Place	123	M	£50k-£150k
T4	m	Erskine Place/Ferry St	Junction	Build outs at junction to provide shorter crossings around junction with placemaking e.g. planters around junction/shops	1	M	£50k-£150k
T4	n	Hill St/George St/Panmure Place/Ferry St	Junction	Toucan crossing across George St to north side of Panmure Place/Hill St to link into contraflow/quiet street on Hill St and shared footway on north side of Panmure Place	1	M	£50k-£150k

T4	o	Burnside Place/Ogilvie Terrace/West Terrace/Southesk Place	Shared footway/cycleway	Provide shared footway/cycleway on north side of the carriageway on existing wide footway	967	S	£50k-£150k
T3		Action 3: Railway Access (Ranking 4, indicative cost £500k-£1M)					
T3	a	Western Road	Shared footway/cycleway	Extended footway on eastern side of Western Road to connect to access through green space to the south and shared footway along Basin View to the north	256	M	<£50k
T3	b	Western Road/Hume St	Junction	Reduced size of junction including widened footway/cycleway on east side of Western Road with north-south crossing facility over Hume St. Potential for signalisation and/or toucan crossings dependent on road traffic flows	1	M	£50k-£150k
T3	c	Basin View/Western Road	Junction	Provide shorter/higher quality crossings on roundabout arms for pedestrians and cyclists on Basin View (south) and Western Road that limits deviation around the roundabout for active travel Signage of route to station via existing crossing of Basin view from Railway Close to station platform (via Aldi) Options to provide more direct alignment of existing crossing point between railway close and station forecourt and/or signalisation of junction to provide more direct active travel crossing facilities. Consideration to be made of opportunities from development land to south of roundabout either side of Basin View	1	M	£50k-£150k
T3	d	Station Access	Shared footway/cycleway	Provide continuous footway/cycleway on south side of station access road to link into station forecourt addressing existing worn desire lines	54	M	<£50k
T3	e	Basin View	Shared footway/cycleway	Construction of new shared footway/cycleway on eastern boundary of Basin View to replace quiet street along Western Road north Potential kerb realignment/hedge trimming along Basin View dependent on available verge width. Potential further improvements in any adjacent redevelopment of industrial units to east of Basin View	187	M	<£50k
T3	f	Lower Hall Street/Basin View	Junction	Significantly reduced junction width of Lower Hall Street and appropriate north-south crossing facilities to provide continuity for active travel facility along east side of Basin View (e.g. tiger or toucan crossing)	1	M	£150k-£500k
T3	g	Hume St	Segregated cycle lanes and extended footway	Widening of footway on south side of road to provide bidirectional cycleway. Relocation of taxi rank opposite (potential use of derelict land south of street) and parking restrictions to provide clear width for traffic	100	M	£50k-£150k
T3	h	Lower Hall Street	Crossings (2)	Provide continuous footways at St John's Place, Strathmore Place and Murray Lane acknowledging modelled pedestrian flows along this corridor	2	S	£50k-£150k
T3	i	Blackfriars St	Shared footway/cycleway	Extend footways on south side of carriageway acknowledging high modelled pedestrian flows and location of school	285	S	<£50k
T6		Action 6: North West Montrose (Ranking 5, indicative cost £500k-£1M)					
T6	a	Brechin Road	Crossing	Provide crossing point north of Glenisla Road bus stop located on the south side of the road potentially in conjunction with development on north side of road	1	S	<£50k

T6	b	Brechin Road	Crossing	Provide continuous crossing point at access to Lidl linking shared path on north side of Brechin Road on either side	1	S	<£50k
T6	c	Brechin Road	Shared footway/cycleway	Designate existing footway on south side of road between Glenisla Road junctions as shared to link with shared footway on south side of Brechin Road to the east	90	S	<£50k
T6	d	Brechin Road/Panter Crescent	Quiet Street	Extend parking restrictions on Panter Crescent to and around its junction with Renny Crescent from Brechin Road to address peak time congestion issues with vehicles accessing/leaving Renny Crescent and the issues this causes for cyclists	47	S	<£50k
T6	e	Unnamed link between Glenogil St and Brechin Road	Off-road Path	Provide signage and lighting and complete construction of southern interface with Glenogil St	90	S	<£50k
T6	f	Nursery Lane	Shared footway/cycleway (TBC)	Extensions to footway likely to require relocation of on-street car parking given likely traffic flows to/from school and width currently taken by this. Liaison with Lochside Primary School required to determine most suitable solutions on highest priority streets in area	314	M	<£50k
T6	g	Borrowfield Road	Shared footway/cycleway	Widening of footway on south side of carriageway (side with fewest accesses) along length from Panter Crescent to Borrowfield Crescent (path link to Newhame Road) including radii reduction and raised tables at Tailyour/Graham/Renny Crescents.	309	M	<£50k
T6	h	Newhame Road	Crossing	Widening of carriageway and widening of existing crossing island between paths on the east and west of Newhame Rd to 2m to accommodate bicycles	2	M	£50k-£150k
T6	i	Newhame Road	Shared footway/cycleway	Around inside of Newhame Road for entire length (between Coronation Avenue and North Esk Road)	1326	M	£150k-£500k
T6	j	Newhame Road	Crossings (3)	Raised tables and reduced radii along Newhame Road at Coronation Way, Newmanswalls Way, and Langley Avenue	3	S	£50k-£150k
T6	k	Fettes Way/Coronation Way	Shared footway/cycleway	Footway widening on west side of street along length between North Esk Road and Newhame Road with priority treatments at side roads Note: this would be a supplementary route in addition to Newhame Road and North Esk Road	442	S	£50k-£150k
T6	l	Charleton Road	Shared footway/cycleway	On either side of road between junction with North Esk Road and Charleton Place	426	S	£50k-£150k
T6	m	A935 (west of Brechin Road roundabout) and Mallard Drive	Signage and markings	Improve clarity of shared paths, addressing localised gaps and deficiencies where these exist particularly along A935	502	S	<£50k
T6	n	Mallard Drive	Off-Road Path	Provide link between Mallard Drive and Newhame Road via improvements to existing underpass or alternative using opportunities provided by development of land adjacent	1137	M-L	£50k-£150k
T6	o	Broomfield Road	Shared Path	Linking between NCN and North Esk Road	184	S	<£50k
T6	p	Broomfield Road/North Esk Road	Crossing	Toucan crossing linking to proposed segregated cycleway on North Esk Road	1	M	<£50k
T5		Action 5: GSK and Sports Centre Link (Ranking 6, indicative cost <£500k)					
T5	a	Erskine Place	Segregated cycleway	Segregated bi-directional cycleway from junction with Ferry St to Erskine St	66	S	<£50k
T5	b	Erskine St	Quiet St	Flattened setts on each side of carriageway to provide comfortable cycling conditions	129	S	<£50k
T5	c	Caledonia St	Shared footway/cycleway	On north side of carriageway between Erskine St and Ferry Road, avoiding access on south side (recent NCN route)	94	S	<£50k
T5	d	Caledonia St/Ferry Road	Crossing	Crossing from north side of Caledonia St to east side of Ferry Road	1	S	<£50k

T5	e	Ferry Road	Shared footway/cycleway	On east side of road. N.B. industrial accesses to units and footway parking. Recent footway works but provide wide radii/lack of dropped kerbs in places	56	S	<£50k
T5	f	Garrison Road	Shared footway/cycleway	On north side of road on current footway (narrow but relatively new, otherwise quiet street) between Garrison Road and off road path to GSK	126	S	<£50k
T5	g	Garrison Road/off road path	Crossing	Raised table to prioritise access to off-road path to GSK. Resign to make pedestrian and cycle usage clear	1	S	<£50k
T5	h	Garrison Road	Shared footway/cycleway	On south side of road (no frontage access compared to north side)	121	S	<£50k
T5	i	Garrison Road/Beacon Road	Crossing	Raised table or crossing from south side of Garrison Road to footway on west side of Beacon Road	1	S	<£50k
T5	j	Beacon Road	Shared footway/cycleway	On west side of road on current footway (narrow but relatively new, otherwise quiet street) between Garrison Road and Provost Reid's Road	167	S	<£50k
T5	k	Beacon Road/Provost Reid's Road	Crossing	Raised tiger crossing between west side of Beacon Road and off-road path north of Provost Reid's Road to sports centre	1	S	<£50k
T5	l	Off-road path from Provost Reid's Road to Marine Avenue	Off-road Path	Widening of existing path to 3m to accommodate walkers and cyclists with mapping and signage	323	S	<£50k
T5	m	Marine Avenue	Crossing	Raised table to provide greater priority for link between off-road paths to south (sports centre) and north (to NCN)	1	S	<£50k

*The type of action identified in the table above is the high-level optimum solution. Future detailed design work may result in the action type changing to a solution lower in the design hierarchy.