

ITEM No ...6.....

REPORT TO: FAIR WORK, ECONOMIC GROWTH AND INFRASTRUCTURE COMMITTEE – 25 SEPTEMBER 2023

REPORT ON: SUSTAINABLE TRANSPORT DELIVERY PLAN

REPORT BY: EXECUTIVE DIRECTOR OF CITY DEVELOPMENT

REPORT NO: 265-2023

1 PURPOSE OF REPORT

1.1 This report seeks approval of the draft Sustainable Transport Delivery Plan, that sets out an ambitious 10-year programme of infrastructure projects targeted to improve sustainable travel in the City and support the regions transition to net zero transport.

2 RECOMMENDATION

2.1 It is recommended that the Committee:

- a approves the draft Sustainable Transport Delivery Plan at Appendix 1;
- b delegates the Head of Sustainable Transport & Roads to carry out a consultation on the draft Plan with key stakeholders and to finalise with changes as appropriate; and
- c delegates the Head of Sustainable Transport & Roads to pursue external funding to enable progression of the projects identified in the plan.

3 FINANCIAL IMPLICATIONS

3.1 The costs of consulting on the Sustainable Transport Delivery Plan will be contained within the City Development revenue budget for 2023/2024.

4 BACKGROUND

4.1 Reference is made to Article V of the minute of the City Development committee meeting held on 7 March 2022, Report Number 63-2022 refers. This report approved a strategic framework approach to developing sustainable transport infrastructure, comprising of the Regional Transport Strategy complemented by a new Dundee City Sustainable Transport Delivery Plan.

4.2 The Regional Transport Partnership approved the draft Regional Transport Strategy to proceed to consultation at the Tactran Partnership Board held on 13 June 2023. The Regional Transport Strategy sets out Dundee’s transport needs over the forthcoming decade in a regional context, taking cognisance of the National Transport Strategy’s overarching objectives, policies, and targets.

4.3 In order to shape sustainable transport at a city level, a Dundee specific Sustainable Transport Delivery Plan has been developed to complement the Regional Transport Strategy and provide a secondary layer of delivery detail to the regional objectives. The Delivery Plan will inform the future Local Development Plan and contribute to the objectives of the Climate Change Action Plan by developing a transport system that encourages and promotes sustainable transport.

4.4 The Sustainable Transport Delivery Plan is intended to be read in conjunction with the Regional Transport Strategy which forms the overarching transport strategy and sets out the future transport vision determined through stakeholder and public consultation. The Delivery Plan focuses on local level project interventions identified within the Regional Strategy and doesn't duplicate the scope of the Strategic Transport Projects Review (STPR2) which identifies

national and regional transport interventions such as cross boundary provisions of rail, aviation, and trunk road projects.

5 NEXT STEPS

- 5.1 Following approval of the draft Plan a stakeholder consultation exercise will be undertaken with changes made where appropriate prior to finalising and publishing the plan.
- 5.2 The project interventions detailed in the Delivery Plan correspond with objectives contained within the draft Regional Transport Strategy and were identified following an extensive appraisal process including public consultation. Secondary detailed consultations will be held on each infrastructure project as part of the design phase development, and further statutory consultations will be undertaken for all Road and Traffic Orders associated with the projects.

6 POLICY IMPLICATIONS

- 6.1 This report has been subject to the Pre-IIA Screening Tool and does not make any recommendations for change to strategy, policy, procedures, services or funding and so has not been subject to an Integrated Impact Assessment. An appropriate Senior Manager has reviewed and agreed with this assessment.

7 CONSULTATIONS

- 7.1 The Council Leadership Team have been consulted in the preparation of this report. Projects identified with the Delivery Plan will be subject to further reports to Committee.

8 BACKGROUND PAPERS

- 8.1 None

Ewan Macnaughton
Head of Sustainable Transport and Roads

Author: James Mullen

Robin Presswood
Executive Director of City Development

Dundee City Council
Dundee House
Dundee

EM/JM/KM

18 August 2023



SUSTAINABLE TRANSPORT DELIVERY PLAN 2024 – 2034

Infrastructure for a sustainable mobility future



Across the world, modes of travel are evolving and transport infrastructure is modernising to harness new technology and respond to public preferences for how they make journeys.

Urban cities with condensed travel demand networks are well placed to adapt to evolving travel patterns and modernise the built environment.

Transport is the single biggest contributor to greenhouse gas emissions, including carbon dioxide and central to the damage we are doing to our planet. If we are to meet the challenge of becoming net carbon zero, our transport systems have to change.

We need a transport system designed for everyone, whatever our location, economic circumstances, gender, culture or abilities.

Opportunities to realise ambitions to achieve a greener, healthier and more equitable transport provision are present and the Scottish Government has set out objectives in the national transport strategy for reduced carbon emission transport, fewer private car journeys, improved public transport infrastructure and greater numbers of journeys made by active travel modes.

Challenges in achieving change will be faced with the pace of transition required to meet these objectives, including the reallocation of road space to accommodate improved sustainable transport infrastructure and reversing the growth in private car use.

In terms of zero emission technology Dundee is a leading city in electric vehicle infrastructure and the Michelin Scotland Innovation Parc continues to provide a leading role in the research, development and manufacture of future transport advancements.

Dundee is a strong and growing regional centre and we will work with regional partners and neighbouring authorities to develop cross boundary sustainable modes of travel. The Council's City Centre Strategic Investment Plan sets out ambitions for the city centre and a public transport network operating in close proximity to the most of the city's residential properties.

The COVID-19 pandemic has resulted in a change to many aspects of travel behaviour and how people move around the city. The pandemic has driven an increase in digital communication, online retail and home working however there is uncertainty as to the longevity of these changes and how travel behaviour will continue to evolve.

This delivery plan will require to be adaptable to take account of longer-term impacts as they become clearer. However, the improvement of air quality, increasing walking, wheeling and cycling and utilising shared and

public transport are objectives which will continue to form core principles for guiding our transport infrastructure investments.

This delivery plan supports the national and regional transport strategy's core ambitions to decarbonise transport and increase the proportion of journeys made by sustainable modes. This plan outlines the interventions proposed in Dundee to adapt infrastructure over the next decade to create a transport network fit for the future.

We start from a strong position, with world leading electric vehicle infrastructure, a strategically planned core and orbital network of pedestrianisation and active travel routes, and a frequent public transport network operating within 400m of most homes. The city's transport network evolved from an era of active travel and public transport being the primary modes of transport which provides an advantageous foundation to build the infrastructure of the future.

Our city currently features many aspects of the "20 minute neighbourhood" concept and the objectives outlined in this delivery plan will improve transport for communities in all areas of the city in accessing employment, education, leisure and recreational amenities.

This plan sets out our commitment to delivering truly sustainable, safe and integrated mobility infrastructure for Dundee over the next 10 years.

Though the objectives set out in this delivery plan will benefit current and future residents of the city, we know change can be disruptive. We will continue to listen to and involve communities as solutions for the future are designed and delivered. We are confident that as a city working together, for the sake of its future, we can make this happen.



Councillor Steven Rome
Convenor of Fair Work, Economic
Growth and Infrastructure Committee
Dundee City Council

INTRODUCTION	01
SUSTAINABLE TRANSPORTATION – STRATEGIC FRAMEWORK	02
ACTIVE TRAVEL	03
ACTIVE FREEWAY ROUTES	04
ACTIVE TRAVEL NETWORK	05
CYCLE PARKING AND STORAGE	07
ROAD SAFETY	08
20MPH ZONES	09
SCHOOL STREETS	11
BUS SERVICES	12
BUS PRIORITY CORRIDORS	13
BUS STOP INFRASTRUCTURE	14
MOBILITY AS A SERVICE (MAAS)	15
DIGITAL INFORMATION AND TICKETING	16
CAR CLUBS AND SHARED MOBILITY	16
MOBILITY HUBS	17
ZERO EMISSION VEHICLE INFRASTRUCTURE	18
ELECTRIC VEHICLE PUBLIC CHARGING	19
INFRASTRUCTURE EXPANSION	20
DELIVERY PLAN SUMMARY TABLE	21

This page is intentionally left blank

Dundee’s transport network is a historically evolved built environment originating from an era when shared public transport, walking and cycling were the predominant modes of local travel. Like other Scottish cities the growth in private car ownership throughout the 20th century saw the transport network adapted to accommodate car growth and more recently road space became dominated by traffic and parked cars.

Dundee City Council aims to enhance the current sustainable transport infrastructure by prioritising active travel, public and shared transport over private car use. In doing so we aim to make the city’s streets safer and more usable for Dundee’s residents and visitors.

It is recognised by both the national and regional transport strategies that motor vehicles will continue to feature in the city’s transport system over the coming decades. The interventions detailed in this delivery plan are designed to reduce the dependency on cars by providing sustainable alternatives, while recognising the importance of our road network and its requirement to provide safe, reliable, accessible, and serviceable transport systems for residents and businesses.

Carbon emissions from vehicle transport are now recognised as unsustainable and national policies to phase out internal combustion engines and incentivise zero emission vehicles are commencing a steep growth profile over the coming decade. This is already evident from the increasing proportion of electric vehicles in new car registrations. The targets contained within the Scottish Government’s Mission Zero for Transport will also require investment in Dundee City Council’s transport assets, with a commitment to phase out the need for new petrol and diesel vehicles in public sector fleets by 2030. The future energy transition of transport will require a radical change to refuelling infrastructure and Dundee has commenced early on this journey with both proportionally high numbers of EV users in the city, and a growing network of charging points. To accommodate this continuing growth of electric vehicles, charging points will require further investment and this delivery plan sets out the strategic objectives for infrastructure provision.

Core to Dundee’s transport network will be a prioritised active travel network providing walking, cycling and wheeling routes which affords the greatest priority to these modes, and places them at the top of the sustainable transport hierarchy. Through direct, safe, and attractive routes we aim to make active travel the most convenient method of travel around the city for users of all abilities. This will create health benefits and transport equality with positive secondary benefits to household finances, environmental impact, and mental health all attributed to cities with high levels of active travel. To enhance active travel routes, environmental improvements will be incorporated in projects with an emphasis on improving biodiversity and habitat along route corridors. The delivery of the projects noted in this plan will also support community wealth building in the city with local supply chain and employment opportunities attributed to the infrastructure investment.

As the city grows as a regional centre, we will ensure that this does not necessitate more car journeys. The delivery plan takes cognisance of potential grant funding sources in shaping the objectives and conforms with both the National Transport Strategy (NTS) and National Planning Framework (NPF4) which promotes the delivery of high quality, sustainable places that meet the transport needs of the city.

This delivery plan will set out the city’s keys objectives in the following modes of sustainable transport;

- **ACTIVE TRAVEL**
- **PUBLIC TRANSPORT**
- **MOBILITY AS A SERVICE AND SHARED TRANSPORT**
- **LOW CARBON VEHICLE INFRASTRUCTURE**

The delivery plan provides detail on the priorities for infrastructure investment and potential funding sources which may enable project delivery. In recognition of other projects throughout Scotland also competing for funding within national programmes, some of the projects referenced in this delivery plan may not be successful in securing funding, and the competitive bidding process may place strain on the national funding programmes leading to postponement of funding awards.

The projects referenced in the delivery plan are at varying stages of development, and changes to outline proposals may be required for various reasons, including value for money, technical feasibility, and community support.

Prioritising Sustainable Transport

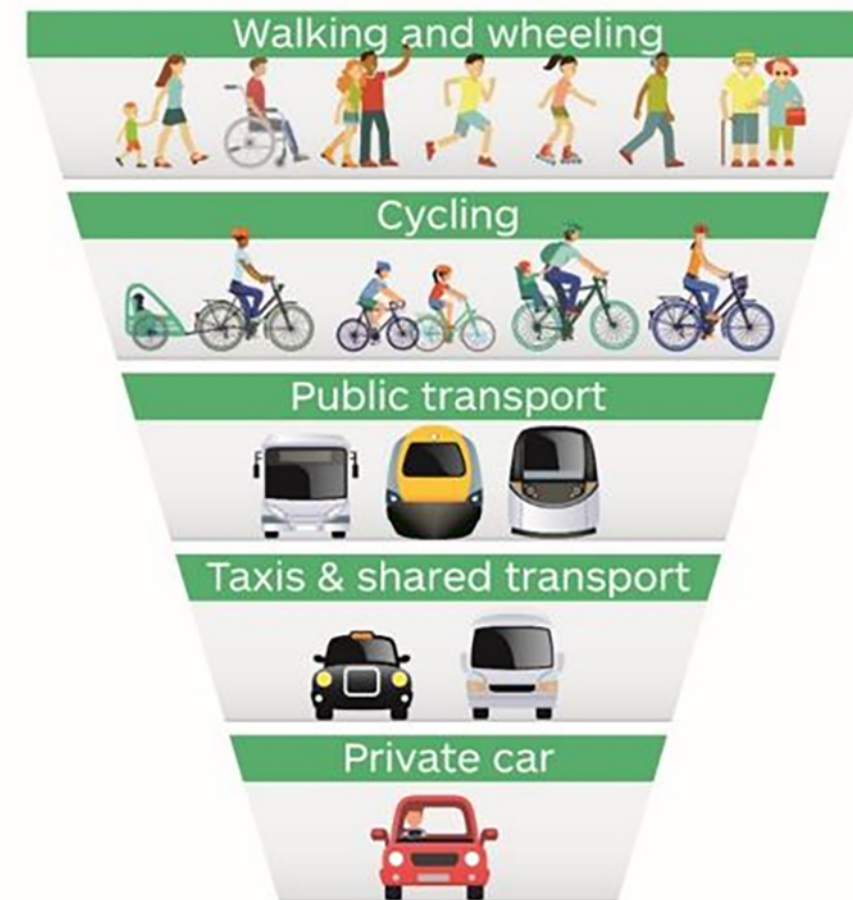


Figure 1 – Sustainable Travel Hierarchy (National Transport Strategy)

The Transport (Scotland) Act 2005 established the formation of seven Regional Transport Partnerships. The core purpose and statutory responsibility of the Regional Transport Partnership is to develop a strategy on a regional basis which replaces the Local Transport Strategy previously prepared in Dundee prior to the inception of the Regional Transport Partnership. This Sustainable Transport Delivery Plan is set within this regional context and tailored to local circumstances and requirements.

The Regional Transport Partnership, Tactran, has produced a new draft Regional Transport Strategy for the period of 2024 to 2034 which is currently published for consultation.

The Regional Transport Strategy is cognisant of the National Transport Strategy's overarching objectives, policies, and targets, and incorporates national transportation projects identified within the Strategic Transport Projects Review. The Regional Transport Strategy formulates a strategy to achieve these objectives through implementation of common regional interventions.

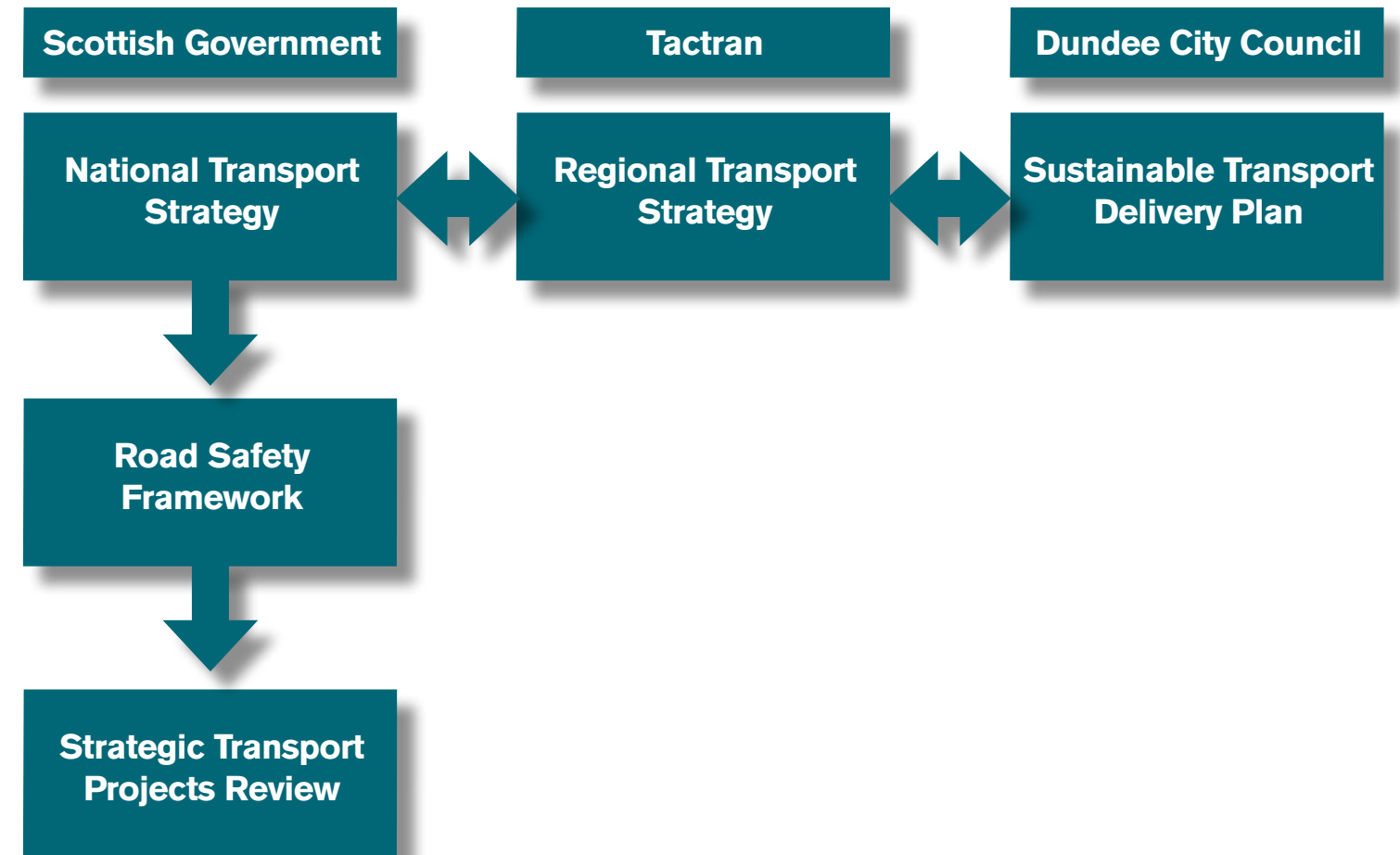
Tactran is governed by a board including representatives of the constituent Councils, and the Regional Transport Strategy is developed in consultation with Elected Members and Officers of the constituent Councils, along with other stakeholders. The Regional Transport Strategy incorporates local policies and objectives alongside national policies to form a delivery plan for interventions at both a local and regional level. The Regional Transport Strategy includes measures aimed at reducing car dependency and car mileage through demand management and by providing realistic sustainable transport alternatives to car use.

To consolidate local level budget and programme planning, Dundee City Council has produced a Sustainable Transport Delivery Plan to enhance the sustainable transport alternatives to car use and improve accessibility for those without access to a car, as a local level output of the Regional Transport Strategy. Dundee City Council's Sustainable Transport Delivery Plan complements this regional strategy and provides a secondary layer of delivery detail to the regional objectives. The two plans have been prepared concurrently through consultation between the two organisations.

The Delivery Plan has not sought to replicate the work of the Regional Transport Strategy and is intended to be read in conjunction with the Regional Transport Strategy which sets out the future transport vision determined through regional stakeholder and public consultation. The objectives of the overarching regional strategy are reflected in the Sustainable Transport Delivery Plan without contradiction or divergence.

The Delivery Plan focuses on local level project interventions associated with sustainable forms of transportation and does not expand on national and regional transport interventions identified in the Strategic Transport Projects Review such as cross boundary provisions of rail, aviation, and trunk road projects.

In summary, the Delivery Plan forms part of a strategic framework for sustainable transport delivery in the region and develops Dundee's local transport objectives with a greater depth of detail to provide infrastructure project plans for each subject area of the local sustainable transport objectives.



Increasing the number of people choosing to travel around the city by walking, cycling and wheeling is an important factor in improving the city's health and economic prospects. By developing a network of active travel routes, putting in place infrastructure improvements and delivering a programme of supporting initiatives, we aim to create the opportunities to bring about a shift in the city's travel habits.

At a national level, active travel is being given greater priority by the Scottish Government with walking, wheeling, and cycling at the top of the travel hierarchy. The Scottish Government has now committed 10% of its total transport budget to active travel, the equivalent of £320m per annum. As a city Dundee is increasingly ready to take advantage of this new support for improving active travel.

The Scottish Government recognises that more people walking, cycling, and wheeling more often can improve public health and air quality, combat climate change and address a range of other outcomes.

The Council is following the Scottish Government's lead and recognises the role of walking and cycling to make a significant impact on the success of the city and the lives of its citizens. In Dundee, promoting cycling can directly help achieve a number of the outcomes in the City Plan and contribute indirectly to many others. The Council will therefore seek to give priority to pedestrians and cyclists in its management of the transport network.

The long-term trend for modal shift to walking and cycling is positive, which shows that people want to walk and cycle more and are responding to initiatives that encourage them to do so. Scottish Household Survey data shows that 44.8% of Dundee households do not have access to a car for private use and 45.9% of the adult population do not have a driving licence.

The climate and the topography of the city means that cycling will always be a challenge for some journeys and the streetscape and urban traffic discourages cycling in some locations. Yet the city's compact size makes it easy to travel around. Over half of the trips made in Dundee are under 2km, many of which lend themselves to walking and cycling. Of all of Scotland's council areas, Dundee has the highest number of short journeys being made. 57% of Walking and Cycling Index 2021 survey respondents agreed they can easily get to many places they need to visit without having to drive. For example, over 4,700 people live within 800m walking distance of Lochee district centre, and over 28,300 people live within a 2km cycle.

The Council recognises that not everyone can cycle, and cycling is not appropriate for every journey, but believes that cycling has the potential to be a very inclusive mode of travel and can provide travel opportunities for many more people if it is supported with appropriate infrastructure to improve ease of use.



A key element of the Scottish Government's transport investment over the next twenty years is its 'Active Freeway' programme which aims to encourage more people to walk, wheel and cycle more often by providing high-quality direct active travel routes, segregated from traffic on high-demand corridors.

Active freeways are intended to provide improved connections for people living and working along and near to the route, which in addition to the city centre includes links to key destinations such as district centres, education, and places of work. By improving safety, active freeways help address the fear of road danger, the biggest single barrier to increasing active travel. By adopting the term 'Active Freeway', Dundee City Council hopes to maximise its potential access to available funding for delivery.

Dundee City Council has carried out a route appraisal of the city's six key strategic corridors and developed concept designs for a series of high quality 'Active Freeways'. Routes include Arbroath Road, Pitkerro Road, Hawkhill, Macalpine Road, Lochee Road and Harefield/Strathmore Avenue/ Dens Road corridors.

Route identification was informed by engagement with key stakeholders, local community organisations, advocacy groups and with members of the public and then assessed against a broad range of criteria including; safety, coherence, directness, comfort, attractiveness and adaptability. Routes were also assessed against the overall levels of service that they could provide for different active travel users.

Engagement comprised a two-phase process; firstly, to seek views on a preferred route option and then to gather feedback on concept designs.

To complement the stakeholder engagement, a StoryMap website was developed to encourage members of the public to view the proposals and complete a short survey to provide their views on the options being considered.

The active travel network map shown in this report details the route alignment for the proposed active freeways, and Dundee City Council will pursue funding opportunities to develop the route proposals in tandem with further public consultation during the proposal design phase.



Arbroath Road Active Freeway Concept Design

In any location, good quality infrastructure is a keystone to creating a cycling network. A safe, comfortable cycling environment is essential to encourage people for whom safety concerns are a barrier to taking up cycling. A city's cycle infrastructure is made up of the road network, complemented by off-road paths and cycle parking. Dundee already has some good cycle routes, particularly its Green Circular and national cycleway route between Invergowrie and Monifieth, with improvements currently under construction on the section between Broughty Ferry and Monifieth.

Unfortunately, other routes are not as good as potential users would like them to be. They do not link to all parts of the city and at some locations cyclists find themselves in conflict with other users of roads and paths. The recent Sustrans bike life report identified safety risks as the main barrier to active travel uptake across Dundee. Safety issues raised include route quality, conflicts with traffic and vehicle speeds.

The ambition is to develop a cohesive network of active travel routes, with the Active Freeway corridors forming the primary cycle network, supported by a secondary network to provide connections into local communities and enabling people to cycle safely to the places they want to go throughout Dundee. The strategy will also consider opportunities to improve the existing 25-mile Green Circular route that circumnavigates Dundee.

The network will include infrastructure that keeps people safe from vehicle traffic and provides a smooth, direct and comfortable journey.

The proposed active travel network will be made up of three different types of routes

- The primary network (Active Freeways). This will follow main arterial corridors and form the spine of the active travel network.
- The secondary network. This will connect between the primary network and local destinations.
- The tertiary network (Local access routes). This will provide connection from residences to formalised active travel routes through streets with reduced speed limits and accessible footways.

Delivery of the network strategy relies on continued funding over the next ten years. Significantly more funding for active travel investment is now being allocated by the Scottish Government which may provide an opportunity to deliver more ambitious projects.

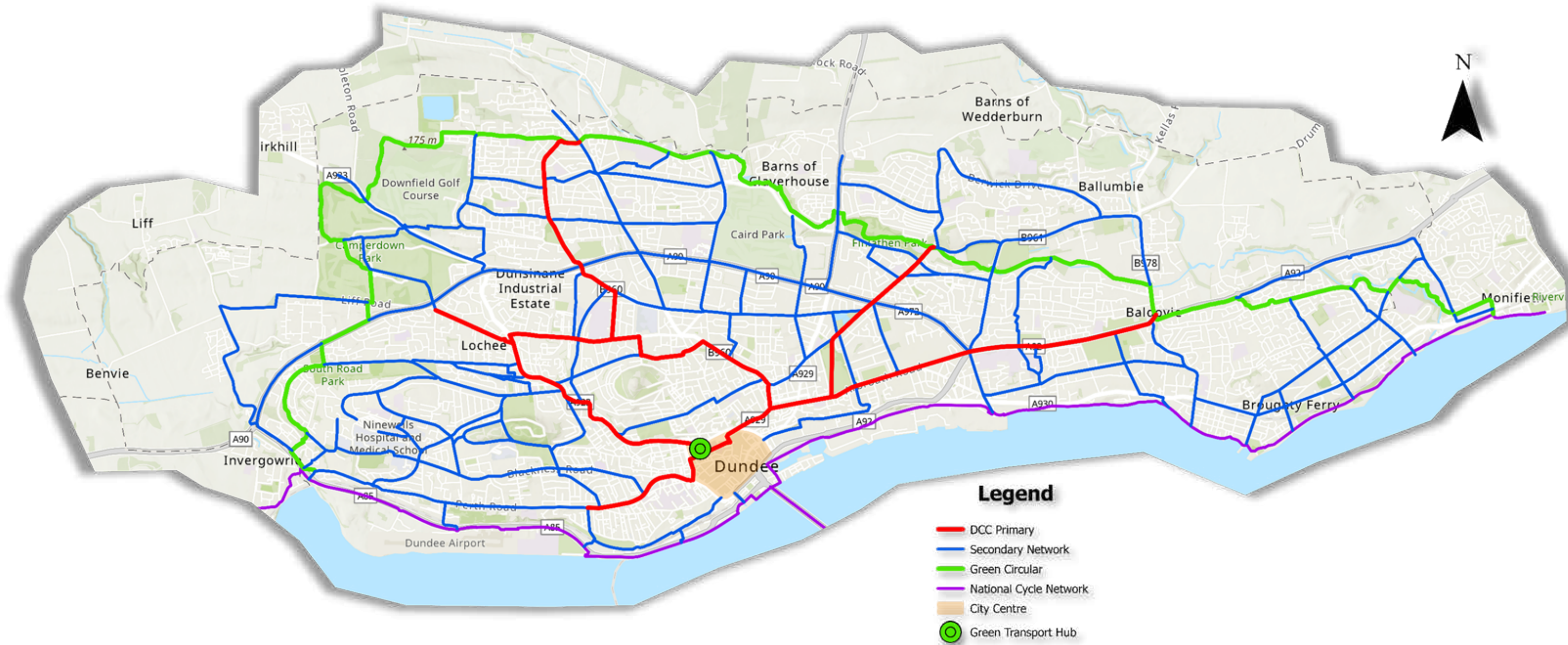
There are several routes within the overall delivery plan where prioritised implementation will have a high impact, positively affecting communities and enabling journeys to be made actively. This includes investment planned as part of the City Centre Strategic Investment Plan and projects that deliver multiple benefits, including, increasing biodiversity, reducing flood risk and improved placemaking.

Schemes identified to be delivered within the next ten years (subject to external funding being secured) are detailed in the table below.

Project	Project Details
Magdalen Green Footbridge	Replacement of the existing footbridge with a new fully compliant pedestrian/cycle bridge that would improve accessibility and connectivity from the Riverside Esplanade to the West End community
Union Street Transformation	Enhancement of the streetscape of Union Street to provide a more attractive place which is inclusive and will be enjoyed equitably by the people who live on, work in, and visit the street.
St Leonards Park Improvements	In partnership with Scottish Water, SEPA and NatureScot deliver active travel improvements as part of a wider redevelopment of the park that includes a new surface water conveyance route to reduce flood risk, increased biodiversity through planting and the creation of new play areas.
East End Campus Active Travel Improvements	Improve the current active travel infrastructure that will facilitate walking, wheeling and cycling by local people travelling to and from the new school.
Western Gateway Active Travel Improvements	Provide new and improved active travel connections to the Dykes of Gray area.
Ninewells Campus Active Travel Improvements	Improve active travel infrastructure within and adjacent to the Ninewells Hospital Campus.
Primary Active Freeway Network	Provide high-quality direct active travel infrastructure, segregated from traffic on the city's high demand strategic corridors.
Broughty Ferry to Monifieth Active Travel Improvements	Complete the city's first major segregated cycle route which runs from Broughty Ferry to Monifieth.

Various funding sources for the above and other schemes will be identified and pursued. External funding opportunities include the Scottish Government, Transport Scotland, Sustrans, and other funding programmes are also expected to be established over the 10-year lifetime of the delivery plan.

The council recognises there are significant challenges in delivering a high-quality cycle network, particularly given the limited road space available. One of the key challenges will be the protection of public transport from delays. In some areas this may require cyclists sharing bus lanes, or the use of cycle lanes rather than segregated cycle racks. The potential impact on current residential and business parking provision, and access required for servicing/loading for businesses will also be challenging. These issues will be carefully considered along with the impact on general motor traffic and will form part of further project specific public consultation work as proposals are developed.



It is recognised that a lack of available secure cycle parking and storage can present a barrier to cycling uptake, with 53% of respondents in the Walking and Cycling Index 2021 stating that access to secure cycle storage at or near home would help them cycle more. This finding corresponds with 51% of properties in Dundee being flats. Dundee City Council aim to improve access to cycle parking and storage through increasing provision in both residential settings and points of destination. Increased cycle storage throughout the city will enable greater opportunities for communities to utilise lower cost transport options in accessing employment, service, and recreational destinations.

Residential cycle storage

An on-street residents' cycle storage scheme commenced in 2023 with bikehangars installed at 40 locations throughout the city covering high density residential areas with limited outside space.

The cycle storage scheme, operated and managed by Cyclehoop on behalf of the Council, has operated successfully in other Scottish cities. To facilitate the operating and maintenance costs of the scheme, users are charged a refundable deposit for a key, and pay a monthly subscription for a space in one of the bikehangars.

The Council's contract with Cyclehoop allows for expansion of cycle stores to new locations within the city should sufficient demand be identified and it is aimed to increase the on street residential cycle storage provision over the forthcoming decade.

Cycle stores for residents of multi-storey flats

The concentration of properties in multi-storey dwellings provides opportunity to accommodate cycle storage in a centralised combined area. An initial pilot project is planned at Dryburgh Gardens to provide a large cycle store accessible by key holders.

The initial pilot project will be monitored and evaluated following inception to determine the viability of expanding this form of provision to other multi-storey residences in the city.

City centre, district centre and community cycle parking

To support and enable cycling uptake, the provision of destination cycle parking will be expanded and enhanced within the city centre, district centres and local communities.

The Council will also continue to liaise with private property owners including business parks, retail parks, further education establishments, supermarkets and other destinations with high visitor numbers to enhance their sustainable transport provisions.

Adaptation of car parks

The Council will convert parts of the Greenmarket and Olympia multi-storey car parks to accommodate cycle access and storage. This provision will support city centre residents with permanent cycle storage facilities and commuters to the city centre requiring secure all day cycle parking. Each location will accommodate standard and non-standard bikes with opportunity to expand the provision in future years to accommodate demand growth.

The cycle storage provision will support existing visitor destinations whilst providing capacity for new developments planned at the waterfront. Repurposing the multi-storey car parks to accommodate cycles reflects the targeted change in travel behaviour and supports active travel uptake for everyday journeys.



In February 2021, the Scottish Government published its Road Safety Framework to 2030 with a vision for Scotland to have the best road safety performance in the world by 2030.

To achieve reductions in injury accidents requires a multidisciplinary and integrated approach between key organisations on matters such as vehicle safety, speed limits, enforcement, education, road engineering measures and post-crash response.

Accidents involving pedestrians and cyclist account for around a third of all accidents on Dundee's local road network and half of seriously injured casualties.

The Council receives Scottish Government grant funding to improve road safety measures which can involve improving street furniture and signage, junction layout alterations and improving pedestrian and cyclist facilities. Officers review injury accident data and prioritise interventions around accident cluster sites as a means of targeted risk reduction.

Over half of journeys made in Dundee are under 2km and lend themselves perfectly to walking and cycling, which provides a number of benefits including to health and household finances. While most residents walk regularly, fewer cycle compared to driving.

Road safety is often cited as a barrier to uptake of active travel and with reference to the public survey included in the Dundee Walking and Cycling Index report, less than half of residents think cycling safety is good. To increase the number of people using active travel for everyday journeys will require an improved perception of road safety, with corresponding improvements in accident statistics.

For this reason widescale interventions are being promoted across the city to reduce vehicle and pedestrian conflict at primary schools, lower speed limits in residential roads and provide segregated active travel infrastructure on main route corridors.



The Council is committed to making the city's roads safer and encouraging people to use sustainable modes of transport. Road accidents in the city are generally low, however the perception of speeding vehicles can influence travel choices, and the severity of accidents which do occur is increased by vehicle speed.

20mph speed limits also benefit the ambience of residential neighbourhoods, reduce noise and support the uptake of active travel. In many locations reduced speed limits may support the creation of shared spaces and social places which people can utilise for recreation as well as travel.

In 2016, a citywide consultation was undertaken to gauge the views of Dundee residents on 20mph speed limits. The consultation was based on the current national guidance for 20mph speed limits which features a signage only approach without extensive physical traffic calming measures. The consultation identified a majority support for the strategy and subsequently a programme of 20mph zones has been progressed on this basis.

The national guidance for 20mph speed limits acknowledges the requirement to maintain a core network of 30mph roads to facilitate longer distance travel within cities. The retention of higher speed limits on the principal road network was supported by the 2016 consultation including responses received from the emergency services and local bus operators.

Considerations as to the appropriateness of 20mph speed limits take into account not only the strategic connectivity role of principal roads but also the need to avoid reliance on extensive police enforcement, as 20mph limits are not routinely enforced unless specifically justified in the interest of casualty reduction. Whilst there are a number of benefits in reducing speed limits in residential areas, the national 20mph guidance recommends road geometry and existing vehicle speeds are also considered when assessing the appropriateness of 20mph speed limits.

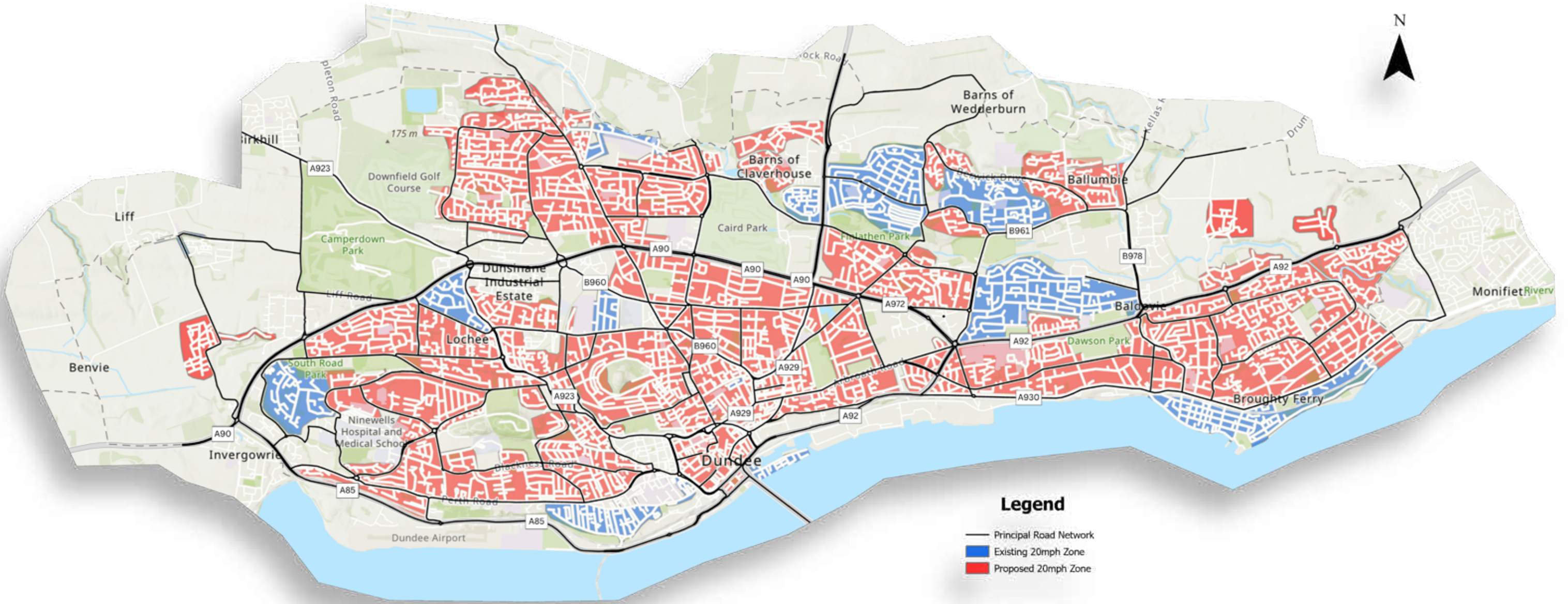
Currently the majority of residential areas are set at the national speed limit for urban roads which is 30mph. Approximately 75% of the road network is assessed as suitable for 20mph and 30% of the road network has already been reduced to 20mph.

The Council also supports 20mph speed limits within new residential developments and through the planning process requires new residential road networks to be designed to limit traffic speeds.

The reduction of 20mph speed limits on residential streets will complement other initiatives detailed in this delivery plan which when combined will support the Scottish Government objective to reduce car kilometres by 20% by 2030.

The map overpage details the current and proposed 20mph road network in Dundee.





School Streets is a nation-wide initiative which aims to reduce the volume of traffic at the school gates by prohibiting non-residential traffic from the area at the start and end of the school day.

The reduction in traffic around schools aims to create a more welcoming environment for children to walk, wheel and cycle to school and lessen traffic and pedestrian conflict at peak periods when large volumes of pedestrian and cars congregate and manoeuvre in the road space outside of schools.

In January 2021 Dundee City Council produced a policy for the selection criteria and implementation of School Street zones. The policy identified 17 zones around 19 primary schools in the city which would be promoted for implementing School Street traffic management measures.

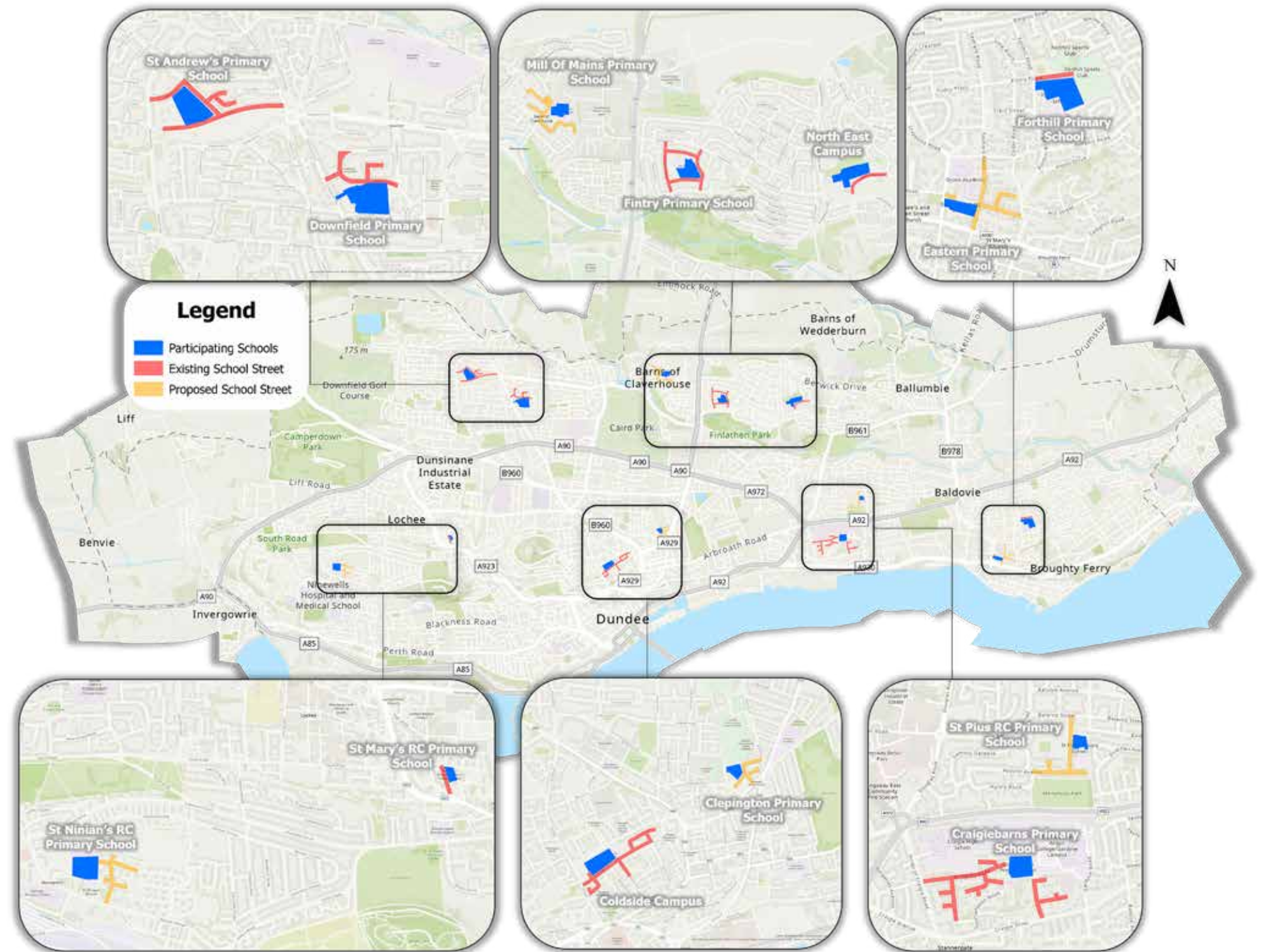
The School Street zones are controlled by Traffic Regulation Orders, enforceable by Police Scotland, which prohibit driving between 8.30am-9.15am and 3.00pm-3.30pm. Permits allowing access to the School Streets zone within these hours are issued to residents so that they can access their homes.

To date eight zones have been implemented with a further five zones proposed to commence in 2023/24. A further four zones are currently being assessed and will be subject to further consultation with stakeholders.

Initial results from the annual Hands Up Scotland Survey identifies that at the schools where the initiative has been introduced fewer pupils are being driven to school with a corresponding increase in journeys on foot or by bike and scooter.

The School Streets initiative is complemented by a range of parallel behaviour change interventions including Bikeability and Play on Pedals programmes, cycle parking improvements at schools, and Safer Routes to Schools travel plan leaflets distributed at schools.

The map details the current 8 zones and 5 zones proposed to commence in 2023/24.



Integration of sustainable travel modes is key to providing a convenient and accessible travel network and active travel combined with bus services provides the optimum mode of sustainable transport over longer distances providing accessibility, connectivity and affordability to users.

Bus patronage in Dundee, as with other parts of the country was severely impacted by the pandemic and with changing patterns of travel and work, recovery has been slow with a reduction in the number of commuters and older people travelling by bus. While Dundee has yet to recover to pre-pandemic passenger numbers, it is faring better than other communities, boosted by increasing numbers of younger people travelling by bus. The lasting impact of the pandemic has led to a contraction of the commercial bus network and reduced frequencies on key bus corridors. Scottish Government initiatives such as the expansion of concessionary travel eligibility should help to support the re-establishment of services and secure their longer-term viability. Particular measures, such as under 22 free bus travel, are targeted to have a longer-term influence on generational shift in favour of public transport.

Dundee has a comparably extensive bus route network serviced by commercial operators whose performance is regulated by the Traffic Commissioner. Most neighbourhoods in Dundee are served by a high frequency bus route. With more than 40% of Dundee households not having access to a private car, bus services provide an essential service for the city's transportation needs.

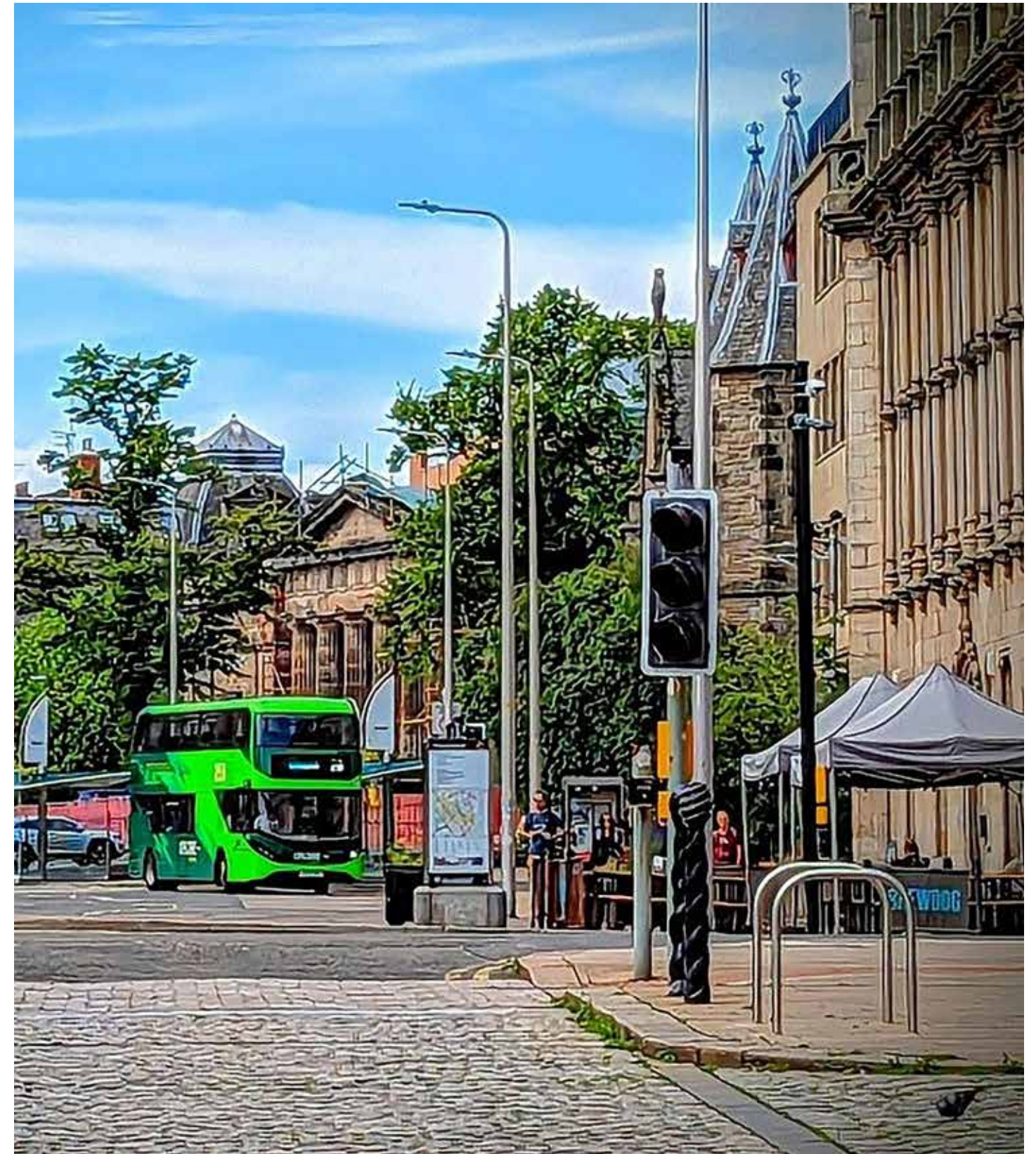
Dundee serves as one of the primary centres for the region, providing employment, further education, healthcare, leisure, retail, and recreational services for the surrounding areas. To enable a coordinated and strategic approach to regional interconnectivity of bus services, the Tayside Bus Alliance, which is a collaborative group comprising of local authorities, the regional transport partnership and bus operators was established in 2022.

The Alliance aims to improve bus services and operations in the region and encourage more people to use public transport which will enable bus operators to expand service frequencies and geographic reach on a financially sustainable basis. This objective is supported by the Transport Scotland Bus Partnership Fund which aims to address the decline in patronage through improving journey time reliability and prioritising bus travel over private car use.

The Regional Transport Strategy is aligned to progressing interventions supporting the national objective to achieve a 20% reduction in car kms by 2030. Journeys over 20km account for 59% the car kms in the region and park and ride sites have traditionally provided a sustainable transport solution from outer lying areas for the urban part of journeys to the city centre. The optimum sustainable transport solution is for the entire journey to be made by bus rather than only part of the journey. Generally, park and ride sites often don't have a significant impact on reducing traffic volumes. As an example, monitoring data from the City of Edinburgh Council identifies that there are approximately 1,200 park and ride trips per day using all their park and ride sites (Hermiston, Ingliston, and Straiton) which equates to less than 1% of the trips crossing the A720 City Bypass for journeys towards the city centre. As a result, the scale of modal shift and congestion relief is relatively small.

Park and ride sites have accordingly evolved to park & choose facilities and mobility hubs serving a wider purpose of transport interchange between more than two modes. These park and choose sites are less focused on providing car parking provision and more on connectivity with the range of alternative transport services which can be accessed including active travel route connections.

All parties involved in the Alliance have a shared objective to improve the user experience of buses and by combining knowledge, expertise, and levers of influence will seek to build patronage numbers, and corresponding services.



Bus Journey times are susceptible to delay from traffic congestion, particularly during peak times at busy junctions on the road network. Bus priority schemes can improve the operational effectiveness of bus services in terms of journey times and journey time reliability. They can also help deliver increased passenger numbers by improving perceptions related to bus service quality. Prioritising buses at junctions and along congested routes and reducing journey times can assist in encouraging modal shift from private car to bus which can help further reduce traffic congestion and vehicle emissions.

A key objective of the Tayside Bus Alliance is to assess potential bus priority routes in the region and develop business cases through Transport Scotland's Bus Partnership Fund (BPF).

The BPF has funded a Scottish Transport Appraisal Guidance (STAG) study to consider bus priority projects through the Tayside area and North East Fife.

This STAG study identified a number of public transport issues that may have contributed to decline in bus passenger use. These include congestion, lack of public transport services, integration of services, and the impacts of the Covid 19 pandemic on travel behaviours. The study outcomes identify a number of bus priority corridors within the city where journey time reliability could be improved. Bus priority interventions may include:

Physical bus priority – including the potential for bus lanes and bus gates;

Priority bus signals – integrated with overall Urban Traffic Management and Control (UTMC) systems. Signal priority has the potential to be in place either full-time or part-time depending on the requirements of network conditions;

Other junction enhancements – such as capacity enhancement, priority changes, give ways and yellow boxes to keep key turning movements free of vehicle queuing obstructions;

Bus stop layout and location enhancements – such as buildouts to stop the need for buses to leave and re-merge with traffic, or rationalisation or relocation bus stops to improve the efficiency of services;

Enhanced parking controls introducing localised measures at key pinch points / problem areas, the reallocation of some on-street parking, and a review of loading areas and taxi ranks;

Bus Lane enforcement – ensuring effective operation of bus priority measures utilising camera technology. Consideration will be given to allow taxi vehicles to use the infrastructure at specific locations.

The study identified a number of corridors and locations in Dundee where a range of bus priority measures should be developed to Outline Business Case (OBC). These are:

- Coupar Angus Rd / Lochee Rd
- Forfar Rd / Pitkerro Rd
- Arbroath Rd
- Kingsway Junctions - Old Glamis Rd, Macalpine Rd, Myrekirk Rd , Strathmartine Rd.

The study has been submitted to Transport Scotland as part of Bus Partnership Fund gateway review process and funding has been sought to undertake further appraisal work. The next stage of appraisal work will prepare an Outline Business Case (OBC), technical assessments including of interfaces with active travel corridors and design development works followed by a public consultation exercise.



Dundee City Council is responsible for the provision and maintenance of approximately 1,000 bus stops, including 350 stops with shelters. The network of bus stops has evolved over decades to serve both long-established bus routes and newer routes introduced to meet changing passenger demand. As the bus network has changed over the years, many roads that were once served by bus services have seen their bus stops become disused.

The number of bus stops on any route and the distance between them is a key determinant of overall journey time. An over provision of bus stops, while having some benefit for individual passengers, contributes to slower journeys, greater dwell time and constrains bus services in competing successfully with the private car. Given the importance placed on bus prioritisation and improved journey times by the bus industry and Scottish Government, it is now recognised that there are too many bus stops on key corridors in the city.

Bus operators record boarding information from electric ticketing systems and can identify with accuracy the level of usage at each stop in their network. This information in conjunction with demographic and spatial data has allowed the Council to sensitively review the position of its current bus stop infrastructure and identify where removal of bus stops can improve bus journey times while maintaining access to public transport. The review has been informed by accessible bus stop guidance that indicates the walking distance to bus stops should ideally be no more than 500m and that the distance between stops is around 400m.

It is also recognised that in some locations bus stops and bus shelters can create pinch-points on pavements and the selection process will improve the pedestrian flow by removing the shelters and stops that have inhibited pedestrian movement.

The city's bus stop infrastructure has been assessed and a considered approach will be taken to bus stop removal. A focus will be given to principal bus corridors where reduced journey times has the greatest potential to generate modal shift towards bus. In addition, the Council will lead on the removal of bus stops that have become obsolete through a contraction of the city's bus network or the relocation of community facilities.

As part of the bus stop rationalisation assessment process, Council officers will engage with elected members, bus operators, equality/access groups, community councils and other recognised community groups, prior to identifying the future network requirements.

Opportunities for bus stop rationalisation will be considered where asset renewals are identified as part of the Councils ongoing maintenance programme, and rationalisation of bus stops will be considered as part of bus priority corridor proposals within the Scottish Government's Bus Partnership Fund. The Council will also continue to explore other external funding sources available to support public transport improvements.

Route	Principal Bus Corridor	Total Number Of Stops On Route
1	City Centre to St Marys via Strathmore Avenue, The Stack & Ardler	72
2	City Centre to Kingsway Retail Park via The Glens, The Stack & Dryburgh	50
5/5a	Ninewells Hospital to Barnhill via Menzieshill, West End, City Centre & Broughty Ferry	149
6	City Centre to Ninewells Hospital via Perth Road, Logie, Elmwood and Gowrie Park	58
10	Ninewells Hospital to Broughty Ferry via Lochee, St Marys, Kirkton, Fintry & Douglas	193
17	Ninewells Hospital to Whitfield via Menzieshill, Lochee, City Centre, Pitkerro Road & Milton of Craigie	125
18	City Centre to Claverhouse via Clepington Road & Kirkton	53
22	Ninewells Hospital to Craigowl via Menzieshill, Blackness Road, City Centre, Hilltown & Strathmartine Road	101
23	Woodside Circular via Woodside, Maryfield & Stobswell	31
28	Myrekirk to Douglas via Charleston, Lochee, City Centre, Arbroath Road & Craigie	101
32	City Centre to Fintry via Stobswell, Pitkerro Road and Linlathen	53
33	City Centre to Whitfield via Stobswell, Mill O' Mains & Fintry	60
16	Dundee Bus Station – Perth Road – Casre of Gowrie - Perth	27
20/21	Dundee Bus Station – Stobswell – Forfar Road – Forfar/Kirriemuir	14
39	Invergowrie – Perth Road – City Centre – Arbroath Road – Arbroath	45
57/59	Dundee Bus Station – City Centre – Lochee Road – Blairgowrie	21
73	Ninewells – West End – City Centre – Broughty Ferry – Arbroath	56

The core principal of MaaS is that users buy transport services based on their needs instead of buying the means of transport. MaaS is an alternative to private car ownership, whereby transport is purchased for each journey made and the method of transport alters depending on the nature, distance, or duration of the journey. Forms of MaaS transport operating in Dundee include public transport, car/bike share and hire and taxi services.

Key to the success of MaaS is the provision of services, customer experience, and interchange between alternate forms of transport to enable multi-mode journeys to be planned and booked easily with a range of options available to the customer to suit their requirements and preferences.

The ambition for MaaS over the next ten years is improve on accessibility, usability, convenience, to place public and shared transport as the preferred form of transport over private car use.

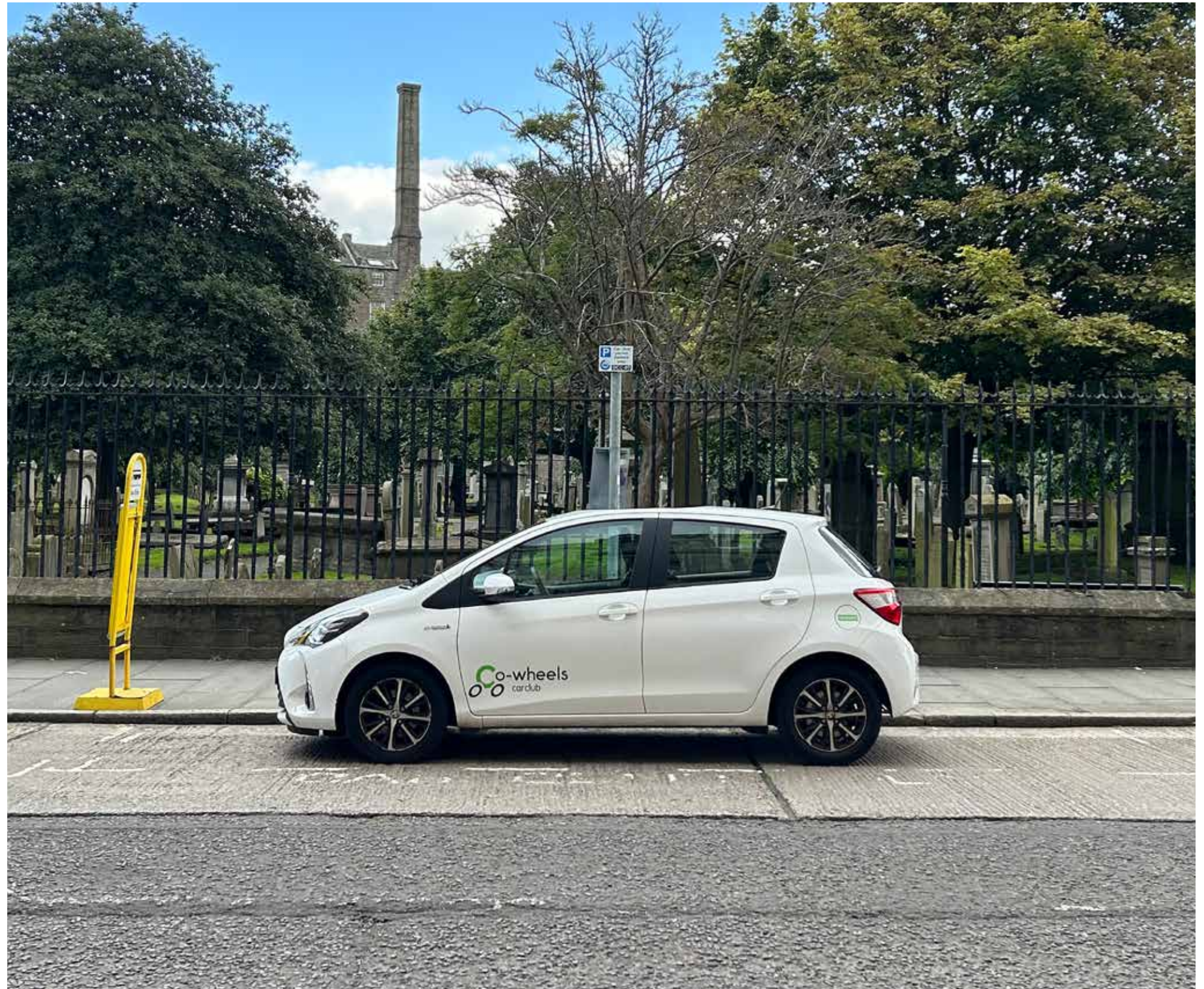
Modernisation of digital ticketing presents an opportunity to increase the consumer offering, and Dundee City Council will work with private sector providers such as event organisers and large destination visitor attractions to include public transport travel options in their booking portals. Similarly, multi-mode journey planning will improve the customer experience of multi-operator journey booking.

The Scottish Government have identified a recommendation in the latest Strategic Transport Project Review (STPR2) to establish a mobility hub delivery framework and Dundee City Council will develop existing and proposed hubs to meet the criteria and standards of the forthcoming delivery framework.

There are a number of new and emerging mobility technologies that can be supported by MaaS including e-scooter hire, demand responsive transport, and also future innovations such as autonomous (self-driving) vehicles. It is acknowledged that not all forms of new single occupancy / user transport will provide a financially competitive alternative to existing established forms of shared transport, and the national transport hierarchy continues to promote active travel and public transport as the prioritised transport options due to considerations such as value and health benefits.

Dundee City Council will continue to embrace innovation and new technologies however it is important that emerging forms of transport are safe, commercially viable, and are strategically aimed at generating customers from transitioning private car drivers rather than converting customers from other more sustainable forms of transport.

By combining the accessibility of transport services, interchange facilities, and digital multi-operator ticketing, total journey solutions can be improved and shared and public transport options can increase in competitiveness as alternatives to private car ownership.



The continued development of internet platforms and apps over the past 20 years has seen service operators increase their online information, booking, and transaction offerings and customers increasingly desire and expect to be able to plan, book, and pay for services online.

Private sector operators providing transport services in the city have invested in their web-based platforms and apps, however these platforms largely remain individual to the operator and there is opportunity for integration.

Currently Dundee City Council administers a multi-operator daily and weekly bus ticket marketed as ABC (All Bus Companies) which allows customers to use all available local bus services with a single ticket. This ticket option provides greater flexibility, particularly for customers who may use more than one bus service or live on corridors served by multiple operators.

The ambition is to expand multi-operator ticketing to incorporate journey booking and payment services. Combining rail and bus journey booking to a single app transaction provides greatest scope for customer benefit due to the transactional volume of these services, however the aim is to create a versatile system which can accommodate a range of providers including taxi, car club, bike hire and any other publicly accessible mobility service operator.

The development of this form of platform is a significant challenge that spans individual Council boundaries and travel providers. Developing and operating a single national platform provides both economies of scale and also improved customer experience when travelling between regions.

The multi-operator booking and transaction objective is recognised nationally as a priority area to improve the visibility of travel options, and convenience of booking journeys which will help support an increase in the proportion of journeys made by public and shared transport.

The Scottish Government have identified a recommendation in the latest Strategic Transport Project Review (STPR2) to establish a National Smart Ticketing Advisory Board to develop a fully integrated smart ticketing and payments service across all public transport modes. Dundee City Council, as one of the four City authorities, will have a supporting role in this work and we aim to work with our partners to deliver this objective within the next ten years.

As passengers migrate to use online and app-based communication, the Council requires to review how it communicates local travel information and decide whether it remains appropriate to publish information in a physical format when it is more accurately and cost-effectively delivered through digital platforms. Web-based information provides lower cost to produce, is more agile to update, and can accommodate live information such as service disruption and rerouting. Comprehensive provision of printed timetables were first introduced before the evolution of smart phones and travel apps. In response to the changing consumption of travel information the Council will place less focus on printing timetables.

As the cost of car ownership increases, the potential for shared mobility options to gain traction with drivers increases. With most cars being parked for around 95% (RAC Foundation) of their time, car clubs and other forms of shared mobility provide a ready solution for drivers only requiring occasional usage.

In the city centre there are a small number of dedicated car club bays. As car club operators have developed their offering, there has been a trend towards a floating car club model that does not require dedicated infrastructure but instead allow users to identify vehicle locations through an app-based platform. This model reduces the requirement for specific infrastructure and will support future expansion. With the support and encouragement of Planning Officers, developers proposing new residential developments can enhance their sustainability by working with car club operators to ensure that shared mobility is readily available.

Expansion of car club demand is expected over the coming decade. In 2023, 16 car club vehicles are operating in Dundee and this is expected to double by 2033.

Expansion of car club vehicles will be demand led and existing providers operating in the city have capacity to increase their offering to meet increase in demand. Operators will monitor demand through both subscription increases and journey bookings and introduce new vehicles to accommodate market growth.

Taxis also form a vital part of the passenger transport offer in Dundee and are particularly important to those with restricted mobility. The provision of taxi ranks is managed by the Council and is reviewed in conjunction with the Taxi Trade representatives to ensure suitable placement. With 30% of the Dundee taxi fleet (circa 200 taxis) being EV, Dundee has the highest proportion of fully electric taxis in Scotland.

Mobility hubs are locations points of sustainable transport interchange. In an urban context, particularly city environments, it is recognised that for people to travel sustainably, journeys may comprise of more than one mode of transport. In a regional and national journey context, the purpose, destination and nature of the journey may influence travel modes.

The purpose of mobility hubs is to provide infrastructure to accommodate interchange between travel modes and incentivise sustainable transport by improving the ease and convenience of travel utilising multiple forms of transport.

There are three levels of mobility hub planned in Dundee as follows.

Regional and national public transport interchange

Dundee has three primary sustainable transport interchanges for regional and national travel, being the Seagate bus station and the train stations in Dundee and Broughty Ferry. These facilities are supported by sustainable transport interchange options including local bus services in close proximity, active travel routes and cycle parking, electric vehicle parking and charging facilities, taxi ranks and close links to other provisions such as car club and bike hire.

Development of satellite hubs on the periphery of the City are also being considered in partnership with the Regional Transport Partnership and neighbouring authorities. Stations on the railway corridor out with Dundee provide regional rapid transit and could be enhanced with park and choose facilities to improve multi-modal local connectivity.

Strategic locality mobility hubs

To support Dundee's residents and visitors in using sustainable forms of transport EV charging hubs will be developed at points of destination such as district centres and also on strategic routes within the city. These hubs will be located to provide convenient pedestrian access to surrounding amenities.

To support traffic reductions in the city centre a strategic mobility hub will be developed at the Bell Street multi-storey car park. This hub will prioritise active travel and accommodate a new active freeway through the heart of the facility providing connections to the north of the city. The facility will also provide EV charging for city centre residents and commuters and cycle parking for onward travel.

Community micro-mobility hubs

As the number of journeys made by bicycle increase over the forthcoming decade, so too will the requirement for cycle storage at transport interchanges. At present most bus users walk between the bus stop and their destination, however as cycling rates increase it is expected the desire for combined cycle and public transport journeys will increase. Micro-mobility hubs are small scale interchange facilities which will accommodate bus to cycle interchange. At high use locations this may be complemented by car club vehicles and taxi ranks.

Micro-mobility hubs will be prioritised on high density bus corridors at points of route interchange, existing cycle commuter corridors, and population centres. Funding opportunities to develop and deliver a programme of infrastructure improvements will be explored over the forthcoming decade.



Dundee Green Transport Hub Concept Design

Transport is currently Scotland's largest emitting sector with emissions from cars, vans and lorries accounting for 17% of Scotland's greenhouse gas emissions.

The aim of this delivery plan is to increase the proportion of journeys by active travel, public transport and shared journeys. At present however vehicle transport remains the predominant mode of travel. It is acknowledged that some journeys will require continuation of vehicle transport such as delivery of goods, materials, or services. To reverse the dominance of cars in our transport system will require an element of behaviour change.

Dundee serves as a regional centre for the surrounding rural areas and decarbonisation of transport requires to provide for both residents and businesses within the city, and those outwith. To meet our net-zero objectives will require both a reduction in the use of vehicles, and also decarbonisation of those that remain.

Zero emission vehicle technology continues to evolve and the pace of adoption has accelerated in recent years with the number of new electric car registrations increasing year on year.

Electric cars and light vans are now competitive with internal combustion engine equivalents when comparing on a whole life cost basis. There remains a cost differential with zero emission heavy goods vehicles however as the market matures and production volumes increase, efficiencies of scale will improve competitiveness.

To accommodate the transport evolution will require the city to adapt, principally in regard to charging and refuelling infrastructure. Dundee is well advanced in this transition journey providing a higher proportion of public electric vehicle chargers per head of population than the national average, operating the highest proportion of zero emission taxis and local authority vehicles in the country and continuing to support public transport operator's fleet transition.

The change in energy consumption from fossil fuels to electric charging will require capacity increase in the national grid. Dundee City Council will continue to work closely with network operators to plan and map future expansion of electricity consumption and in addition to national decarbonisation of energy production feeding into the grid, Dundee will continue to develop at source renewable energy production in new charging hubs. Currently all of Dundee's charging hubs and operational depots feature solar arrays and battery storage technology to lessen the strain on the grid and new vehicle charging developments will continue this strategy. This will include the new mobility hub at Bell Street which is planned to incorporate half an acre of solar array and 500kWp battery storage solution and the proposed refuse collection vehicle charging depot which will be located at the Michelin Scotland Innovation Parc and utilise the renewable wind energy generated at the site.

In terms of the infrastructure required over the forthcoming decade, the city will adapt and this delivery plan sets out the city's infrastructure expansion plans.



The sale of new battery electric cars and light vans is increasing, and in 2022 battery electric vehicles accounted for 16% of new cars registered in the UK. A Scottish Government objective in reaching net zero is to phase out the need for new petrol and diesel cars and vans by 2030.

Since 2011, Dundee City Council has been installing EV charging infrastructure across the city to support the public, and businesses, in making the switch to battery electric vehicles.

To identify the scale of EV charging infrastructure required in the future an assessment of Dundee was undertaken. This assessment found that:

- 53% of properties in the city park their vehicles on-street.
- 43% of properties have access to off-street / private parking provision.
- 4% of properties park their vehicles in public car parks.

At present, the charging infrastructure deployed in Dundee can support 11.4% of the city's vehicles being electric. There are currently estimated to be 56 publicly available rapid chargers in the city and 134 fast chargers. The table below shows the expected increase in electric vehicles to 2045 and corresponding requirements for charging infrastructure.

Year	Number of Vehicles	% of Total Vehicles	Required charging posts		
			Rapid chargers (Public)	Fast chargers (Public)	Home chargers (Private)
2025	9,507	15%	48	148	4,716
2030	27,252	43%	136	426	13,521
2035	45,631	72%	228	714	22,641
2040	57,673	91%	288	903	28,615
2045	63,377	100%	317	992	31,446

The public charging infrastructure deployment would require a total investment of approximately £46 million at 2023 prices.

The infrastructure assessment is based on current traffic levels and reductions in private vehicle use targeted by the Scottish Government may decrease infrastructure demand should either the number of vehicles in the city decrease, or frequency of charging reduce.

It is also acknowledged that as vehicle and charging technology evolves, so too may charging trends and it is possible that with longer range batteries and faster charging times the demand versus capacity ratio may reduce, lessening the number of chargers required in the city from those currently forecast. Similarly, future advancements in battery and charging technology may shift forecast demand for on-street charging towards rapid charging at hubs, should typical average charging times reduce to under five minutes.

Future charging infrastructure requirements are not forecast to reduce below the demand period profiled to 2035. The forecast will be monitored and revised over the course of the forthcoming decade to account for changes in car use, technology advancement, and charging patterns.



At present the majority of charge points in Dundee are owned by Dundee City Council and have been installed utilising grant funding to encourage uptake and accommodate early adopters. The market is now increasing, and private sector finance and operators are forecast to provide the majority of charging network growth in the coming years.

To aid the transition from grant funded infrastructure to a private investment model which will continue the growth of the charging network, the Scottish Government launched the Electric Vehicle Infrastructure Fund (EVIF) in 2022. This fund seeks to accelerate private investment in charging infrastructure through an initial public / private investment model prior to private sector investment continuing the expansion without public sector finance.

The vision for Dundee City Council is for the city's residents and visitors to have access to a customer-focused, reliable and accessible EV charging network.

To enable a sustainable charging network requires tariffs to be set at a level sufficient to fund the full costs of operating the infrastructure including maintenance, renewal and upgrade of chargers. As operator of the majority of the charging infrastructure currently in the city, Dundee City Council also has a role as a market rate stabiliser to encourage competitive private sector tariffs while not undermining the commercial viability of private sector investment required to grow the network to meet the future demand forecast.

The Council has a tariff model policy of setting future kWh costs which covers both direct operation and maintenance costs and also enables reinvestment for infrastructure renewal and improvement. This will ensure the city remains at the forefront of the transition to zero emission transport with new technology advancements and a reliable service offering.

Dundee City Council has bid into the Scottish Government Electric Vehicle Infrastructure Fund seeking grant funding support to attract private investment in expanding the city's on-street and community-based charging provision.

The bid aims to support the delivery of 100 on-street and 25 community fast chargers. The bid features a total investment value of £1 million with 76% of the funding from private sector investment.

Public charging provision will only account for a proportion of the charging demand and with 43% of homes having access to off-street parking, home charging will continue to have a significant role in transport energy refuelling.

Since 2017 Dundee has stipulated a planning requirement for new build developments to provide electric vehicle charge points and from 2015 the Scottish Government has provided grant funding support to residents and businesses installing charge points at private properties. As the market evolves, electric vehicle suppliers are adapting their product offering to include the option to provide charge point installations in both leasing and purchase options.

Electric charging of HGV fleets is forecast to continue current practices, which is predominantly depot-based refuelling. Since 2020 Dundee City Council has operated an HGV charging station at their Marchbanks facility presently supporting eight fully electric bin lorries. The council also provides charging for HGV's at its Greenmarket site which facilitates intercity electric bus operators, coach operators and other early adopters of electric HGVs. On the other side of the city, the Michelin Scotland Innovation Parc is developing proposals for similar HGV charging provision which will expand capacity, encourage growth in this market and utilise the clean energy generated at the site.

Hydrogen fuel cell technology is currently at an early adoption stage with end uses of road haulage, rail, aviation and maritime at alternate stages of development. Hydrogen fuel cells present advantage to battery cell technology in heavy goods vehicles in situations where range and refuelling time are key considerations.

Due to Dundee's relatively small geographic boundary, local authority operations and local bus services can be serviced by battery electric vehicles. With consideration of energy conversion and cost, battery electric powertrains provide greater efficiency and are the optimum vehicle choice where range and charging requirement are sufficient.

The hydrogen market for road haulage will predominantly be comprised of commercial longer distance operators and it is possible refuelling may replicate current diesel practice whereby operators utilise refuelling facilities situated in their premises with intermittent refuelling infrastructure provided by private sector stations located at regular points on the trunk road and principal road networks. This scenario may result in commercial service stations situated on Dundee's orbital trunk roads providing hydrogen refuelling facilities.

Through collaboration with neighbouring authorities and regional partners, Dundee City Council will contribute to the planning of a regional network of hydrogen refuelling infrastructure and will consider options to support private operators seeking early adoption of hydrogen technology.

Short: 1-3 years Medium: 4-6 years Long Term: 7-10 years

Action	Indicative Cost	Potential Funding Partners	Delivery Timescale
Broughty Ferry to Monifieth Active Travel Improvements	£19M	Sustrans Places for Everyone Programme Fund	Short term
Union Street Transformation	£3M	Sustrans Places for Everyone Programme Fund	Short term
Magdalen Green Pedestrian/ Cycle Bridge	£4.5M	Transport Scotland Active Travel Transformation Fund	Short term
St. Leonards Park Regeneration	£6M	Sustrans Places for Everyone Programme Fund, Scottish Water and NatureScot	Short term
Cycle Parking & Storage Infrastructure	£0.75M	Transport Scotland Cycling, Walking, Safer Routes Fund, Cycling Scotland	Short term
20mph zones	£0.5M	Transport Scotland Cycling, Walking, Safer Routes Fund	Short Term
School Streets	£0.25M	Transport Scotland Cycling, Walking, Safer Routes Fund	Short Term
On-street Electric Vehicle Chargers Expansion	£1M	Transport Scotland – Electric Vehicle Infrastructure Fund	Short term
Bell Street Low Carbon Transport Hub	£16M	Department for Transport Levelling Up Fund	Short term
Lochee Road Bus Priority Corridor	£15M	Transport Scotland Bus Partnership Fund	Medium term
Forfar Rd / Pikerro Rd Bus Priority Corridor	£15M	Transport Scotland Bus Partnership Fund	Medium term
Arbroath Road Bus Priority Corridor	£15M	Transport Scotland Bus Priority Partnership Fund	Medium term
East End Campus Active Travel Route Improvements	£11M	Transport Scotland Active Travel Transformation Fund	Medium term
Ninewells Campus Active Travel Route Improvements	£2M	Transport Scotland Active Travel Transformation Fund	Medium term
Western Gateway Active Travel Route Improvements	£6M	Transport Scotland Active Travel Transformation Fund	Medium term
Lochee Road Active Freeway	£24M	Transport Scotland Active Travel Transformation Fund	Medium term
Macalpine Road Active Freeway	£16M	Transport Scotland Active Travel Transformation Fund	Medium term
Arbroath Road Active Freeway	£20M	Transport Scotland Active Travel Transformation Fund	Medium term
Hawkhill Active Freeway	£10M	Transport Scotland Active Travel Transformation Fund	Long term
Harefield – Strathmore – Dens Road Active Freeway	£20M	Transport Scotland Active Travel Transformation Fund	Long term
Pitkerro Road Active Freeway	£10M	Transport Scotland Active Travel Transformation Fund	Long term
Kingsway Junctions Bus Priority	£15M	Transport Scotland Bus Partnership Fund	Long term
Total	£230M		

The projects identified in this delivery plan are at varying stages of development and cost estimates will be confirmed following completion of detailed design work. Delivery timescales are dependent on national funding awards and not all projects are certain to secure grant funding. Indicative costs presented are based on 2023 prices.

Contact Details

**City Development
Dundee City Council
Dundee House**

**50 North Lindsay Street
Dundee, DD1 1LS**

**For general advice and information,
email city.development@dundecity.gov.uk**

