

Glasgow Liveable Neighbourhoods

Strategic Business Case, Tranche 1

OCTOBER 2022



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Strategic Business Case

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1 Executive Summary

- 1.1.1 Glasgow is the biggest city in Scotland and is the economic engine and main commercial hub not only for the city region but also for the country. Almost 2.5 million people, half of Scotland's population live within an hour of the city¹. However, the City and the city-region suffer from a high level of car dependency. Journeys within Glasgow by walking, cycling and public transport are often prohibitive in terms of time and financial costs and the urban environment is not perceived as safe and accessible by all groups. This exacerbates inequalities based on income, age, gender and disability, with many of Glasgow's most deprived communities situated around the City's periphery and inner urban areas blighted by strategic roads infrastructure.
- 1.1.2 Glasgow is a world class city with a thriving and inclusive economy where everyone should be able to flourish and benefit from the City's success. This scheme comprises of the redevelopment of Glasgow to deliver Liveable Neighbourhoods across the City. These Liveable Neighbourhoods will transform the City's streets, spaces and neighbourhood areas ensuring everyday journeys made by active travel become the norm, allowing all citizens the equal opportunity to participate in the social and economic life of the City.
- 1.1.3 A wide range of information is presented outlining the objectives of developing Liveable Neighbourhoods within Glasgow and the types of measures expected to be put in place to achieve these aims. Glasgow's liveable neighbourhoods are designed to provide:
- Healthy more resilient places that allow people of all ages and abilities to thrive in their local area.
 - Accessible places where people can meet their daily needs and services in a sustained manner.
 - Better connect places helping to reduce the city's dependency on cars by making walking, cycling and public transport the first choice.
 - A sustainable and low carbon city
- 1.1.4 The Liveable Neighbourhoods Programme will be set up as with areas within Glasgow being allocated to Tranches. The first 3 Tranches have been presented in the map (below). This business case will focus on the Tranche 1.
- 1.1.5 A range of local and national policies have been identified which closely align with objectives of the Liveable Neighbourhoods programme. These include Glasgow City's Strategic Plan and Development Plan from a local perspective as well as the National Planning Framework and National Transport Strategy from a national perspective alongside many others.
- 1.1.6 A key element of this is the contribution towards the Sustainable and Low Carbon City theme within Glasgow City Councils Strategic Plan (2017-2022). Each Liveable Neighbourhood will directly contribute to reducing the city's carbon footprint through

¹ Taken from 2011 census data

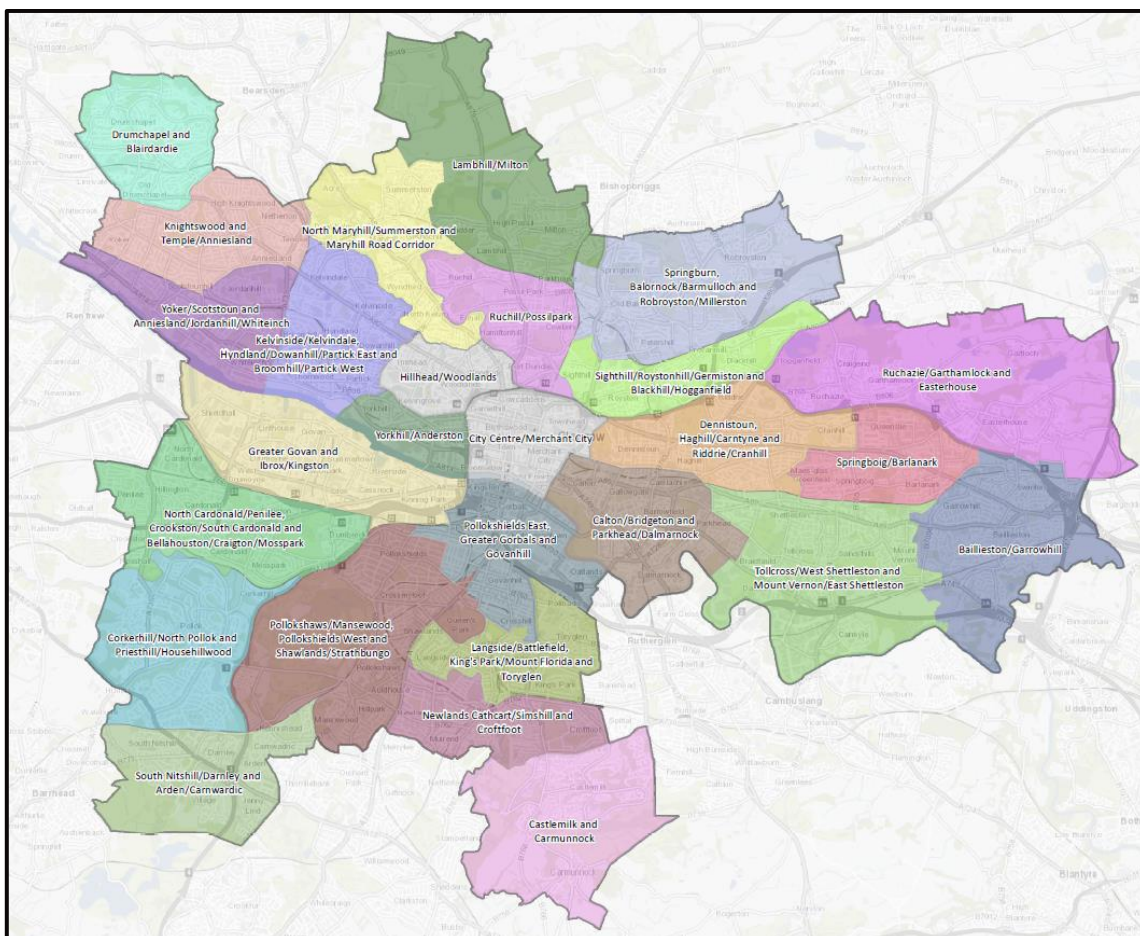
encouraging a shift towards active modes and reducing the level of congestion within the city.

- 1.1.7 The Strategic Case provides a strong narrative for investment in the Liveable Neighbourhoods programme and outlines clearly the benefits that are expected to be realised by the local population alongside wider benefits that would accrue to the whole city
- 1.1.8 Development of specific packages of interventions is currently underway for each of the initial four Liveable Neighbourhoods within Tranche 1 of the programme. As a result, the economic assessment of the scheme benefits has been undertaken for an indicative package of interventions to provide an idea of the magnitude of potential benefits.
- 1.1.9 A range of environmental, social and health benefits have been calculated as part of the indicative appraisal providing a comprehensive understanding of the impact of the scheme in terms of monetised benefits. Indicative costs have also been used to provide a benefit-cost ratio.
- 1.1.10 The benefit cost ratio for the Liveable Neighbourhoods scheme is expected to range between 5 and 13 suggesting a high to very high potential value for money category.

2 Introduction

2.1 Background

- 2.1.1 Glasgow City Council have commissioned Arcadis and David Simmonds Consultancy to develop Strategic Business Cases (SBC) for both Liveable Neighbourhoods and Active Travel across Glasgow. This business case will focus on the development of Liveable Neighbourhoods across the City which will be delivered in six tranches across distinct and diverse areas of Glasgow.
- 2.1.2 The economic appraisal presented in this report is based on the TELMoS18A model which is used with the permission of Transport Scotland. We accept full responsibility for the use made of this model and for the results obtained from it.



- 2.1.3 An SBC should provide a rationale for intervention and provide enough evidence for a scheme to proceed to development. It should detail the need for intervention and propose a variety of options with which to deal with the issues, in the context of Government objectives (or in some cases, as part of a wider strategic level assessment). As a minimum it should set out the Investment Objectives, and how they help meet Government strategy.
- 2.1.4 This stage of business case development will constitute the first version of the Strategic Case from the Five Case Model (making a robust case for change), which will be revisited in the Outline Business case (OBC) later in the project lifecycle.

Typically, the SBC is presented to decision makers and if successful, may proceed to development.

2.1.5 The Liveable Neighbourhoods programme will make a significant contribution to several national and local policy objectives and particularly to the themes set out by Glasgow City Council in its Strategic Plan 2017 – 2022. Most notably the programme will make a major contribution to the Sustainable and Low Carbon City theme as each Liveable Neighbourhood will directly contribute to the desired outcomes of:

- The city is clean and public spaces are well maintained;
- We have a low carbon footprint as a council and as a city;
- We have more sustainable, integrated transport networks across the city and less congestion; and
- Citizens use active travel, including walking and cycling.

2.1.6 It will also make a major contribution towards the recommendations set out in Glasgow's climate Plan:

- Recommendation 2 - Tree planting, peatland restoration, and green infrastructure; and
- Recommendation 4 - Improving Infrastructure for walking, cycling and remote working.

2.1.7 The details of how the LNP will help deliver these outcomes and contribute to wider government policies are set out in the following chapters.

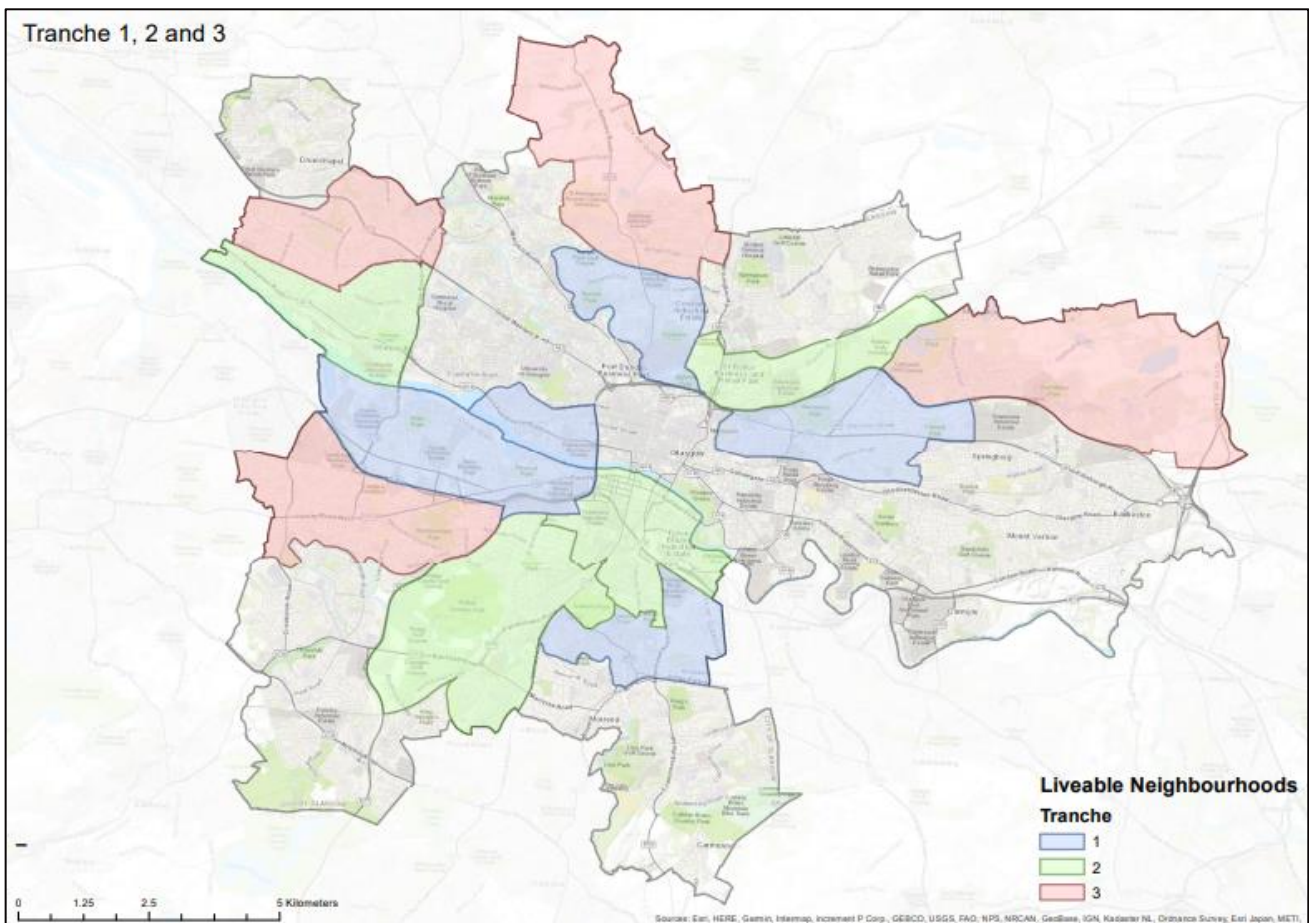
3 Strategic Case

3.1 Scheme Description

- 3.1.1 Glasgow is the biggest City in Scotland and is the economic engine and main commercial hub not only for the city region but also for the country. Almost 2.5 million people, half of Scotland's population live within an hour of the city². However, the City and the city-region suffer from a high level of car dependency. Journeys within Glasgow by walking, cycling and public transport are often prohibitive in terms of time and financial costs and the urban environment is not perceived as safe and accessible by all groups. This exacerbates inequalities based on income, age, gender and disability, with many of Glasgow's most deprived communities situated around the City's periphery and inner urban areas blighted by strategic roads infrastructure.
- 3.1.2 Glasgow is a world class city with a thriving and inclusive economy where everyone should be able to flourish and benefit from the City's success. This scheme comprises of the redevelopment of Glasgow to deliver Liveable Neighbourhoods across the City. These Liveable Neighbourhoods will transform the City's streets, spaces and neighbourhood areas ensuring everyday journeys made by active travel become the norm, allowing all citizens the equal opportunity to participate in the social and economic life of the City.
- 3.1.3 Glasgow's liveable neighbourhoods are designed to provide:
- Healthy more resilient places that allow people of all ages and abilities to thrive in their local area.
 - Accessible places where people can meet their daily needs and services in a sustained manner.
 - Better connect places helping to reduce the city's dependency on cars by making walking, cycling and public transport the first choice.
- 3.1.4 The first three Tranches of the Liveable Neighbourhoods Programme (LNP) are shown below in Figure 3.1.

² Taken from 2011 census data

Figure 3-1: LNP – Tranches 1-3



3.1.5 Tranche 1 of the programme consists of four areas identified within Glasgow as key areas for regeneration through the introduction of Liveable Neighbourhoods:

- Ruchill, Hamiltonhill, Possilpark, Port Dundas and Cowlairs.
- Langside, Battlefield, Mount Florida, King's Park and Toryglen.
- Greater Govan, Ibrox Cessnock, Kinning Park and Kingston.
- Dennistoun, Haghill, Riddrie, Carntyne and Cranhill.

3.1.6 As part of the Glasgow Transport Strategy (GTS) the Liveable Neighbourhoods Plan (LNP) for Glasgow aims to reduce the city's dependency on cars and make walking, cycling and public transport the first choice. It is essential that residents' benefit from safer, quieter streets that facilitate play, walking and cycling. Through an area-based approach, the LNP will help to limit the city's contribution to climate change and develop an inclusive network of accessible and revitalised neighbourhoods designed for the benefit of all, with integrated green infrastructure and enhanced public spaces.

3.1.7 The ambition of Scotland 2045 national strategy is for each part of Scotland can be planned and developed to create: **sustainable places**, where emissions are reduced and biodiversity is restored



and better connected; **liveable places**, where everyone can live better, healthier lives; **productive places**, where there is a greener, fairer and more inclusive wellbeing economy; and **distinctive places**, where assets are recognised and enhanced.

- 3.1.8 The LNP is a programme with a requirement to achieve overarching outcomes for the city by delivering on LNP tranches of work packages delivering specific outputs (to be identified through communities). The LNP aims to transform streets, identified through meaningful engagement, into areas where people feel they are safe, pleasant and attractive environments. By encouraging active travel as the first choice of transport, these projects will benefit public health by increasing physical activity, reducing noise and air pollution. Liveable Neighbourhoods in Glasgow require that the infrastructure to be built in each area reflects the requirements and aspirations of people living within their local communities. To achieve this the project will identify interventions in LNP areas through community conversations and dialogue, with interventions grouped into four broad themes. This means that the output for each area will differ as they will be driven by collaboration and community empowerment, as well as by the specific physical, social and economic needs and opportunities of each location. The four themes are:

i. Local Town Centres

Glasgow's network of centres is a key characteristic of the city in moving towards creating more cohesive neighbourhoods. This enables residents to access most of the activities needed for good living within a short walk, cycle or public transport trip from their homes. Shops for everyday essentials, health and community facilities, education, parks and playgrounds and ideally employment should all be locally accessible to everyone without the need of a car. While there are major challenges created by retail competition and the shift to online shopping, there is a significant opportunity to strengthen the position of many local town centres in Glasgow. These mixed-use places are defined by a well-connected active travel network, improving ease of access, and a high-quality public realm, improving environmental quality, with good access to employment, essential services and community infrastructure. This local living encourages development that enhances both social interaction and a vibrant local economy through planning which is more vision-led.

ii. Everyday Journeys

A Liveable Neighbourhood includes more sustainable forms of transport for everyday journeys, such as the daily commute, the school run, or a trip to the shops. This brings activities and services to neighbourhoods rather than moving people to activities reducing the need for people to travel. Local focus contributes to greater economic viability at the local level, while also promising less time spent in traffic congestion, lower levels of noise pollution, reductions in greenhouse gas emissions and improvements in air quality. This is especially important as the transport sector is Scotland's major contributor of carbon emission.

There is sizeable scope for modal shift for shorter journeys in Glasgow as almost 50% of journeys are under 3km in length, and 70% are less than 5km. By improving the conditions for walking and cycling within neighbourhoods there is a significant opportunity to reduce carbon emissions and to provide more-active travel choices. This will bring health benefits and improvements in quality of life and more time and more opportunities for social connection. However, it is also recognised that the needs of different age groups, genders and physical abilities is crucial in designing suitable streets and infrastructure.

iii. Active Travel

There is a growing awareness of the need to change our transportation habits by reducing our use of cars and shifting to active travel, such as walking and cycling. An important aspect of Glasgow's LNs is ensuring there is adequate implementation of active travel networks within neighbourhoods, connecting them to the city network and helping to meet Glasgow's ambitious target to make walking, cycling and wheeling considered as first choice modes of travel. The Liveable Neighbourhoods approach will create the bridge between the front door and the city-wide segregated network.

iv. Streets for People

The final key theme relates to the promotion of a better balance between vehicles and people by working with local communities, leaning from best practice elsewhere, and sharing design guidance.

During the 20th century, Glasgow's streets and public spaces became dominated by the needs of motorised transportation. City streets are increasingly used as spaces for testing a seemingly unstoppable flow of "disruptive" unsustainable transport, such as vehicle movement and parking. However, city streets are also spaces where key urban functions also take place, such as commerce and play, social interaction and leisure, creativity and politics.

International best practice has shown that as space is reallocated and vehicle speeds and flows are reduced, there is significant potential to improve the quality of street spaces. Data has shown rebalancing streets in this way has many benefits, including more people walking and cycling, higher usage and increased speed of public buses, neutral or positive effects on traffic flows, as well as an increase in retail sales and reduction in commercial vacancies due to increased foot fall. Streets for People creates opportunities to increase the range of people and activities that are on the street. It also creates space for increased green infrastructure, which is an important tool in climate adaptation and mitigation.

3.2 Scheme Objectives

- 3.2.1 The Liveable Neighbourhoods Programme has an ambitious city-wide vision, with a wide array of small-scale interventions planned to enable the desired transition to a more cohesive neighbourhood. To monitor the success of the scheme in establishing Liveable Neighbourhoods, objectives have been set out to outline what success looks like. These have been outlined in Table 3-1.

Table 3-1: Liveable Neighbourhoods Plan Objectives

Objective No.	Theme	Objective
LN1	Active travel	Improvements in Sustainable transport and encouraging modal shift

Objective No.	Theme	Objective
LN2	Active travel	Provide safe, accessible and well-connected walking and cycling networks
LN3	Active travel	Raise awareness about the benefits of active travel
LN4	Streets for people	Reallocating road space for people and active travel
LN5	Streets for people	Re-imagine Glasgow's streets as highly social spaces, which have a positive function for water management and biodiversity
LN6	Streets for people	Improving safety, accessibility and legibility
LN7	Streets for people	Create inclusive streets prioritising the most vulnerable user
LN8	Streets for people	Develop street designs that are responsive to Glasgow's conditions of climate and seasonal light
LN9	Everyday journeys	Reduced emissions in local areas and contributing to carbon neutrality; discourage private car use
LN10	Everyday journeys	Improve health outcomes and wellbeing in Glasgow, by making active travel the first-choice mode for everyday journeys
LN11	Everyday journeys	Facilitate and promote independent travel choices for all ages and abilities, particularly children
LN12	Everyday journeys	Ensure easy access to local centres, schools, open and green spaces
LN13	Everyday journeys	Build a network of urban movement, where walking and

Objective No.	Theme	Objective
		cycling are integral parts of the multi-modal system
LN14	Everyday journeys	Improve neighbourhood permeability for active travel and reduce road danger to make every street a good choice for walking and cycling
LN15	Local Town Centres	Strengthen the existing town centres / high streets to include multipurpose spaces with a range of uses, amenities and facilities
LN16	Local Town Centres	Enhance town centres as attractive destinations
LN17	Local Town Centres	Support the Glasgow Food Plan by enhancing access to food for all, including by cycle delivery networks
LN18	Local Town Centres	Support local wellbeing economies, also with links to circular economy
LN19	Local Town Centres	Adequate access to quality local healthcare support and facilities
LN20	Local Town Centres	Work with communities and stakeholders to promote opportunities for local stewardship and management

Note: Specific measurable targets and dates for all objectives will be developed in the next stage of business case development.

3.3 The Strategic Context

3.3.1 Since the expansion of the European Union (EU) in 2004, western European cities in particular have experienced a significant reduction in European grant funding and lack of investment into public realm infrastructure. This was followed by the full withdrawal of ERDF capital infrastructure funding in the case of many areas including Glasgow and most of western Scotland's city centres, following the end of the 2000-2006 Objective 2 Structural Funds Programme. This shift of resources towards the new Eastern European member states has had a substantial impact on the options for funding infrastructure in Glasgow.

- 3.3.2 This has been further exacerbated by significant and ongoing reductions in central government grants to local government which have impacted upon service provision and local regeneration initiatives, and reduced income from revenue-generating activities like Planning Services, or from developer contributions, due to the general development downturn.
- 3.3.3 This scheme will contribute to the following policy objectives and reverse the effects of reduction in public realm infrastructure funding, through improving access to healthy, more resilient, and better-connected places for Glasgow residents. This will in turn reduce the city's dependency on car and stimulate local economic centres.

Local / National Policies

- 3.3.4 To determine how well the proposed scheme meets both local and national policy objectives, an overview of the national policies impacted by the scheme are provided in Table 3-2 with more detailed information provided in Table 3-3.

Table 3-2: Summary of scheme impact on key local and national policies

Policy	Overview of Scheme Impact
Glasgow Strategic Plan 2022 to 2027	The city-wide Liveable neighbourhoods programme will contribute to the 'Grand Challenges' of the strategic plan, in particular Challenge 3, Mission 1 'Deliver sustainable transport and travel aligned with the city region', Mission 2: Become a net zero carbon city by 2030 and Grand Challenge 4, Mission 1: Create safe, clean and thriving neighbourhoods. The Missions target reductions in car travel both in terms of transfer to sustainable modes and reductions in journey length and implementation of local infrastructure changes in line with a Liveable Neighbourhoods approach for every single community by 2030 so that our local streets are safe and pleasant for everyone to walk, wheel, cycle, play and spend time in
Glasgow City Development Plan	The LNP will contribute towards the aims of sustainability and reducing non-essential car travel through encouraging active travel and the development of sustainable communities.
Glasgow's Transport Strategy (2022)	The Glasgow Transport Strategy is Glasgow's updated local transport strategy. It will set out a Policy Framework and a Spatial Delivery Framework to help guide decision-making on transport up to 2030.
Glasgow's Active Travel Strategy 2022-2031	The LNP will deliver both the environment and, if required, the infrastructure to encourage active travel within neighbourhoods. It is complementary to the city-wide active travel network and is likely to enhance the benefits of this strategy.
Glasgow's Liveable Neighbourhoods	Glasgow's Liveable Neighbourhoods will be accessible and healthy places that allow people, of all ages and abilities, out to play and socialise in their local area. Neighbourhoods should perform in such a way that maximises the social, economic and environmental benefits of the area through interventions that improve localities and place and help to reduce the city's dependency on cars by making walking, cycling and public transport first choice.

	Glasgow's Climate Action Plan	The LNP will make a significant contribution towards Glasgow's climate emergency. It will help transformation the city and achieve its carbon goals through reductions in car travel and increased urban greening and the development of sustainable communities.
	Glasgow's Road Safety Plan 2020 - 2030	This plan sets out the city's vision of no-one being killed or seriously injured in road accidents by 2030. Reducing car-based traffic, particularly on short to medium journeys at peak times is an objective closely aligned with the expected outcomes of this scheme.
	Glasgow's Open Space Strategy	The introduction of pocket parks, parklets and improvements to existing public parks and spaces as part of the LNP will help to improve open spaces in Glasgow in-line with the Open Space Strategy.
	Glasgow City Region Economic Strategy	The Liveable Neighbourhoods scheme aims to create more cohesive local areas with better connections to help deliver economic growth. It will increase the attractiveness of Glasgow's neighbourhoods and help attract an increased labour pool.
Scottish Government National Plans, Policies and Strategies	Scotland 2045. Fourth National Planning Framework – NPF4 (Draft)	Focusses on the creation of sustainable, liveable, productive and distinctive places. A key objective of the project is to create more cohesive living spaces through the introduction of liveable neighbourhoods.
	Scotland's Digital Future (2011)	Digital infrastructure is one of the potential interventions as part of the Liveable Neighbourhoods Plan. Making Neighbourhoods more data driven aligns with many aspects of the Scotland's Digital Future policy document.
	2020 Challenge for Scotland's Biodiversity	Green Wildlife Corridors, Parklets and Pocket Parks are examples of the numerous biodiversity impacts that will be undertaken as a result of the Liveable Neighbourhoods.
	Climate Ready Scotland (2019)	Sustainability is at the heart of liveable Neighbourhoods with interventions such as tree planting and EV charging points contributing to the carbon agenda.
	Regeneration Strategy (2011)	One of the key aims of the Liveable Neighbourhoods is the regeneration of neighbourhoods throughout Glasgow.
	National Transport Strategy 2 (2020)	Vision for a sustainable, inclusive, safe and accessible transport system. One of the aims of creating Liveable Neighbourhoods is to provide safe and inclusive travel across the neighbourhood allow easier access to amenities.

Table 3-3: Impact of scheme on local and national policy

	Policy	Overview of Scheme Impact
Local Government Planning Policies	Glasgow Strategic Plan 2012 to 2027	<p>The Plan sets out four Grand Challenges for the council to deliver against. These are to:</p> <ul style="list-style-type: none"> • Reduce poverty and inequality in our communities • Increase opportunity and prosperity for all our citizens • Fight the climate emergency in a just transition to a net zero Glasgow

- Enable staff to deliver essential services in a sustainable, innovative and efficient way for our communities.

The plan outlines Missions that will be undertaken to address these priority Grand Challenges, as well as outlining the risks to their delivery.

Glasgow continues to face challenges in addressing many impacts. Glasgow seeks to Reduce poverty and inequality in our communities; Increase opportunity and prosperity for all our citizens; Fight the climate emergency in a just transition to a net zero Glasgow; and Enable staff to deliver essential services in a sustainable, innovative and efficient way for our communities.

The vision for the Strategic Plan is to support a fair and sustainable city where everyone gets to contribute and all can benefit from a flourishing Glasgow.

Glasgow aims to become a sustainable low carbon city. This is a long-term goal; however, there are Challenges and Missions that can be put in place now to deliver this ambition. The environment and transport remain high on the list of priorities for Glasgow citizens and businesses and this plan focuses on delivering improvement in these areas. The Challenges and Missions are as follows:

The Grand Challenges and their Missions are as follows:

1. **Reduce poverty and inequality in our communities**

- End child poverty in our city using early intervention to support families
- Meet the learning and care needs of children and their families before and through school
- Improve the health and wellbeing of our local communities
- Support Glasgow to be a city that is active and culturally vibrant

2. **Increase opportunity and prosperity for all our citizens**

- Support Glasgow residents into sustainable and fair work
- Support the growth of an innovative, resilient and net zero carbon economy
- Raise attainment amongst Glasgow's children and young people

3. **Fight the climate emergency in a just transition to a net zero Glasgow**

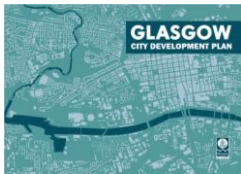
- Deliver sustainable transport and travel aligned with the city region
- Become a net zero carbon city by 2030

4. **Enable staff to deliver essential services in a sustainable, innovative and efficient way for our communities**

- Create safe, clean and thriving neighbourhoods
- Run an open, well governed council in partnership with all our communities
- Enable staff to deliver a sustainable and innovative council structure that delivers value for money

Having clean, sociable, accessible and safe neighbourhoods for people to live and work in is a key driver for the delivery of Glasgow’s commitment to reduce inequalities. Living in quality neighbourhoods, where you feel a sense of ownership over the decisions made in it, improves the health and wellbeing of Glasgow’s people.

Glasgow City Development Plan

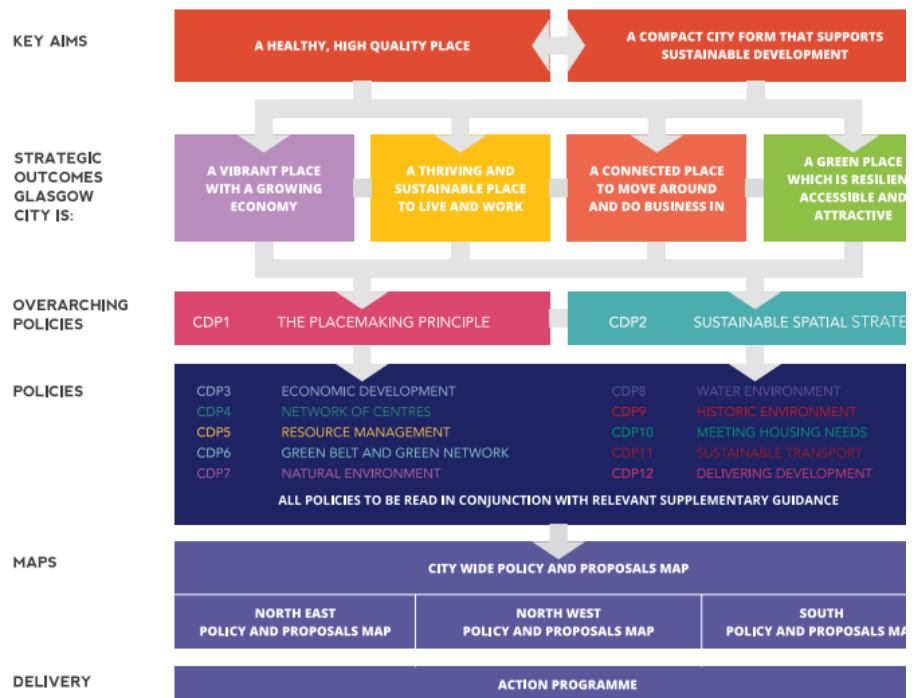


This Plan for the City of Glasgow sets out a clear 10 year planning framework, including a spatial strategy, policies and proposals for the future use of land and infrastructure. The plan has two key aims: a healthy, high-quality place; and a compact city form that supports sustainable development. Within these aims are four key outcomes:

There are key issues which are highlighted in the plan relating to the city profile and context in terms of the social, economic and environmental aspects.

Social: Issues include accommodating the rising population and household numbers, as well as addressing health levels and levels of health inequality.

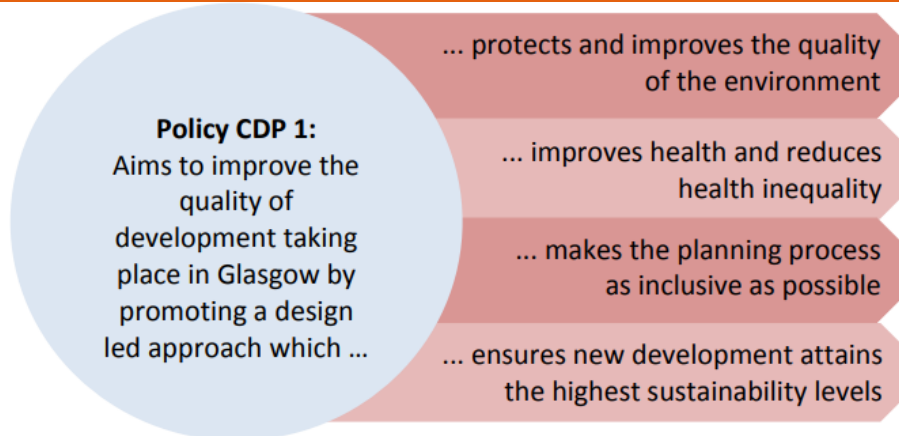
Economic: Issues include growing the city’s considerable economic contribution and benefitting from the significant potential of the available employment pool and further and higher education sectors, while challenging levels of unemployment and deprivation in the city.



Environment: Issues includes enhancing the city’s compact and sustainable form by addressing the significant areas of vacant and derelict land; delivering access to better quality open spaces; addressing the significant number of car journeys and promoting active and reducing the need to travel. Also ensuring that the city is in a resilient position to respond to environmental and water management challenges in coming years.

The Development Plan introduces two overarching policies: the Placemaking Principle and the Sustainable Spatial Strategy.

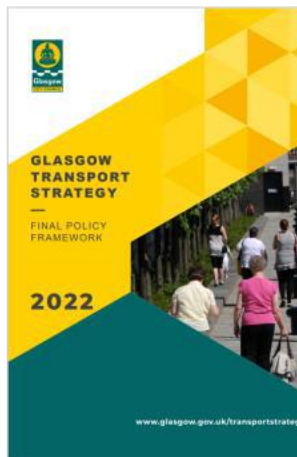
Placemaking Principle:



Sustainable Spatial Strategy: The plan identifies priority areas where a strategic approach is needed to co-ordinate development activity, direct investment and address emerging opportunities.

The Plan introduces 12 policies, several which the scheme contributes to. For example, City Development Policy (CDP) 1 – The Placemaking Principle; CDP 4 – Network of Centres; CDP 11 – Sustainable Transport; CDP 2 – Delivering Development.

Glasgow's Transport Strategy



The Glasgow Transport Strategy for the city of Glasgow aims to set a clear direction for transport policies, projects and investment up to 2030. It is the overarching transport strategy for the city by Glasgow City Council.

Replacing and updating the Council's existing Local Transport Strategy "Keep Glasgow Moving" 2007-09, the new Glasgow Transport Strategy responds to several challenges and opportunities for Glasgow. In particular, the role of transport in planning, economic development, social inclusion and the climate & ecological emergencies.

We also have goals we are working towards outcomes we want to achieve. They must therefore influence our decision-making. These four outcomes recognise that transport is part of a wider system and that transport plays a particularly important role in achieving wider goals in society.

- Transport contributes to a successful and just transition to a net zero carbon, clean and sustainable city.
- Transport has a positive role in tackling poverty, improving health and reducing inequalities
- Transport contributes to continued and inclusive economic success and a dynamic, world class city.
- Places are created where we can all thrive, regardless of mobility or income, through liveable neighbourhoods and an inclusive City Centre.

Glasgow City Region Economic Strategy

The Glasgow City Region Economic Strategy sets out an evidence base of our economy today and the future challenges we collectively face, identifying key opportunities that must be grasped.

The document introduces:



- The Region’s Economy – this focuses on how the economy functions, key data, and some of its key strengths.
- Our Grand Challenges and Opportunities – this outlines the Grand Challenges from the Baseline and seven key opportunities to transform the economy.
- What We Will Do – the vision, mission and strategy priorities.

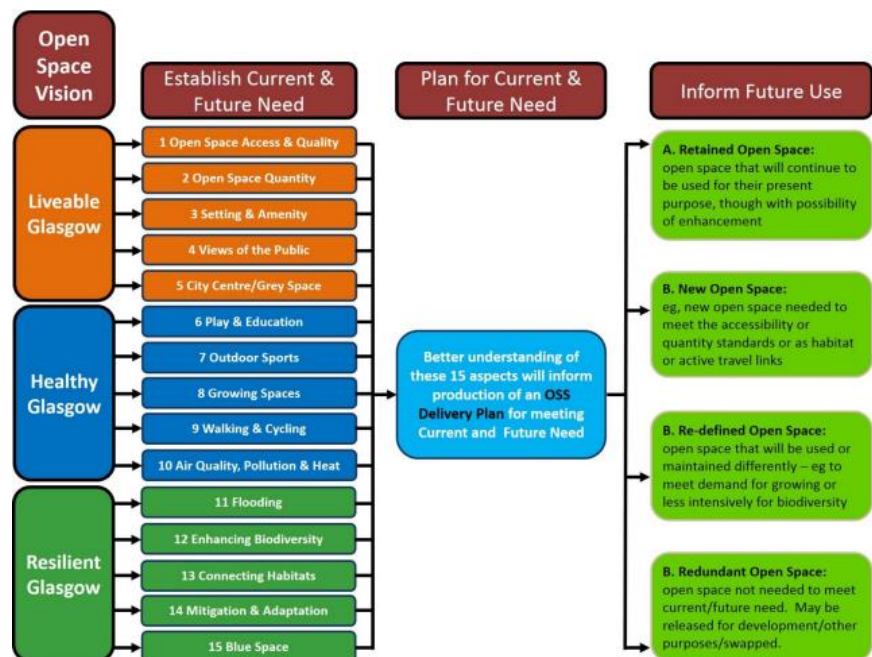
How We Will Deliver the Strategy – the action plan including priority programmes, the approach to delivery, how we will work with investors, government and the private sector.

Glasgow’s Open Space Strategy



This strategy sets out a long-term vision for Glasgow’s open spaces to ensure that they meet the City’s needs in the years to come. The Open Space Vision is: “To ensure Glasgow continues to be a “dear green place” for both residents and visitors alike by integrating open space into all aspects of the city’s activities in ways that promote sustainability, equality and enhance quality of life”.

LES also has responsibility for the management and maintenance of Glasgow’s parks and open spaces, which includes 91 Parks (covering 3,160 hectares), 1,029 hectares of woodlands and 24 hectares dedicated to allotments. In Glasgow there is a long tradition in the pursuit of a high-quality built environment and public realm, and this continues with the vision for delivering a high-quality environment that supports economic vitality, improves the health of Glasgow’s residents, provides opportunities for low carbon movement, builds resilience to climate change, supports ecological networks and encourages community cohesion. However, a significant amount of open space in the form of playing fields is managed on behalf of the council by Glasgow Life, and the city’s Open Space Strategy is owned by Development and Regeneration Services.



Glasgow’s Active Travel Strategy 2022-2031

Glasgow’s active strategy has a fundamental role to play in achieving a successful transition to a carbon neutral, clean and sustainable city; tackling poverty, improving health and reducing inequality; contributes to inclusive economic success and creates place where



all can thrive regardless of mobility or income. The strategy sets out the vision to make active travel first choice and to increase walking, wheeling and cycling across Glasgow for those who can.

Walking, cycling and wheeling must be facilitated in ways that complement one another, and equally importantly, provide seamless links with local public transport services. This strategy places active travel as a meaningful and crucial element of our daily journeys and will contribute to Glasgow's health, economy, connectivity and wellbeing as well as helping to deliver on climate commitments.

Accessibility and inclusion are core to this strategy. Active travel can reduce transport inequalities and offer residents greater independence to move around Glasgow. The proposed City Network will provide safe active travel at all times of day, for people of all abilities. Walking and wheeling infrastructure and public spaces must provide easy access for everyone, so that nobody feels disconnected from public transport, local services and their community.

It addresses the barriers to cycling, but also, and perhaps more importantly, the barriers that prevent people from taking up cycling in the first place. In conjunction with the Liveable Neighbourhoods Plan, it will help to make streets feel safer to walk, wheel, play and spend time in.

Glasgow's Liveable Neighbourhoods



Glasgow's Liveable Neighbourhoods will be accessible and healthy places that allow people, of all ages and abilities, out to play and socialise in their local area. Neighbourhoods should perform in such a way that maximises the social, economic and environmental benefits of the area through interventions that improve localities and place and help to reduce the city's dependency on cars by making walking, cycling and public transport first choice.

It is possible to rebalance the way streets are designed and used, to make them more people friendly and better for socialising and improving commercial activity. To also place active travel and public transport as a first choice whilst maintaining the transport needs of the city. Glasgow is adopting the 20-minute neighbourhood approach by establishing the Liveable Neighbourhoods Plan. The publication of this toolkit is the first stage of a 10-year programme that will focus on enabling communities and people of all abilities to improve their neighbourhoods.

The four key themes of a liveable neighbourhood are:

1. Local Town centres - enable communities to meet their everyday needs locally and bring vibrancy, activity and jobs.
2. Everyday journeys - short journeys are made by car that could happen on foot or by bike: for example, to school, childcare, shops, or family and friends.
3. Active Travel - Walking, cycling and moving around on your own helps health, wellbeing and carbon emissions.
4. Streets for people - achieves a better balance between vehicles and people by working with local communities, learning from best practice elsewhere, and sharing design guidance.

Glasgow's Climate Plan



Glasgow looks to become one of the most sustainable cities in Europe. The city has already achieved (and exceeded) its target of reducing CO2 emissions by 30% by 2020, achieving this goal by 2015, through a combination of energy efficiency and local generation. But this also means that many of the quick wins have been realised. In this light, the city recognises that there needs to be a sharp increase in the scope, scale, and intensity of delivery of projects to set Glasgow on course to achieving its net zero carbon goal for 2030.

The most recent data (2018) for city emissions highlights that Glasgow's total area wide emissions is 2,591 kilo-tonnes (ktCO₂). This represents a 37% reduction on the city's baseline data (2006) and the total emissions which will have to be mitigated by avoiding, reducing and offsetting activities, in that order. Transport emissions are the biggest challenge for the city, as the sector has seen slower reductions than in other sectors such as Domestic and Commercial & Industrial. However, the COVID 19 pandemic may have had an impact on the city's emissions, particularly in the transport sector. Data published by Google Environmental Insights for 2020 suggests that transportation-based emissions in Glasgow decreased by 39% in 2020. The city will strive to maintain that reduction and further reduce transport sector emissions. The city's ambition is to reduce emission through direct mitigation, while also adapting to the impacts of climate change and addressing the ecological emergency, all of which will provide carbon offsetting opportunities, whilst also improving quality of life and place in the city.

To achieve the level of change that is required to respond to the Climate Emergency, the city commits to action within five main themes. They are:

1. Communication and community empowerment – engage with communities about climate change, foster participation and collaboration and enable local action
2. Just and inclusive place – ensure that the transition to a net-zero society is a catalyst for building a fairer, healthier, prosperous, resilient and greener city for all, Empower and invigorate our communities, strengthening local economies
3. Well connected and thriving city – support decarbonisation of transport systems by helping to improve infrastructure for walking, cycling, wheeling and reducing the need to travel.
4. Health and wellbeing – support creation and maintenance of good quality, multifunctional open space to help reconnect communities with nature
5. Green recovery - Supporting improved infrastructure for walking, cycling and remote working

Key Actions that Liveable Neighbourhoods will support are:

- Action 56 – reduce the need to own and use a car through measures in the City Development plan, Glasgow Transport Strategy and Liveable Neighbourhoods
- Action 51 – deliver a comprehensive active travel network, incorporating the spaces for people measures and enabling

20-minute neighbourhoods through the liveable neighbourhood plan.

- Action 59 – work with partners in the city to accelerate the transition of Glasgow’s economy from linear to circular, making it more inclusive and sustainable

Glasgow’s Road Safety Plan 2020 - 2030



This plan sets out the city’s vision of no-one being killed or seriously injured in road accidents by 2030. The Plan sets out a number of actions to achieve this target, which include prioritising active travel across the city.

A significant step towards shifting that balance to active travel is by implementing a city wide 20mph speed limit. Slowing vehicle speeds opens up opportunities to walk and cycle more journeys, improving the environment we all live in

Reducing car-based traffic, particularly on short to medium journeys at peak times, is just one of the key elements to reducing road casualties in Glasgow. We need to encourage safe sustainable active travel such as walking, cycling and wheeling and explore and support new methods of travel such as e-bikes and scooters. We also need to ensure our public transport system is an affordable and reliable option for everyone, and that it provides good access to healthcare, services and employment.

Education, training and publicity is also a vital component in the safe-systems approach, to ensure all road users are risk aware, not only for themselves, but for other road users.

Scotland 2045. Fourth National Planning Framework – NPF4 (Draft)



The draft NPF4 sets out a vision for how Scotland’s places will change in the future. It reflects priorities across Scottish Government portfolios and brings together a wide range of plans, programmes and policies. It explains how they will work together to build sustainable, liveable, productive and distinctive places. The

draft highlights six qualities of successful places in order to do so:

1. Designed for lifelong health and wellbeing: supporting safety and improving mental and physical health.
2. Safe and pleasant: supporting safe, pleasant and welcoming natural and built spaces.
3. Well-connected and easy to move around: supporting networks of all scales.
4. Distinctive: supporting attention to local architectural styles and natural landscapes.
5. Sustainable: supporting net zero, nature-positive and climate-resilient places.
6. Adaptable: supporting commitment to investing in the long-term value of buildings, streets and spaces.

This proposed interventions within this scheme contribute to several objectives highlighted within the framework, these being:

- Sustainable Places
- Liveable Places

- Productive Places
- Distinctive Places

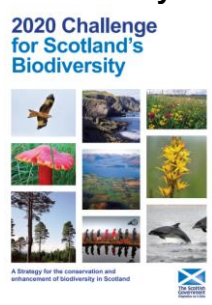
Scotland's Digital Future (2011)



Digital technologies are widely recognised as an enabler of productivity and a driver of innovation and international trade, helping to boost jobs and export income. This strategy sets out in detail how the SG intends to achieve their digital ambition. It summarises what they are already doing, and what further actions they propose to take, in four key areas of public service delivery: the digital economy; digital participation; and broadband connectivity. In doing so, the strategy will ensure that Scotland is positioned to take full advantage of the opportunities offered by the digital age.

Technological change can make contributions to both improving outcomes and reducing costs. It is already clear that technology will play a key role in delivering health and social services in many countries throughout the world in the 21st century. However, broadband use is lowest amongst older people, those with health difficulties, and those on low incomes.

2020 Challenge for Scotland's Biodiversity



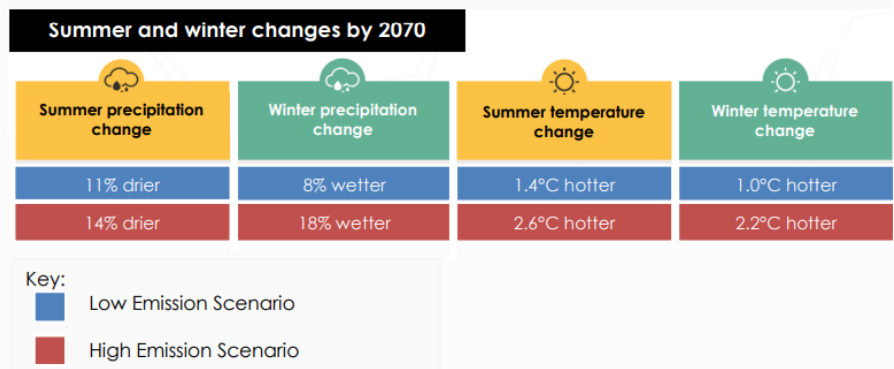
Scotland is defined by its rich nature of native animals, plants and vibrant landscapes. Biodiversity plays an essential role in meeting the SG's vision of a smart, sustainable and successful Scotland, and lies at the heart of their economic strategy, specifically when it comes to the additional variety it adds to urban green spaces, as well as providing health and well-being benefits.

Previously, the long-standing approach to environmental health has focused on the minimisation of environmental "bads", such as air or water pollution. Today, however, there is new extra emphasis placed on environmental "goods". The natural environment is now recognised as an important resource for promoting physical and mental health, improving educational outcomes, and supporting community development and regeneration. These benefits will be enhanced by the tree planning, urban greening and temporary greening of vacant and derelict land as a part of the Liveable Neighbourhood developments.

Climate Ready Scotland (2019)



Climate change adaptation is about responding to the changes that we have seen in our climate over the last few decades and preparing for the challenges that will face as our climate continues to change.



There are a range of outcomes highlighted in this strategy. There are three which relate directly to this scheme and its objectives. Outcome

1, for example, emphasises that Scotland's communities are inclusive, empowered, resilient and safe in response to the changing climate. Several of the proposed interventions will directly impact this outcome by enhancing social sustainability indicators such as social cohesion and interaction, attractive public realm and sustainable urban design (amongst others) (Dempsey *et al.*, 2011). Outcome 2 states how the people in Scotland who are most vulnerable to climate change can adapt and climate justice is embedded in climate change adaptation policy. Finally, Outcome 5 says that Scotland's natural environment is valued, enjoyed, protected and enhanced and has increased resilience to climate change.

Regeneration Strategy (2011)



This Strategy responds to the challenges faced by Scotland's most disadvantaged communities to help create a Scotland where all places are sustainable, and where people want to live, work and invest. Regeneration of Scotland's most disadvantaged areas and strengthening of local communities are key priorities for the Scottish Government. Future generation activity must put communities first, make connections between the physical, social and economic dimensions, focus on the safety and quality of places and tailor interventions to address unemployment.

This strategy doesn't seek to change viable development models but looks to build on previous success and encourage innovative ways of working where this can support progress. Key to success will be:

- Reforming the way in which mainstream resources are used to support vulnerable communities.
- A stronger focus on community-led regeneration.
- Realising the economic potential of Scotland's communities through focussed funding and other support mechanisms.

This links directly to this scheme, particularly due to enhanced health outcomes through active and sustainable public transport and urban greening in four deprived areas of Glasgow.

National Transport Strategy 2 (2020)



This strategy sets out the vision for Scotland's transport system for the next 20 years. It will help to create a sustainable, inclusive, safe and accessible transport system, helping to deliver a healthier, fairer and more prosperous Scotland for communities, businesses and visitors. It sets out four key priorities:



Reduces inequalities

- Will provide fair access to services we need
- Will be easy to use for all
- Will be affordable for all



Takes climate action

- Will help deliver our net-zero target
- Will adapt to the effects of climate change
- Will promote greener, cleaner choices



Helps deliver inclusive economic growth

- Will get people and goods where they need to get to
- Will be reliable, efficient and high quality
- Will use beneficial innovation



Improves our health and wellbeing

- Will be safe and secure for all
- Will enable us to make healthy travel choices
- Will help make our communities great places to live

The scheme directly links to this strategy through each theme highlighted within the Liveable Neighbourhoods:

Local Town Centres: This enables residents to access most of the activities needed for good living within a 20-minute walk, cycle or public transport trip from their homes.

Everyday Journeys: By improving the conditions for walking and cycling within neighbourhoods there is a significant opportunity to reduce carbon emissions and to provide more-active travel choices, which enhance health outcomes.

Active Travel: An important aspect of Glasgow's LNs is ensuring there is adequate implementation of active travel networks within neighbourhoods, connecting them to the city network and helping to meet Glasgow's ambitious target to make walking, cycling and wheeling considered as first choice modes of travel.

Streets for People: This focuses on the rebalancing of streets from being less car-centric to more people-centric. It creates opportunities to increase the range of people and activities that are on the street, while removing space for motorised vehicles, contributing to a sustainable travel network. It also creates space for increased green infrastructure, which is an important tool in climate adaptation and mitigation.

20-Minute Neighbourhoods

- 3.3.5 The Government's National Planning Framework 4 statement highlights the '20-minute neighbourhood' as the number one opportunity for making our streets and neighbourhoods more liveable. This is a complementary policy idea alongside the Liveable Neighbourhoods Plan.

- 3.3.6 The Scottish Government has already made commitments to deliver a net zero society and green long-term investments that will transform our society and build a wellbeing economy. These policy shifts have highlighted the importance of neighbourhoods and place with this being evident in the Government's National Planning Framework 4 position statement highlighting the '20-minute neighbourhood' as the number one opportunity for making our streets and neighbourhoods more liveable. This is a method of achieving connected and compact neighbourhoods designed in such a way that all people can meet the majority of their daily needs within a reasonable walk, wheel or cycle (within approx. 800m) of their home.
- 3.3.7 The issues that will be addressed such as the spatial imbalance of vehicles over people and the priority of vehicles movement over people movement will bring together initiatives such as car free zones around schools and the active travel strategy for the city. This will also assist in working towards the city's target to be carbon neutral by 2030.



*Taken from '20-minute neighbourhoods' (planning.vic.gov.au)

Scottish Index of Multiple Deprivation

- 3.3.8 The indices of multiple deprivation are commonly used as a guide to identify areas of low socio-economic performance. This is key information in understanding the current and future potential for economic growth.
- 3.3.9 Glasgow lies within Scotland's Central Belt and is the country's largest city and only metropolitan region. Over the last 30 years, Glasgow has transformed from a city scarred by rapid industrial decline to a vibrant global destination city. The city centre

is a major contributor to the national economy and remains a focus for knowledge, culture, creativity, innovation and prosperity. The City Centre is also a place where people increasingly choose to live.

- 3.3.10 The Glasgow City Centre Strategic Development Framework outlines the following vision for 2050 the city centre:

*The City Centre will be a vibrant, inclusive, sustainable and liveable place. A green, attractive and walkable City Centre will ensure a people friendly place that is climate resilient, fosters creativity and opportunity and promotes social cohesion, health and wellbeing and economic prosperity.*³

- 3.3.11 Some areas outside the city centre are deprived and have lower employment rates and higher poverty rates compared to the city centre whilst others are more prosperous but would also benefit from improvements in sustainability and inclusivity. These areas have the potential to become a series of vibrant, diverse and inclusive neighbourhoods that bring life to the whole city. This will necessitate the provision of supporting social infrastructure and a step change in the quality of the physical environment to become more people focussed.
- 3.3.12 Public realm investment in Tranche 1 of this scheme will help to alleviate the social and economic deprivation and poverty rates detailed in this section. Tranches 2 and 3 have also been confirmed as:

Tranche 2

- Pollokshaws, Mansewood, Pollokshields West, Shawlands and Strathbungo LN
- Greater Gorbals, Govanhill and Pollokshields East LN
- Sighthill, Roystonhill, Germiston, Blackhill and Hogganfield LN
- Yoker, Scotstoun, Jordanhill and Whiteinch LN

Tranche 3

- North Cardonald, Pennilee, Crookston, South Cardonald, Bellahouston, Craigton and Mosspark LN
- Knightswood, Temple and Anniesland LN
- Lambhill and Milton LN
- Easterhouse, Ruchazie and Garthamlock LN

- 3.3.13 Tranches 4, 5 and 6 locations are in the process of being confirmed.

- 3.3.14 Figure 3-2 shows the Index of Multiple Deprivation across Glasgow City in 2020 and key statistics detailed in Table 3-4. It shows that the majority of Glasgow City and outlying areas fall into the most deprived 30% of the country. Of those of a working age, there is a high proportion of income and employment deprived people in Glasgow. The city also has a relatively young population, with almost three-quarters of the population at working age.

³ City Centre Strategic Development Framework. Glasgow City Council. May 2021.

Figure 3-2: Scottish Index of Multiple Deprivation 2020 – Glasgow City

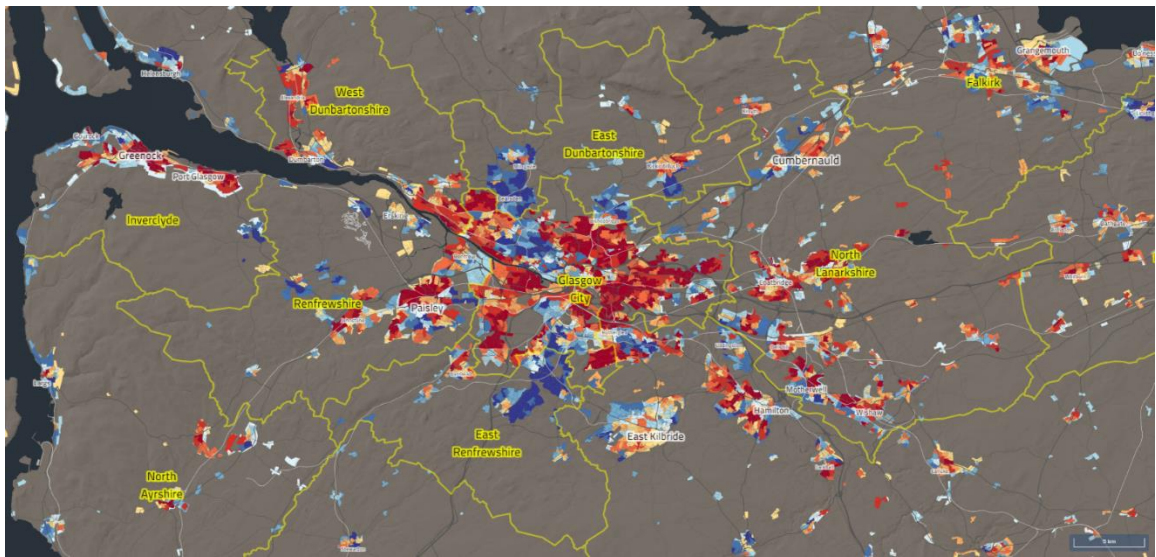
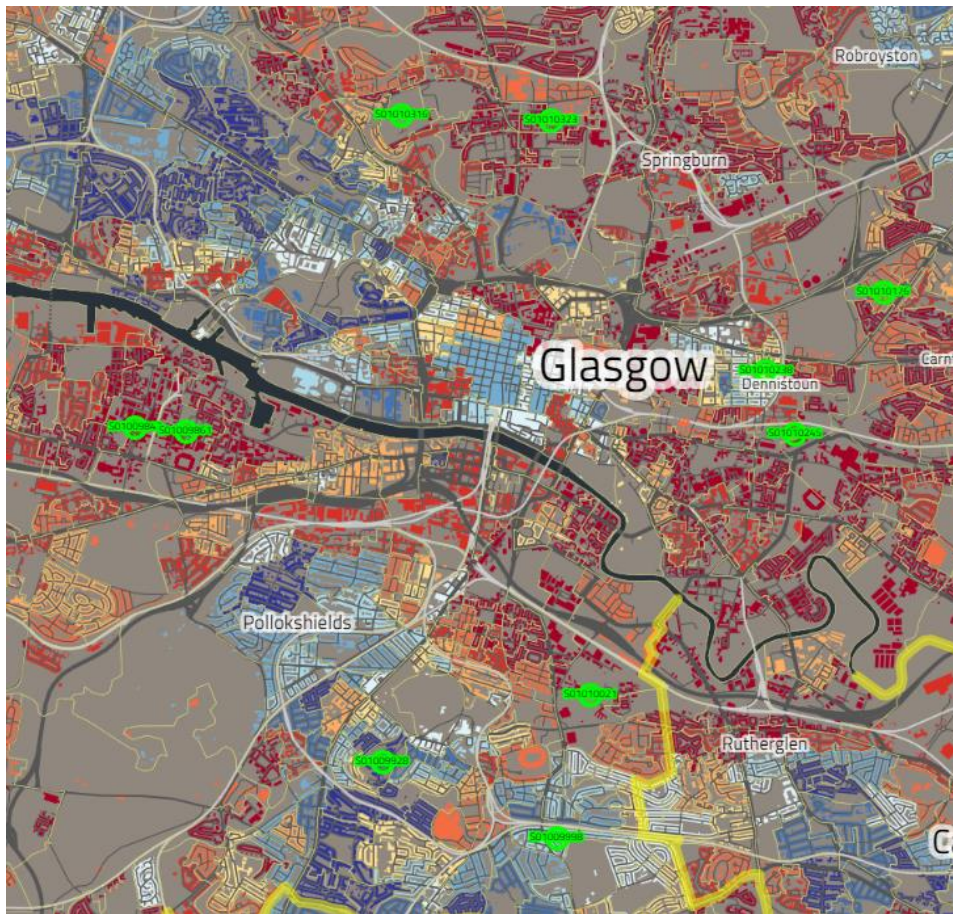


Table 3-4: Scottish Index of Multiple Deprivation 2020

Indicator	IMD (2020)
Total Population	621,020
Working Age	71%
Income Deprived	19%
Employment Deprived	9%
No qualifications (working age)	18%

3.3.15 In comparison with Figure 3-2, Figure 3-3 demonstrates the Index of Multiple Deprivation in Glasgow in 2020 focussing on the areas within each liveable neighbourhood (shown by green place markers). The map demonstrates that the majority of the study areas fall into the most deprived areas of the city.

Figure 3-3: Scottish Index of Multiple Deprivation 2020 – Liveable Neighbourhoods



3.3.16 As shown in Table 3-5, 50% of the areas in question fell within the most deprived 10% of Glasgow’s population in 2020, and the majority fell within the most deprived 30% of the population. Langside/Battlefield and King’s Park/Mount Florida were within the least deprived 30%.

Table 3-5: Scottish Index of Multiple Deprivation 2020

	Scottish Index of Multiple Deprivation (2020)								
	North West	North East			South West		South East		
	Ruchill/Possilpark	Dennistoun	Haghill/Carntyne	Riddrie/Cranhill	Greater Govan	Ibrox/Kingston	Langside/Battlefield	King’s Park/Mount Florida	Toryglen
Total population	10,737	11,305	8,978	11,233	13,509	12,220	13,673	9,430	4,475
Working age (%)	67%	77%	67%	64%	69%	78%	78%	70%	64%
Income Deprived	33%	13%	51%	18%	42%	28%	3%	8%	29%
Employment Deprived	16%	6%	29%	8%	21%	15%	2%	4%	11%
Decile	1	5	1	3	1	1	10	7	1
Quintile	1	3	1	2	1	1	5	4	1

*Population data taken from the 2012 Glasgow indicators project

3.3.17 The working age population and employment rate for each area is shown in Table 3-6 which demonstrates that Langside/Battlefield, King’s Park/Mount Florida and Dennistoun all have the highest employment rates despite having some of the lowest proportions of working age population. However, most areas have

significantly lower employment rates compare to the average for Glasgow (69.3%⁴) between July 2020 to June 2021.

Table 3-6: Employment Rate (Glasgow Indicators Project 2012)

Area	Total Population	Working Age Population	Employment Rate
Ruchill/Possilpark	10,737	67%	47%
Dennistoun	11,305	77%	63%
Haghill/Carntyne	8,978	67%	53%
Riddrie/Cranhill	11,233	64%	45%
Greater Govan	13,509	69%	54%
Ibroy/Kingston	12,220	78%	58%
Langside/Battlefield	13,673	78%	75%
King's Park/Mount Florida	9,430	70%	67%
Toryglen	4,475	64%	51%
Ruchill/Possilpark	10,737	67%	47%

Conclusion

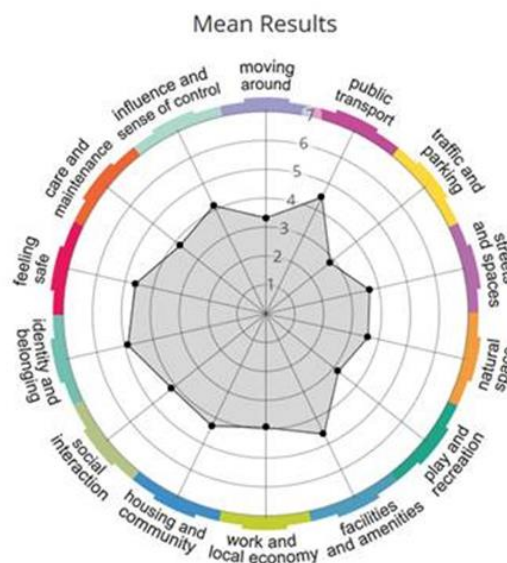
- 3.3.18 Analysis of data from the Scottish Indices of Deprivation demonstrates that in general, the four Liveable Neighbourhoods areas that form tranche 1 of this scheme are more deprived compared to the Glasgow average. The majority of the areas within each neighbourhood have lower life expectancy, higher levels of child poverty, lower levels of children and young people in education, and higher unemployment claimant rates for out of work benefits.
- 3.3.19 Investment in public realm infrastructure through the Liveable Neighbourhood scheme has the potential to improve deprivation levels in Tranche 1 areas through providing improved access to healthier, more resilient places which are better connected to the rest of the city and stimulate local centres' economies. The scheme would also encourage mixed-use development in the Liveable Neighbourhoods, which would help to improve the current socio-economic situation.

⁴ Nomis Labour Market Statistics <https://www.nomisweb.co.uk/reports/lmp/la/1946157420/printable.aspx>

3.4 Consultation

- 3.4.1 An in-depth and comprehensive stakeholder engagement process has been undertaken by Glasgow City Council. This has included extensive engagement with the public to develop the Liveable Neighbourhood concept.
- 3.4.2 Events were held at a series of venues in the communities which make up the Liveable Neighbourhoods to explore ideas and help generate options. There was a focus on local community groups and community representatives, with each event focusing on a specific community. Some of the key observations included:
 - Community involvement in the design of areas should happen more often.
 - Greenspace is vital for mental wellbeing, so give people places to sit and enjoy nature.
 - Plants, flowerbeds and colour all enhance an area – the flowerbeds on Saracen Street were cited as an example.
 - The 20-minute Liveable Neighbourhood idea would increase quality of life.
 - Create wider more accessible pavements, making them easier to navigate for everybody, families with children / buggies, people in wheelchairs.
 - Use parklets and planting to transform busy roads, get more greenery/planters on the streets, and also benches, basically just bring more life to Glasgow’s streets and get rid of cars / traffic
- 3.4.3 Glasgow City Council has also launched a digital platform called ‘Commonplace’ for each area within the first tranche of proposed Liveable Neighbourhoods. This allows people to comment and propose interventions in their area based on the themes of the intervention (see 3.1.8 for further details). The information gathered on the online platform will be used to help formulate specific interventions within each of the proposed areas. This information is used within a ‘Place Standard toolkit to analyse the requirements of an area, an example of this for Langside to Toryglen is provided in Figure 3-4.

Figure 3-4: Place Standard tool for Langside to Toryglen



- 3.4.4 Live consultations were also held, at each event there was the opportunity for any current grassroots projects to present their ideas and in between activities to feed into the option generation process. The image below shows a consultation event at Carntyne, where members of the community used blocks and other items to map out important hubs (red blocks represented important buildings, while yellow blocks were churches) as well as potential new developments (the green post-it notes, for example, represent new allotments, while the green straws represent strengthened pedestrian/cycle routes). After all of the ten events have been finished, we will be producing diagrams based on these large-scale maps and the story boards.



- 3.4.5 Stakeholder engagement is a key facet of the Liveable Neighbourhoods Plan. Liveable Neighbourhoods should be designed with the needs of the local community in mind and be specially tailored to the specific needs of the local population. Requirements are likely to differ for each individual neighbourhood underlining the emphasis for considered stakeholder engagement.
- 3.4.6 The engagement undertaken to date alongside future proposed events and the digital 'Commonplace' will all play significant roles in developing the Liveable Neighbourhoods scheme and ensure views of stakeholders are represented in the final deliverables. There was general consensus from stakeholders that the introduction of Liveable Neighbourhoods would be beneficial given that the interventions were targeted and specific to each area. The introduction of pocket parks and more green spaces were seen as particularly beneficial by many of those consulted.
- 3.4.7 The ongoing stakeholder engagement and the central role it plays in the development of specific options for each of the areas in all tranches of the Liveable Neighbourhoods programme will ensure that there is widespread support for the scheme as it moves forward through the project development phases.

3.5 External Impacts

Brexit

- 3.5.1 The impact of Brexit on Glasgow and on the scheme poses many challenges, however, Glasgow has proved itself to be resilient when faced with other economic challenges. The consensus of opinion is that the UK and Scottish economies will weaken in the short to medium term as a direct result of the uncertainty generated following the UK vote to leave the EU. On balance, all the key short to medium term macroeconomic impacts of Brexit will likely be negative.
- 3.5.2 In response to Brexit, the Scottish and UK Governments have been asked to commit to the following actions⁵:
- Maintaining a structural funds programme prioritising urban areas where the vast majority of Scotland's economic output is generated and its population live.
 - Accelerate City Deal capital infrastructure works.
 - The transfer of surplus land holdings to Glasgow City Council to enable their inclusion in the city's Strategic Housing Investment Plan.
 - To develop more effective collaborations across agencies and with Glasgow to support higher levels of city competitiveness, innovation and economic growth.



COVID-19

- 3.5.3 The global climate crisis as well as the COVID-19 pandemic has had a significant impact on local neighbourhoods and town centres highlighting the importance of local public space within our city and the need to re-prioritise the balance of our streets.

⁵ Brexit and the Glasgow economy: impacts, actions and asks. (2016)

<https://www.glasgow.gov.uk/CHttpHandler.ashx?id=35550&p=0>

4 Economic Case

4.1 Options Assessment

4.1.1 Tranche 1 of the programme consists of four areas identified within Glasgow as key areas for regeneration through the introduction of Liveable Neighbourhoods:

- Ruchill, Hamiltonhill, Possilpark, Port Dundas and Cowlairst.
- Langside, Battlefield, Mount Florida, King's Park and Toryglen.
- Greater Govan, Ibrox Cessnock, Kinning Park and Kingston.
- Dennistoun, Haghill, Riddrie, Carntyne and Cranhill.

4.1.2 Within these areas, a range of schemes are proposed, these are outlined in Table 4-1.

Table 4-1: Tranche 1 Liveable Neighbourhood Areas

Govan to Kingston LN Area
Govan Road and Elder Park Corner
Drumoyne Streets for People
Lorne Street and Festival Park
Cessnock Ibrox Village Street
Dennistoun to Cranhill LN Area
Railway Bridges
Riddrie Town Centre
Hogarth Park / Todd Street Park / Hagwill Cross
Carntyne Square
Artists Lighting M8 Bridge – Cranhill
Ruchill to Cowlairst LN Area
Dummy Railway
Ruchill Street Placemaking
Langside to Toryglen LN Area
Langside Monument
Toryglen Streets for People

4.1.3 The options assessment will be provided for each of the scheme elements described above. More detailed options assessment will be undertaken at the next stage of business case development for various scheme elements.

Govan to Kingston LN Area

Govan Road and Elder Park Corner

Background

- 4.1.4 The proposals for Govan Road West stretch from Linthouse Road – Moss Road intersection to Skipness Drive roundabout. Govan Road is a key primary road with high street frontages and local town centre. Govan Road currently serves as a main access route to the QEUH from the north. The proposed changes to the A739 will improve the traffic capacity of Govan Road to potentially accommodate the forecasted trip generation to and from CWIC Campus.
- 4.1.5 The new junction improvements to Linthouse Road – Moss Road – Govan Road intersection and a new signalised junction at Holmfauld Road – Govan Road intersection will serve as the primary access to CWIC Campus. A 3m wide segregated bi-directional cycleway is also proposed on Govan Road which is part of the wider Connecting Communities City Network. Opportunities for tree planting have also been identified. A new civic entrance for pedestrians and cyclists is proposed at the north-western corner of Elder Park to improve active travel connectivity.

Process

- 4.1.6 Options have been considered based on a variety of site constraints and development opportunities. The proposals for Govan Road also tie into the ongoing work for Connecting Communities / Liveable Neighbourhoods Programme for Greater Govan to Kingston area.

Long List

Govan Road

- 4.1.7 Three options have been considered for the proposal of a segregated cycleway on Govan Road. The proposed cycleway is accommodated through the reallocation of road space by the removal of painted median and concrete islands in the carriageway space. All three options retain on-street parking on the southern flank of the road.
- Option 1: Proposal of 1.5m segregated uni-directional cycleways on either side of Govan Road.
 - Option 2: Proposal of 3m segregated bi-directional cycleway on the northern flank of Govan Road.
 - Option 3: Proposal of 3m segregated bi-directional cycleway on the southern flank of Govan Road.
- 4.1.8 The signalised junctions have also been through the optioneering process to accommodate the cycleway proposals. Intermittent tree planting has been proposed in between the on-street parking spaces and on the footpath.

Elder Park Corner

- 4.1.9 Three design options have been considered for the new civic space and entrance to Elder Park. This is facilitated through removal of Skipness Drive roundabout and creation of a 'T' junction between Drive Road and Govan Road. In addition, the

design aims to improve access to the park and celebrate the heritage of the area with a grand entrance and well-defined civic space. The fast link bus route is retained.

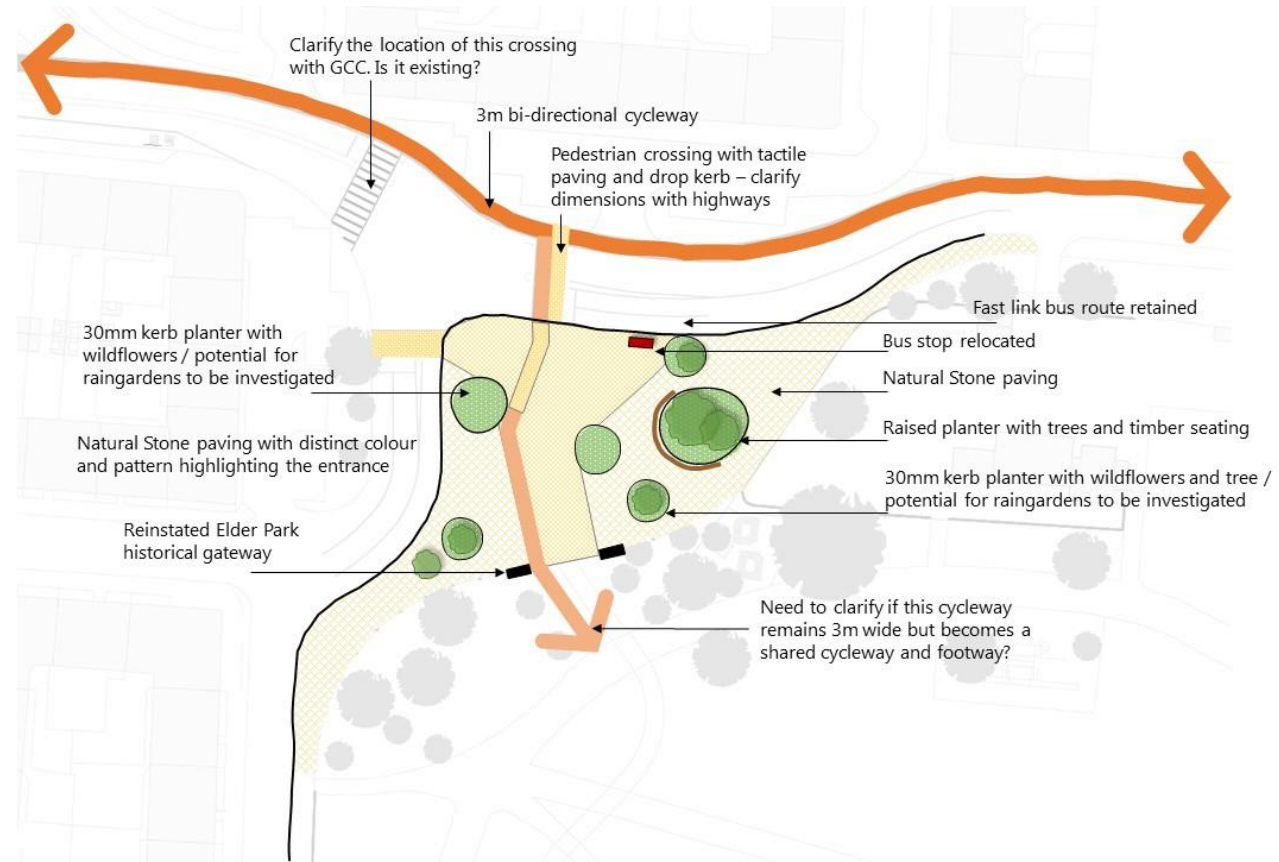
4.1.10 The design principles remain the same, which are as follows:

- New grand entrance gateway.
- No vertical obstructive features within the view framing gateway from the junction.
- Natural stone paving for the civic space including footpath around the entrance area to reflect the historical importance of the place and highlight the conservation area.
- Natural stone paving with distinct pattern / colour to highlight and guide the pedestrians to the gateway.
- Entrance to function as a flexible civic space with intermittently placed planters (potentially with rain gardens) and trees.
- Transition of cycleway from a 3m wide segregated bi-directional cycleway to a shared footway and cycleway into the park.

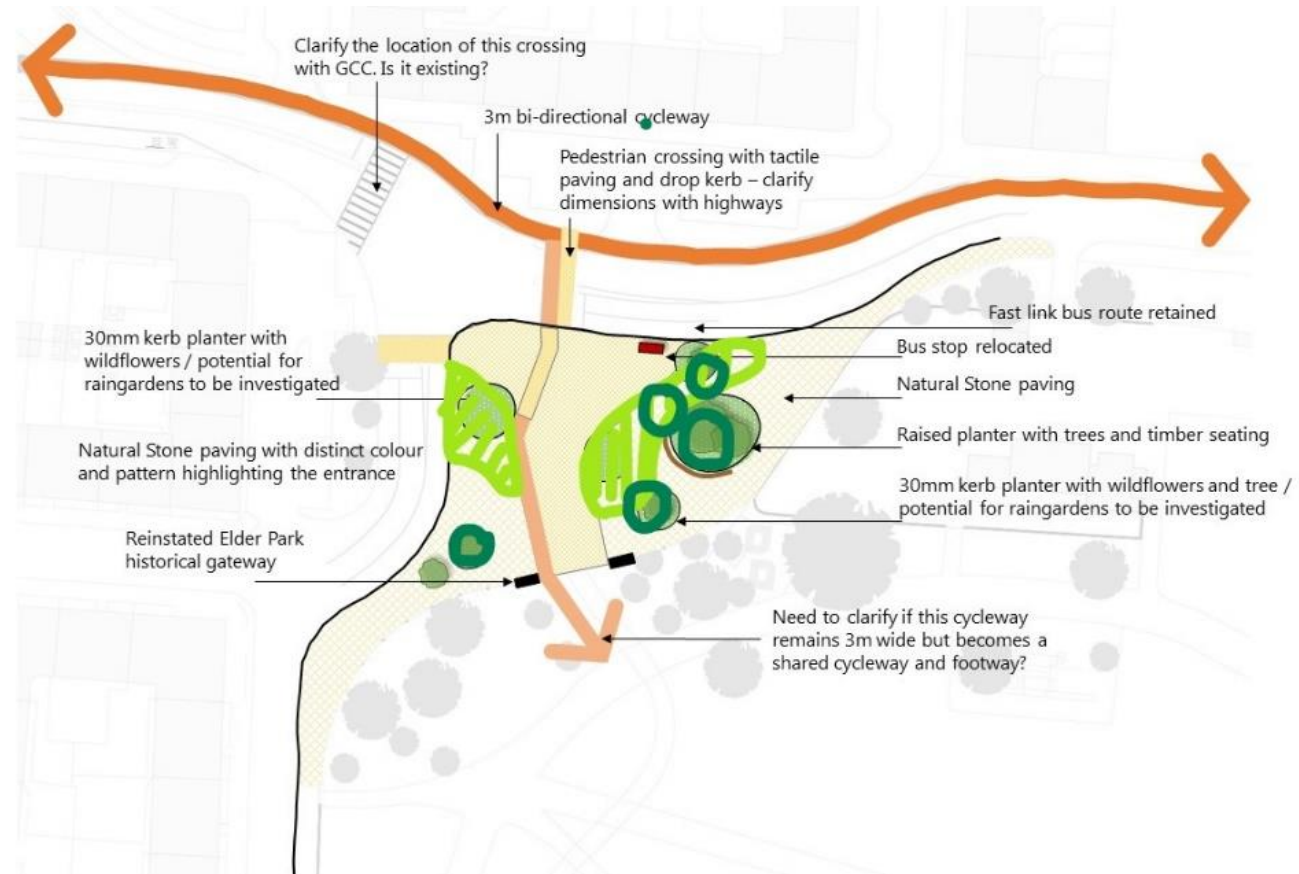
4.1.11 Option designs have been presented in Table 4-2.

Table 4-2: Govan Road Options

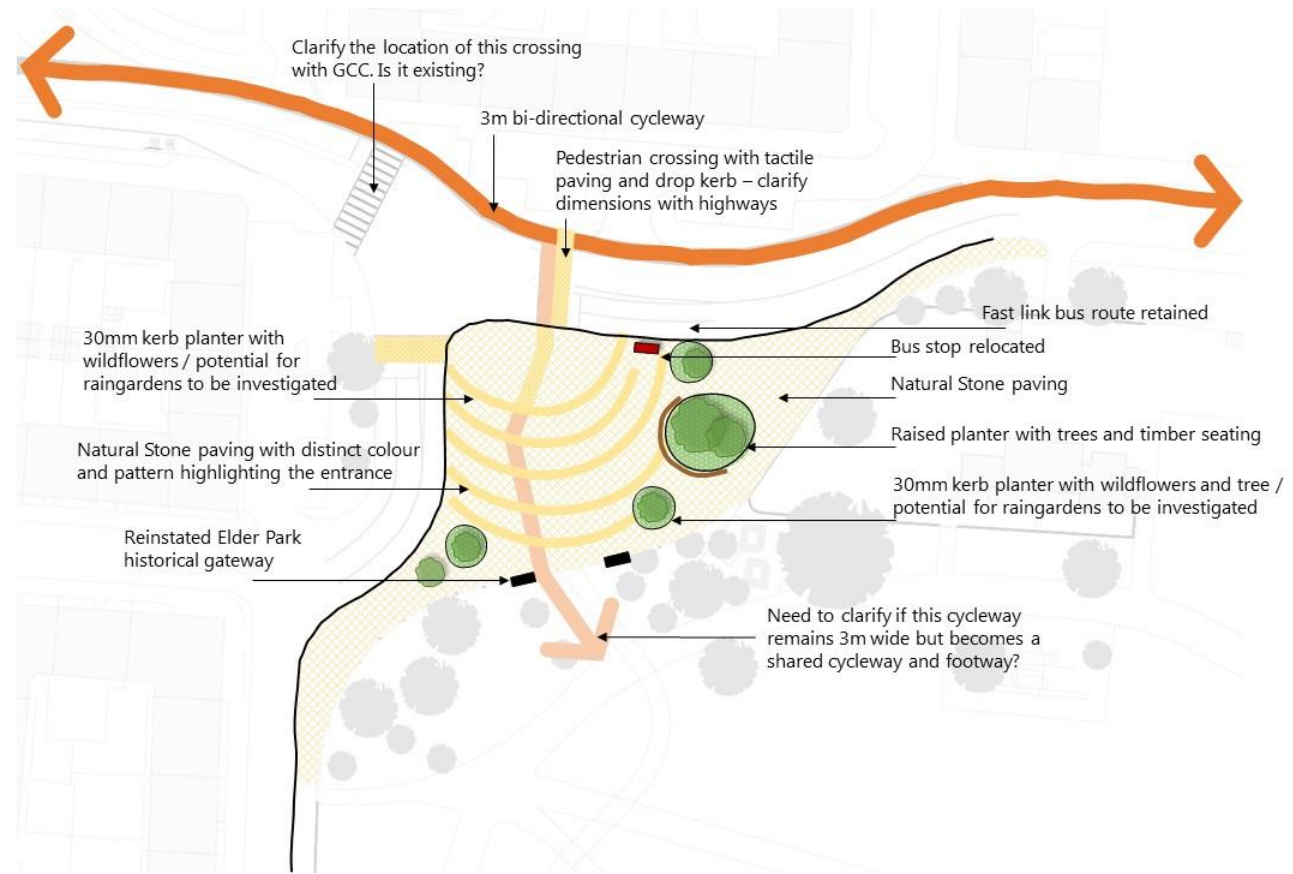
Option 1



Option 2



Option 3



Preferred Option

- 4.1.12 The preferred option for the active travel route (3m wide segregated cycleway) on Govan Road is along the northern flank of the road up to Golspie Street East junction which then switches to the southern flank of the road at the signalised junction continuing eastwards for the remaining stretch of Govan Road. This is due to allocated car parking and high-quality public realm around Pearce Institute on the northern flank of Govan Road and to provide direct connections to the Govan Cross Shopping Centre, existing cycle way on Langlands Road, which is also part of the proposed Active Travel City Network, and Govan subway and bus stations which are on the southern flank of the road. At the under-construction Govan Row development, the cycle lane crosses over to connect to the proposed active travel River Bridge connecting Govan to the Riverside Museum and Glasgow West End.
- 4.1.13 The preferred option for Elder Park Corner is an improved variation of Option 2 (see Table 4-2) and includes design features of Options 1 and 3. Option 2 was chosen for its simplicity in design that guides pedestrian flows and its maximum biodiversity and SuDS impact with large amount of planted areas for wildflowers and rain gardens. The preferred Option is presented in Figure 4-1.

Figure 4-1: Elder Park Corner Preferred Option



Drumoyne Streets for People

- 4.1.14 Drumoyne Streets for People project is focused on reducing vehicle dominance on the streets, making them pedestrian and cycle friendly, safe and accessible for all ages, and creating opportunities for residents to use underutilised green spaces as accessible and biodiverse open spaces around the neighbourhood. This is rooted in the evidence based design methodology that has been described under Analysis. While primary streets and bus routes run along the boundary of the area, its inner part is proposed to be reimagined as a network of quiet streets and attractive open

spaces with natural play and improved planting, which enables active travel, enhances biodiversity, perception of safety and fosters social interaction on local streets. Alongside restricting vehicular thoroughfare through the neighbourhood and redirecting the traffic flows, the network of green spaces and the creation of safe routes to school has played an important role in the identification of the location, where the introduction of modal filters would be the most beneficial.

Option 1

- 4.1.15 The design intention for this area is to introduce a series of modal filters and safe active travel routes to the schools, including connections to the green spaces that are nestled in the heart of the neighbourhood. Lunan Place, Largo Place and Ardshiel Road to Drumoyne Road junction have been identified as key locations for traffic calming measures using modal filters such as planters that contribute to the residential character and restricts through traffic from Shieldhall Road to Langlands Road. The green spaces on these streets have also been proposed to be improved for natural play, access and planting with reclamation of carriageway space, where possible to foster social cohesion.
- 4.1.16 Similarly, Nimmo Place has been identified as an optimal location for modal filters to eliminate rat runs through pedestrianisation of a section of the street with bollards at either end, planting and cycle parking with high quality paving adjacent to Moogety Community Garden. In order to promote safe active travel routes to schools, timed closures with lockable bollards have been proposed on Cromdale Street, a shared active travel route on Mallaig Road and reinstating the existing gate on Ardshiel Road to provide a key east west active travel connection for the residential communities through Elder Park Recreation Ground to Govan High School. All other key walking and cycling routes to schools will be controlled through modal filters and resurfaced as necessary to ensure safety and accessibility. Painted crosswalks are to be introduced as tactical urbanism measures at key locations in promixity to open spaces and road diversions / closures to highlight pedestrian priority and bring vibrancy to the streets.
- 4.1.17 Finally, on Shieldhall Road and Langlands Road, continuous footways and junction closures (Shieldhall Road only) are proposed on side-street junctions, to ensure safe and accessible footpaths that denote pedestrian priority and traffic calming. A parallel crossing is proposed on Shieldhall Road close to Cromdale Street junction.

Option 2

- 4.1.18 The alternative option includes the due minimum interventions that will focus on restricting vehicular thoroughfare and eliminating rat runs through the introduction of modal filters such as planters and lockable bollards at the above identified locations, and junction closures on Shieldhall Road. Safe cycle routes to school will be achieved through resurfacing existing residential streets and footpaths, new east west connections through Elder Park Recreation Ground and an integrated cycle lane on Mallaig Road.

Preferred Option

- 4.1.19 While the preferred option, Option 1, recommends comprehensive placemaking on streets encompassing public realm improvements, modal filters and traffic calming

measures, in order to transform residential streets as places for people to connect, meet, greet and play, Option 2 focuses on accelerating restricted vehicular access using signage and planters for reducing through traffic. The latter can be implemented to trial road closures and diversions as temporary measures with the community. Further to this, implementation of permanent measures recommended in Option 1 in a phased manner can be considered.

Lorne Streets and Festival Park

- 4.1.20 Various options were considered for the reconfiguration of Govan Road / Lorne Street and Brand Street. This included keeping Lorne Street open to traffic and also completely blocking the street off and adding the additional space to the entrance of Lorne Street Primary School and Lorne Street Gardens.
- 4.1.21 We also considered different configurations of Festival Park and different locations for the new entrance. The option finally chosen was the one which integrated the most with Lorne Street Gardens and opened the park to natural surveillance and hence reducing anti-social behaviour.
- 4.1.22 Different road and pavement surfaces were considered to best integrate the existing cycle lane into the landscaping and give a greater priority to pedestrians moving between Festival Park and Lorne Street Gardens.

Cessnock Ibrox Village Strip

- 4.1.23 The high street and civic amenities section of Paisley Road West is designed to have a more balanced and improved public realm in terms of reallocation of streetscape for high quality accessible footpaths for increased pedestrian footfall, segregated bi-directional cycle lane, bus lanes and two lane bi-directional carriageway. Three nodes were identified along the stretch:
 - 1. Edmiston Drive junction and green space;
 - 2. Elizabeth Street Gardens as a flexible civic space; and
 - 3. Walmer Crescent Conservation Area high street
- 4.1.24 Two primary options with multiple variations were considered for this scheme and are as follows:
 - Option 1: two 1.5m wide segregated unidirectional cycle lanes on either side of the road, resurfacing footpaths with high quality paving in Walmer Crescent Conservation Area and no improvement to the standalone high street block, and a minimal option for Edmiston Drive junction designed around the existing carriageway and green space, included resurfacing improvements.
 - Option 2: 3m wide segregated bi-directional cycle lane on the northern flank of Paisley Road West, public realm improvements on Paisley Road West, Clifford Lane greening, and realignment of Edmiston Drive junction to reduce carriageway space, ensure pedestrian and cycle priority and create a usable green space and improved public realm. Walmer Crescent is to be improved to highlight the Conservation Area through high quality natural stone paving, as well as proposals for a roof garden over the existing parade of shops and high street facades upgrade.
 - Option 3: An alternative to option 2 was also considered where the bi-directional cycle lane was proposed along the southern flank of the road.

- 4.1.25 All options considered reduction of road speed to 20mph, reduced 6.5m wide two-lane carriageway with 3.25m wide bus lanes and tree planting with rain gardens on Paisley Road West. Elizabeth Street open space is proposed as a flexible community space that encompasses a series of temporary urbanism measures and extends into the vacant and derelict space improved as community gardens and flexible play space behind Park Bar in all options. New and improved zebra / parallel crossings are proposed along the high street stretch to ensure pedestrian and cycle priority.

Preferred Option

- 4.1.26 Option 2 with the above proposals was then developed as the preferred option.

Dennistoun to Cranhill LN Area

Railway Bridges

- 4.1.27 Bellfield Bridge – Different arrangements of buildings to the west of the bridge were explored to maximise natural surveillance.
- 4.1.28 Whitevale Bridge – Different locations for the turning head (north and south of the bridge) were explored in relation to the entrance to the adjacent park. Different types of landscaping on the bridge were also explored.

Riddrie Town Centre

- 4.1.29 Various options were explored in a separate workshop with Smythycroft Secondary School. Two detailed options were explored the main difference being the configuration of cycle routes and the treatment of the disused underpass. The two options were to use the disused underpass as either an amphitheatre space for the school or as a pump track for cyclists. The options also experimented with different locations for the civic space and covered pupil zone.

Hogarth Park / Todd Street Park / Haghill Cross

- 4.1.30 The design intention for this area is to improve Hogarth and Todd Street green spaces; to introduce a multifunctional civic space by Kelvin College; introduce traffic restrictions on Carntyne Road in front of the College and potentially reinstating / relocating the New Parkhead Railway Station to contribute to modal shift. ; and to integrate a new active travel route in the form of a bidirectional cycle way from Alexandra Park to the north, to the south towards the potential new railway station.
- 4.1.31 The following options were considered for this scheme:

Hogarth Park and Todd Street Park:

Option 1:

- Following the route of the disused railway line through Hogarth Park where possible, the Park and Todd Street are to be improved to include a sinuous 3m wide segregated bi-directional active travel route designed along the existing topography and utilising existing routes, resurfaced and well-lit pathways, and large swathes of wildflower meadow planting to create a biodiverse habitat.
- Minimal clearance of trees to make room for the cycle lane and new tree planting to the east

- Improving the derelict play area as a natural play space with appropriate lighting and potential bouldering and climbing activities for children
- Segregated cycle lane to pass through Todd Street and Carntyne Road junction and continue westwards through Carntyne Road

4.1.32 Option 2: Similar to Option 1, a segregated bidirectional cycle lane aligned to the path of the disused railway line and connecting westwards through another disused railway line behind Kelvin College. This option is not feasible due to topographical constraints

4.1.33 Option 3: Same as Option 1 with additional connections to the proposed Nursery, reduced tree planting to the east and incorporation of sport pitch on the adjacent vacant land on Carntyne Road to the south.

4.1.34 A combination of Options 1 and 3 was chosen as the preferred option.

Haghill Cross and Carntyne Road:

- Option 1: Complete closure of Carntyne Road for vehicular traffic, active route only and creating a public square on the underutilised green space in front of Kelvin College
- Option 2: Creation of bus gate (6.5m carriageway) on the stretch of Carntyne Road in front of Kelvin College with active travel route, widening of footpaths, and creating a combination of hard landscaped civic space and terraced planting with rain gardens, seating and retained trees, and shared cycleway and footpaths
- Option 3: A due minimum option with timed closures of the road for traffic and maintenance of green space for civic use.

4.1.35 Option 2 was chosen as the preferred option to bring vibrancy and a sense of identity to the area, ensure pedestrian priority and transform the underutilised green space by Kelvin College as Haghill Cross, a high-quality civic space for the College.

Parkhead Railway Station and Duke Street:

- Option 1: Reopening the closed Parkhead Railway Station through improving existing platforms to accessible standards. Creation of a multi-level station entrance with an active travel ramp to the railway station at Todd Street Park
- Option 2: Relocating Parkhead Railway Station to the west, opposite proposed Haghill Cross. Utilising vacant and derelict land on Duke Street to create a Station Square providing an extended civic space with access to the relocated and elevated railway station through an active travel ramp. The vehicular access is also proposed to the north of the station via Duke Street with drop off services for cars and taxis in the Station Square
- Option 3: Relocating Parkhead Railway Station to the west, opposite proposed Haghill Cross. Utilising vacant and derelict land on Duke Street to create a Station Square providing an extended natural civic space with wildflower planting, trees and rain gardens and station entrance with access to the relocated and elevated railway station through an active travel ramp. The vehicular access is proposed to the south of the station via A89 roundabout with drop off services for cars and taxis. A footbridge is also proposed across the railway line connecting both platforms for ease of accessibility

4.1.36 Zebra crossings on Duke Street are proposed in options 2 and 3. Safe and accessible connections for active travel users between the green spaces and to

adjacent proposed civic spaces have been ensured through improved pedestrian footpaths, crossings at signalised junctions and segregated cycle lanes. Option 3 was chosen as the preferred option for effective use of space and creating effective connections between Forge Shopping Centre, Retail Park, Kelvin College and the improved parks and open spaces. This option also presents the maximum potential to create a modal shift with a multi modal transport hub connecting railway station to bus stops and active travel network.

Carntyne Square

- 4.1.37 The driving design intention for the space is to reclaim a large proportion of the roundabout and surrounding carriageway as usable public space with increased greening and tree planting. This would include opportunities for community events and flexible public space; and include a bidirectional cycle route through the area to link Edinburgh Road to Carntynehall Road. The signalised junction at Edinburgh Road is to be reconfigured in line with a rebalanced streetscape along Edinburgh Road; to transform the isolated central green space as a usable linear park with trees retained, SuDS, footways, segregated cycleways and bus lanes / line rail corridors on either side. Single lane carriageways with on-street parking are proposed to be retained on either side of the road.

Carntyne Square

- 4.1.38 Two primary options were considered after multiple variations were considered for this scheme and are as follows:
- 4.1.39 Option 1: Widening the original roundabout layout, the central island is to be increased in area and improved as a high quality civic space, for pedestrians. Public space to include converted toilet block as café/retail space, seating, retained trees and pockets of planting and wide pedestrian crossings connecting key desire lines. The eastern extents of the carriageway on the roundabout to be reclaimed as a bus and taxi access only; differentiated by a change in paving. The western section of carriageway to be retained with 2 lanes to allow traffic flow through the space. A bidirectional cycle lane to be introduced from north to south, with an option to be located along western carriageway alignment or eastern footway space behind the existing bus stop. The parade of shops to the north have increased high quality public realm space with trees, rain gardens and planting, retaining on-street parking on both sides of the road.
- 4.1.40 Option 2: Creating a large central multifunctional civic space, with planting, seating, lighting and natural play. Different paving materials and planting highlight the radial design of the space. The existing toilet block is to be converted into a café/retail space, with a spill out area comprising of seating around existing mature trees. The road is downgraded to a two lane carriageway (6.5m) retaining its original alignment and bus stop on the western side of the civic space, with a 4m segregated bidirectional cycle lane following the same alignment, framed by trees, raingardens and wildflower planting. The parade of shops to the north have increased high quality public realm space with trees, rain gardens and planting, and the relocation of the eastern bus stop close to the Church, with an opportunity for public art at the entrance to the new square. To allow the relocation of the bus stop, removal of on-street parking on the eastern flank is recommended whilst retaining on the western

flank. A section of Abbeyhill Road passing through the new civic square is proposed to be closed for through vehicles from Carntynehall Road travelling east, with emergency access only. A local play space is also created to the north of the Church. A New turning head is created within the Church grounds with access and egress from Carntyne Road.

- 4.1.41 This option also includes the potential refurbishment and redevelopment of the Church Hall building as a three storey block for residential use and potential relocation of GP surgery from Edinburgh Road to ground floor space with a coffee shop, thus creating an active frontage along the eastern edge of the square.
- 4.1.42 Option 3: Similar to Option 2, this option retains through access on Abbeyhill Road and no public art close to the shopping parade.
- 4.1.43 Option 2 with the above proposals was then developed as the preferred option to maximise the civic space and avoid severance to the pedestrian priority public space between the square and shopping parade.

Edinburgh Road

- 4.1.44 The junction on Edinburgh Road to be reconfigured in alignment with new street layout to include green space, footways, bidirectional cycle lane and allocated bus lanes. 3 Options have been considered for Edinburgh Road:
 - Option 1 includes a central green reserve with footpath and cycleway, with 3m carriageway, then 3.5m bus corridor on either side.
 - Option 2 is also framed by 4m wide carriageway to the north and south, with a single central wider bus/light rail corridor 6.5m wide. This has meant that the green reserve with footpaths and 4m wide bidirectional cycleway is shifted northwards.
 - Option 3 has been considered the preferred option, where the road is framed by 3m wide carriageway and then a 3.5m wide bus/light rail corridor on either side of a central green corridor that contains a 4m bidirectional cycleway and 3m footpaths adjacent to the bus corridors.

Preferred Option

- 4.1.45 Option 2 for the Carntyne element of the scheme has been selected as the preferred option with Option 3 of the Edinburgh Road section of the scheme.

Artists Lighting M8 Bridge – Cranhill

- 4.1.46 Two main lighting options were considered, high level artist lighting either suspended in a daisy chain fashion or as a series of lanterns as opposed to lighting laid into the ground. It was agreed that the ground let lighting solution was preferred as it was more robust and less likely to cause disturbance to drivers on the M8.

Ruchill To Cowlares LN Area

Dummy Railway

- 4.1.47 The aim of this scheme is to improve the appearance and safety of the Dummy Railway footpath. The project will improve access by upgrading the footpaths and landscaping in the area to provide a more pleasing environment for local people to use.

- 4.1.48 As well as improving the route between Panmure Street, Bilisland Drive and Balmore Road, new connections will be made that allow safer links through the existing communities by establishing routes that run east to west to connect the community to Ruchill Park and the School Campus including St. Cuthberts and High Park.
- 4.1.49 The landscape will feel like a small linear park with places for recreation and exercise. Nature is important and the soft landscape areas will be allowed to grow wild to encourage biodiversity as well as featuring nature trails and nature-based play areas. Figure 4-2 provides an overview of the Dummy Railway.

Figure 4-2: Dummy Railway scheme element



Ruchill Street Placemaking

- 4.1.50 The Ruchill Street Placemaking scheme element proposes to create a safer, attractive and more enjoyable public realm along Ruchill Street. The focus of the project is to create a safer place for the local people that improves access for pedestrians, wheelers and cyclists to move through this bust street linking Ruchill Park to Maryhill Town Centre.
- 4.1.51 The excessive road space will be reconfigured to allow people to go about their everyday journeys by creating a street for people, not just vehicles. Figure 4-3 provides an overview of the proposed Ruchill Street Placemaking scheme.

Figure 4-3: Ruchill Street Placemaking scheme element



Langside to Toryglen

Langside Monument

- 4.1.52 The focus of the Langside Monument project is to create a safer place for the local people that improves access for pedestrians, wheelers and cyclists to move through this busy neighbourhood
- 4.1.53 Currently, there is an excessive amount of road space that can be reconfigured to allow people to go about their everyday journeys by creating a street for people, not just vehicles
- 4.1.54 Proposals to reconfigure the roundabout to make the monument more accessible and improve the public realm between the monument and Battlefield Rest are a key priority. The project will tie into the 'Connecting Battlefield' project which is providing improvements to active travel and public realm in Battlefield neighbourhood.
- 4.1.55 Figure 4-4 provides an overview of the scheme

Figure 4-4: Langside Monument scheme element



Toryglen Streets for People

- 4.1.56 The Toryglen Streets for People scheme element will revitalise under-utilised public space creating a series of playful green links that permeate through the neighbourhood.
- 4.1.57 The 'green fingers' will establish a network of natural play spaces forming routes that link Ardmay Park to the south with Malls Mire in the north of Toryglen.
- 4.1.58 These 'fingers' will permeate the neighbourhood and better connect the community to the schools and local facilities.
- 4.1.59 Clear crossing points will establish safer, more attractive routes and reprioritise the road space for pedestrians in these locations. Figure 4-5 provides an overview of the scheme.

Figure 4-5: Toryglen Streets for People scheme element



4.2 Appraisal Methodology

- 4.2.1 As part of the SBC submission, an appraisal of an indicative package of interventions will be provided to give an approximate view of what the benefits of the scheme might look like.
- 4.2.2 The indicative package of schemes benefits cost ratio has been used to determine the potential BCR for the current package of schemes proposed based off the calculated scheme costs. Although this is an approximation, it is considered that this will provide a reasonable understanding of the likely BCR position of the scheme.

Direct, indirect and opportunity benefits: definitions

- 4.2.3 Benefits have been categorised in three ways:
- 4.2.4 **Direct benefits** are those that flow directly from the LN investments, either:
- Inherently through planting and maintaining, a tree will achieve some carbon benefits; or
 - So long as people continue to do what they're doing now (or, more precisely, in the relevant year(s) of the Base Case) e.g. walking along the High Street, in which case they may get the benefit of a quieter, cleaner, safer environment, and be healthier as a results
- 4.2.5 If the benefits are inherent, they can be considered directly from the design of the scheme. If they depend on people continuing to do the same as without the scheme, then we need some estimates of how many people are doing that – which will require some data and some forecasting.

4.2.6 Indirect benefits will arise only if people change their behaviour, e.g. by walking instead of driving to the shops (whether the same shops or different ones). In these cases, there will often be benefits both:

- The people who make different decisions (if they make different decisions because some of the alternatives, they choose between have improved, it is axiomatic that they do so because they benefit; if they make different decisions because some alternatives have been made worse or eliminated altogether, then they will be worse off).
- Other people affected by those decisions i.e., those affected by externalities such as benefitting from reduced air pollution because other people choose to drive less. These could also be negative – if for example people who already cycled to a certain destination now find that the cycle parking there is too congested.

4.2.7 **Indirect benefits** clearly depend on some form of forecasting to predict the changes in behaviour.

4.2.8 **Opportunity benefits** are those which depend on another public sector decision and, in particular, those that would depend on the commitment of further public expenditure. (These may also be described as option values.)

4.3 Environmental benefits

4.3.1 These are benefits to the environment itself i.e., “looking after the planet”. Benefits which are more about “looking after people” are in the health, social or economic categories.

Table 4-3: Environmental benefits: initial assessment

Benefit	Comments: achievement	Comments: appraisal
Air quality: urban greening, such as the introduction of street trees, can also help to improve air quality	Local effect (particularly removal of particulates)	Value per tree (to draw from literature). If this a value of reduced pollution in terms of health improvements, move to health category.
	Global effect (sequestration of carbon)	Value per tree (to draw from literature) or carbon absorbed per tree (within the appraisal period) valued by standard (CCC) value
Climate ⁶ : shorter journeys and more use of active modes will reduce carbon emissions and increase climate resilience by reducing urban heat island effect	Correct if increased active travel abstracts from car use rather than from PT use	Carbon reduction effects: standard emission calculations and carbon values applied to car flows. NB a study indicating that Glasgow does not display “heat island” characteristics was mentioned on 24/11, though it was also mentioned that Glasgow is starting to have heat issues on some summer days
Mitigation of climate change	Increase in unpaved area and improvements to drainage will reduce risk of surface water flooding	

⁶ Also to pick up Derek Dunsire’s own work – or updates – on value of carbon sequestration by trees

Energy efficiency: walkable environments provide opportunities to develop community district heating systems and zero-carbon homes.	Link is through higher densities and energy-efficient building forms. Full exploitation may require redevelopment of old, less efficient homes, but that needs to be done using low- or zero-carbon-emission building materials (e.g. avoiding cement and concrete)
Biodiversity: opportunities to improve biodiversity, particularly through connectivity of habitats	Depends on detailed design and maintenance (or deliberate lack of maintenance activity, such as not mowing edges of parks and gardens)

Source: "Benefit" originally from TCPA (2021), edited and extended; other columns added (including notes from 24/11/21 meeting)

4.4 Health and wellbeing benefits

4.4.1 The equivalent table for benefits to individuals' health and wellbeing is shown below. 'Wellbeing' included to make it slightly wider than conventional 'health' including for example reduced exposure to noise.

Table 4-4: Health benefits: initial assessment

Benefit	Comments: achievement	Comments: appraisal
Physical and mental health: health benefits of regular physical activity are well established; time spent walking in green spaces contributes directly to mental health and recovery	Depends on who switches from what to walking or cycling; health benefit may be small if they are already fit or adopt these modes instead of taking other exercise. Need to consider visits to parks etc as well as walking to get to or from a destination	Queensland research provides a value of benefits per additional km walked or cycled (with a distinction depending on the previous level of activity of the walker/cyclist). To adapt to Glasgow – and to clarify what is the perceived benefit to the individual, what is the saving in health care costs
Healthcare costs: improved health from increased activity should relieve health service costs	As above	
Noise reduction	Reduction in car traffic and reduction in speeds	Standard noise calculations are more detailed and not appropriate at this stage.
Accessible healthcare: conventional healthcare services, voluntary groups, nurseries, and libraries can be co-located in accessible locations	Will depend on provision and take-up of suitable space. Increased rents may work against such co-location especially by voluntary groups	Treat as an opportunity (option) value
Healthy diet: improving the local food environment in a	Can local food production make a socially significant	

walkable neighbourhood, through local food-growing, can enable people to access healthier options	contribution to overall diets ⁷ , given the limitations of space and what will grow in the West of Scotland climate? Easier access to (reasonably priced) shops selling fresh food may itself confer health benefits	
Accident reduction	See text below	Standard transport appraisal methods available for accidents

Source: "Benefit" originally from TCPA (2021), edited and extended; other columns added (including notes from 24/11/21 meeting)

4.4.2 Accident reduction is a potentially important benefit. It is however not certain that more walking/cycling will reduce accidents; in the worst case it would simply increase the number of potential victims for car/pedestrian or car/cyclist collisions. Benefits to older retired people of increased out-of-home physical activity will depend on maintaining high standards of pavement quality and cleanliness – injuries resulting from fall can be extremely damaging to subsequent mobility and independence. It may be significant that the TCPA document doesn't claim accident reduction as a benefit of 20MNs.

4.5 Economic benefits

4.5.1 The range of economic benefits is considered in the table below.

Table 4-5: Economic benefits: initial assessment

Benefit	Comments: achievement	Comments: appraisal
Improved accessibility to jobs and services	Accessibility calculations implemented in TELMoS combine and value the effect of faster or more enjoyable travel with the effects of changes in destinations e.g., if more jobs locate within the LN zone.	Improvements in the quality of walking/cycling and of access to PT will be valued in minutes and input to the model/appraisal process
Local businesses: better streets and public spaces can boost footfall and trading, and help reduce vacancy in	This is in line with previous research on pedestrianisation but will mainly be at the expense of other businesses (conventional or online) elsewhere.	Relocation of employment is considered in TELMoS. Unless there is a reason to benefit some businesses at the expense of others, the benefit is in the additional choice

⁷ There are about 32ha of allotments in Glasgow; at the standard size of 250m² that implies about 1,280 allotment holders, out of around 300,000 households. Gardens are probably much more significant for food production, but viable 20-minute neighbourhoods imply higher densities which are unlikely to result in increased provision of gardens. (<https://glasgowallotments.org/allotment-sites/>; <https://www.scottishlegal.com/article/bill-amended-to-protect-standard-size-of-an-allotment>)

high streets and town centres		(perhaps) and accessibility offered to customers (included above).
Productivity: walkable environments with highly connected street networks are more likely to make a positive contribution to labour productivity ⁸	This is a net gain so long as the economy has the capacity to maintain full employment at full productivity (i.e. not if increased productivity of one group leaves other workers long-term unemployed)	Calculated in TELMoS
New jobs: keeping investment local through community wealth-building can develop the skills of local people and create stable, well-paying jobs	This seems to assume a higher proportion of independent, locally-owned businesses sufficiently prosperous to generate such jobs (at the expense of non-local, chain businesses. Not clear how this could be pursued or that it is a logical consequence of other changes (e.g. greater footfall may attract more, not less, investment from outside firms)	Treat as an opportunity for further action rather than as an inherent part of the LN programme, except for the actions relating to procurement of goods for physical implementation of LNs (see section 4.13.1)
Land value: investment in better place-making can boost land values	Implies higher rents being paid, which is a likely outcome but may create difficulties for small local businesses, or reduce value to local residents by driving out valuable but less profitable shops/services	Land values reflect the capture (by landlords) of benefits to occupiers; they are not additional benefits in themselves
Road congestion: making active travel safer and more inviting can reduce traffic and congestion.	Correct if increased active travel abstracts from car use rather than from PT use	If transfers from car to walk/cycle and any consequent reductions in congestion are modelled, should be captured in accessibility
Healthcare cost savings	Depend on balance between savings from increased physical activity and losses from possible increases in accidents.	See Queensland evidence.

Source: "Benefit" originally from TCPA (2021), edited and extended; other columns added (including notes from 24/11/21 meeting)

4.5.2 These benefits are all either indirect (in that depend on people or firms responding to changing circumstances e.g. by expanding businesses) or complex in that depend on data that is difficult to observe e.g. the numbers of people walking

⁸ Local, easily accessible jobs may also contribute to increased labour participation (particularly among those with mobility problems and/or care commitments?).

between different places (in future years). Fortunately, the TELMoS modelling developed for Transport Scotland provides a broad-brush representation of much of the necessary data and the potential responses.

4.6 Double counting and other issues

- 4.6.1 Land value uplifts represent a transfer of benefits from occupiers to landlords, not additional benefits. We will therefore not consider them as a form of benefit, though the fact that benefits may be captured by landlords is of course significant to any discussion of distributional effects.
- 4.6.2 There is a question of whether longer-term mental health benefits to individuals of enjoying relaxation in green (or greener) spaces, and/or of walking/cycling rather than driving, are additional to or a double-counting of the immediate, perceived enjoyment or reduction in generalised cost. However, given the difficulties of measuring and valuing mental health benefits, this is not an immediate practical problem for the appraisal.

4.7 Distribution of benefits

- 4.7.1 For the final version of this report we intend to look further into the distribution of benefits in terms of:
- Spatial distribution – where the benefits occur.
 - Sectoral distribution – which part of the economy (residents, firms etc).
 - Social distribution – which kinds of households gain or lose in what ways (especially in terms of more/less well-off).
- 4.7.2 The last of these has to have regard to the potential for “gentrification” effects: areas that become more desirable as places to live are likely to attract different groups of households to seek to live there. Longer-term improvements in the quality of neighbourhoods are highly desirable in many ways, but it has to be recognized that in a society where households can relocate and, in many cases, can compete for housing, area-based policies cannot be accurately targeted at particular social groups.

4.8 Defining the programme to be appraised

Introduction

- 4.8.1 This chapter has to consider what is being appraised, and the context in which it is being appraised i.e. what is the Alternative Case and what is the Base Case with which it is being compared.

Approach – the overall Liveable Neighbourhoods Programme

- 4.8.2 The objective of the present appraisal is to inform the Business Case for developing the Liveable Neighbourhoods Programme across all the non-central areas of Glasgow.

- 4.8.3 Earlier stages of the work considered the costs and benefits of the Liveable Neighbourhoods Programme across the four areas of Glasgow that were specified in the Brief. Even within these, only limited design work has been done so far.
- 4.8.4 The approach taken to the overall Programme has therefore been to consider the absolute benefits in the four defined areas, and to assume that, with careful design and selective investment according to the needs of each city area, a similar benefit cost ratio can be achieved for the full Programme. We note that this could mean no investment at all in the areas that already most “liveable”.

Approach – the four areas in Tranche 1

- 4.8.5 As noted above, only preliminary design work has been done to date. A detailed appraisal, using costs based on quantity surveyors’ examination of detailed plans, and benefits calculating from the impacts of those plans, is therefore not possible.
- 4.8.6 For the present Business Case we are taking our own very broad-brush assessment of the improvements that may be achieved (the impacts), in a form which can be input into the modelling calculations to forecast their consequences and their benefits. This assessment is informed by the plans that we have seen, and the improvements are assumed to apply in the four defined areas. Similarly, the costs are based on initial estimates for parts of the city, extrapolated to a city-wide network.
- 4.8.7 The main Base Case for the present draft appraisal is one of the existing TELMoS18A Do-Minimum forecasts (that for the Business Low traffic scenario) as prepared for Transport Scotland. Some sensitivity analysis has been done looking at the effect of adding the LN Programme to an alternative “Do-Something” situation including a representation of the Glasgow Metro proposals.

4.9 Estimating the benefits

Introduction

- 4.9.1 This chapter sets out the more detailed assumptions and the results of the calculations for different benefits. For the model-based calculations, a summary is (or will be) in the Appendix; more detailed documentation is available in the Model Development Report which has been prepared for Transport Scotland.
- 4.9.2 The focus is strictly on the effect of the LNs (the Alternative Case) compared with the situation which is the same but without the LNs (the Base Case). Providing we can maintain this focus, we do not have to be concerned about deadweight effects i.e. the benefits of changes which are going to happen anyhow.

Appraisal period

- 4.9.3 The present appraisal of LN interventions is estimating benefits over a period of 10 years, which is relatively short comparing with many local government investments. This makes the estimates of benefits less dependent on assumption about maintenance and renewals, which we consider would be particularly important for the types of intervention proposed (e.g. a bench in the street probably has a relatively short life compared with a road or railway line).

- 4.9.4 The discount rate used is however the (UK) Treasury standard one.
- 4.9.5 This means that in the present calculations £1 of benefit is worth between 70p and 75p in year 10, but in year 11 there are no benefits at all. This is approximately equivalent to assuming that the benefits depreciate in a straight-line manner over approximately 18 years.

4.10 Environmental benefits

- 4.10.1 The following headings pick up from the potential environmental benefits listed in section 4.3.

Air quality: local effects of trees

- 4.10.2 The presence of trees in the street can have some beneficial effects on air quality (though there is also a risk that they can block natural ventilation and trap local pollution). More detailed design work and more detailed analysis would be needed to estimate and value these effects in terms of:

- the numbers and types of trees planted, and their locations
- future air quality in those locations (bearing in mind that the gradual decarbonisation of transport and home/commercial heating should remove important sources of pollution)
- the numbers of people affected by that air quality.

Air quality: local effects of traffic reduction

- 4.10.3 Initial estimates are that the LN programme will produce only a tiny (<0.1%) decrease in car trips. This is because
- making PT more attractive tends to divert trips from walking rather than from car
 - making certain destinations more attractive tends to attract more trips there in general, not just by walking and PT – additional measures not so far proposed would be needed to discourage additional arrivals by car.
- 4.10.4 Whilst the reduction in pollutants emitted may be slight, some other effects will come into play in the LN programme:
- local pedestrianisation may help to separate pedestrians and vehicles and reduce the adverse impacts of pollution (air quality being worse closest to the vehicles emitting the pollutants)
 - there could be local increases in traffic/pollution due to traffic being displaced from (for example) going round rather than through a residential neighbourhood.
- 4.10.5 Decarbonisation of transport (electric cars and electric or hydrogen buses) should in any case make traffic less of a source of air pollution.

Carbon sequestration by trees

- 4.10.6 Extrapolating from the example design work we have seen suggests that the Liveable Neighbourhoods programme for the four areas might involve planting something around 2,000 trees. Given a figure of 10kg of CO₂e absorbed per tree year, that gives a total of 20 tonnes CO₂e absorbed per year across the four areas. The STAG high value of not emitting one tonne of CO₂ in 2030 is about £100/tonne, so 20 tonnes CO₂e absorbed per year should be valued at about £2,000 per year.

4.10.7 This assumes that:

- the trees themselves are “additional”, i.e. they would not otherwise be growing
- the CO₂ and other GHG emissions involved in growing and planting them are insignificant compared with the CO₂ they absorb.

4.10.8 Whilst this saving is a step in the right direction, the value itself is too small to be significant in the overall value for money calculation.

Reduction in greenhouse gas emissions

4.10.9 This is expected to be very slight – see points about air quality, above.

Local mitigation of climate change

4.10.10 The TCPA assessment of potential argued that 20MNs could lead to an increase in unpaved area and improvements to drainage, which would reduce the risk of surface water flooding”.

4.10.11 In the present example plans, the only increase in unpaved area would seem to be the breaks in paved areas for trees to be planted, and possibly some additional decorative planting. The spaces identified as potential mini-parks or community gardens are already open and unpaved. As such the effect on surface water flood risk would appear to be minimal.

4.10.12 As design work progresses, further attention might be paid to areas where flood risk is significant with a view to ensuring that the LN programme contributes to mitigation. Equally, care will be needed in tree planting to ensure that the planting and subsequent growth of the trees does not damage existing draining systems.

Opportunities for district heating and net-zero homes

4.10.13 The suggestion in earlier discussion was that improved opportunities would result from a mix of uses (particularly employment and residence) and higher densities allowing for efficient operation of district heating or combined heat-and-power (CHP) systems.

Biodiversity

4.10.14 The level of tree planting and other changes in vegetation are on a small scale and unlikely to offer significant benefits in terms of biodiversity.

4.10.15 Note that we assume all tree planting is done in such a way as not to have negative environmental consequences elsewhere.

4.11 Health benefits

4.11.1 The following headings pick up from the categories of health and well-being benefits listed in section 4.4.

Direct benefits of improved health from increased physical activity

4.11.2 The parallel appraisal of the Active Travel Strategy includes a monetary valuation of the benefits expected to flow from increased walking and cycling in terms of the value of longer lives and the value of increased productivity due to reduced sickness.

4.11.3 We need to avoid double counting between the two appraisals as well as within each one. We therefore need to be careful not to count the benefits of increased walking and cycling in both unless there are clear reasons to do so. Since the descriptions we have been given suggest that direct measures to facilitate and encourage walking and cycling are seen as belonging to the ATS, we have not counted them as part of the LN programme.

Value of noise reduction

4.11.4 It is not clear that there will be any significant noise reduction from LNs themselves. Again, the switch to electric cars (and possibly electric buses) should reduce the amount of noise generated by motor vehicles. Some design details, e.g. the use of cobbles or setts as a speed limiting device, may increase noise levels

More accessible healthcare and other social service facilities

4.11.5 This is treated as an opportunity benefit – not valued here since it would depend on other decisions (by the health/social providers) and possibly on additional public investment.

Value of a healthier diet

4.11.6 We are aware that the provision of space for community gardens is under discussion. These could (if well used) deliver benefits in

- fresh food (in modest quantities),
- physical and mental health value of gardening work, including both the exercise involved in same tasks (e.g. digging) and the satisfaction (sometimes) of producing an edible crop;
- education for children/young adults who otherwise have little or no practical knowledge of food production or of using raw fruit and vegetables.

4.11.7 Given the uncertainties about the provision of space for community gardens or similar, we are not pursuing the question of how to measure and value these benefits.

4.12 Economic benefits

4.12.1 These can be calculated using TELMoS18A to model the effect of the interventions and the associated ULTrA appraisal calculations to appraise them.

4.12.2 We have taken the view that to avoid the risk of double-counting between the LNs appraisal and the ATS appraisal, we should assume that the LN interventions mainly affect people's enjoyment of being in the places whose environment is improved by the interventions, whilst the ATS relates to improving the enjoyment, or at least reducing the dissatisfaction or simply the time spent, in getting from place to place. We also assume that the direct positive effects of the LNs will arise mainly while people are outside. The proposals for tree planting, for example, may improve the view from the windows of some tenements, but it may also be a worsening for others, particular ground floor dwellings which may lose some (scarce) natural lighting.

- 4.12.3 From the discussion to date around the potential designs, and bearing in mind the focus of the LNs on encouraging the use of local neighbourhood facilities, we have assumed that the main measurable effect on accessibility and hence on the economy will come about through making a proportion of the destinations in the LN areas more attractive to visit for shopping, services, recreation etc. The exact form of this will differ for different users e.g. for a parent with a buggy it may be in fewer or quieter roads to cross or easier crossings; for an older person with mobility difficulties it may be through fewer kerbs to negotiate and more benches in suitable places on which to rest. We have also assumed that the improvements in environment will apply in particular to access to and from public transport, particularly bus services, especially as bus stops tend to be found in or adjacent to local shopping/service centres.
- 4.12.4 The changes input to the modelling process are therefore
- a one minute reduction in the generalised cost of travel (by any mode) to the LN destinations for “other home-based travel”, which includes trips to shops, services, recreation etc
 - a two minute reduction in the generalised cost of using public transport to or from the LN zones.
- 4.12.5 These changes are input to the run of the model for the “Alternative” or Do-Something Case; all other inputs are kept the same (the Base Case). The differences in output are therefore do solely to these input changes and can be taken as the impacts of the LN interventions.
- 4.12.6 The model is run separately for the Base Case and the Alternative Case, but it is easier and more appropriate to discuss the working of the model in terms of the way in which differences arise.
- 4.12.7 The input changes in generalised costs improve residents’ accessibility to local shopping/service destinations, and to all kinds of destinations by public transport. For people who are already going to those destinations, or already using public transport, this is a straightforward reduction in time or inconvenience, or an improvement in the quality of their journey. Other people will change their travel patterns, for example making slightly more trips to (and purchases from) local shops. Those shops will prosper slightly more as a result, which will tend to make the local shopping centres more attractive and to increase employment there.
- 4.12.8 Over time the improvement in the attractiveness of these centres, and the improvements in access by public transport to other areas, will become apparent to other people, and will tend to attract slightly more households wanting to live there. This can lead to an increase in demand for housing, some increases in rents, and possibly to changes in the mix of households in the area.
- 4.12.9 Initial estimate for the resulting benefits from LNs (for four areas), over the 10-year period from 2025 to 2035, is £265M⁹.

1. ⁹ TEST WD 16/12/21, Glasgow LA only

4.13 Estimating the Costs

Costs

4.13.1 Present value costs (PVC) have been estimated for each of the scheme elements, Table 4-6 provides a breakdown of outturn costs by scheme element and Table 4-7 overview of the total scheme costs.

Table 4-6: Scheme element cost breakdown

Scheme element costs (£m)	2024	2025	2026
Govan Road and Elder Park Corner	£0.80	£4.81	£2.41
Drumoyne Streets for People	£0.53	£3.18	£1.59
Lorne Street and Festival Park	£0.54	£3.27	£1.63
Cessnock Ibrox Village Street	£1.18	£7.05	£3.53
Railway Bridges	£0.61	£3.68	£1.84
Riddrie Town Centre	£1.11	£6.67	£3.34
Hogarh Park / Todd Street Park / Haghill Cross	£1.41	£8.45	£4.22
Carntyne Square	£0.88	£5.27	£2.64
Artist Lighting M8 Bridge - Cranhill	£0.34	£2.05	£1.03
Dummy railway	£0.52	£3.12	£1.56
Ruchill Street Placemaking	£0.38	£2.31	£1.15
Langside Monument	£0.70	£4.20	£2.10
Toryglen Streets for People	£0.64	£3.86	£1.93
Govan Road and Elder Park Corner	£0.80	£4.81	£2.41
Drumoyne Streets for People	£0.53	£3.18	£1.59
Lorne Street and Festival Park	£0.54	£3.27	£1.63
Cessnock Ibrox Village Street	£1.18	£7.05	£3.53

Table 4-7: Scheme Costs

Costs in 2022 prices, undiscounted	£96,547,443
Costs in 2010 prices, undiscounted	£78,239,924
PVC	£48,014,016

4.14 Value for money

Introduction

4.14.1 This chapter compares the benefits against the costs to assess value for money.

Liveable Neighbourhoods

4.14.2 The following figures relate to the four LNs in the present programme.

4.14.3 Our initial estimate for benefits of LNs, over a 10-year period, is a net present value (at 2010 prices) of £231.3m. This initial estimate is an approximate assessment of the value of the improvements for (a) people visiting shops and services in the LN zones and (b) people accessing public transport (mainly waiting at bus stops) in the LN zones, thus representing the ways in which we expect people to experience the improvements brought about by the LNs in the course of daily life. Other benefits (e.g. the air quality and other benefits flowing from the presence (or the growth) of additional trees) still have to be added to these benefits.

4.14.4 The capital cost for the scheme has been estimated as £48.0m in 2010 prices and values. The expected benefit cost ratio of the LN programme is currently 4.81, with further benefits still to be added, but maintenance costs also still to be taken into account. The further benefits include

- a small benefit from carbon sequestration by the trees planted as part of the programme (noting that this is dependent on a number of conditions, notably that these are “additional trees” that would not be sequestering carbon somewhere else if the LN programme was not pursued)
- local air quality effects of trees (noting that this may become less valuable as decarbonisation of transport and domestic/commercial space heating are decarbonised)
- inclusiveness resulting from increased social interaction within the Liveable Neighbourhoods.

4.14.5 It seems unlikely that increased maintenance costs (for trees, street furniture) would seriously reduce the benefit cost ratio.

4.15 Conclusion

4.15.1 The evidence to date suggests that further work extending the Liveable Neighbourhoods programme to the rest of Glasgow will overall deliver a comparable, high benefit cost ratio of 4.81. This indicates a strong case for continuing for investing in the programme.

4.15.2 The analysis also indicates that the value of the Liveable Neighbourhoods programme will increase slightly as the Glasgow Metro is developed, as the LN improvements will improve the quality of pedestrian (or cyclist) access to the Metro.

4.15.3 Further work will be undertaken at the next stage of business case development to further refine the costs and benefits of the scheme and provide a more robust BCR position. Given the current ‘indicative package of schemes’ BCR position, it is reasonable to assume that the scheme will provide strong value for money.

5 Financial Case

5.1 Introduction

5.1.1 The purpose of the financial case is to ascertain the affordability and funding requirements of the preferred option and to demonstrate that the recommended project is affordable. This involves determining the funding and affordability of the proposed project on the organisation's income and expenditure account, balance sheet and prices for its services (if applicable).

5.2 Scheme Costs and Funding

5.2.1 The overall project cost including all four elements of the scheme come to an overall total of £96.5m. The project costs are broken down in Table 5-1:

Table 5-1: Cost of Scheme (by scheme element)

	Scheme Element	Cost (£m)
Govan to Kingston	Govan Road and Elder Park Corner	8.02
	Drumoyne Streets for People	5.30
	Lorne Street and Festival Park	5.44
	Cessnock Ibrox Village Street	11.8
Dennistoun to Cranhill	Railway Bridges	6.14
	Riddrie Town Centre	11.1
	Hogarth Park / Todd Street Park / Haghill Cross	14.1
	Carntyne Square	8.79
	Artist Lighting M8 Bridge - Cranhill	3.42
Ruchill to Cowlares	Dummy railway	5.20
	Ruchill Street Placemaking	3.85
Langside to Toryglen	Langside Monument	7.00
	Toryglen Streets for People	6.45
Total		96.5

5.2.2 Funding elements are set out in Table 5-2 for the Glasgow Liveable Neighbourhoods Programme Tranche 1. The current proposed funding allocations are yet to be decided and therefore a range of potential funds have been provided from which the required level of funding will be attained.

Table 5-2: Funding Streams

Funding Stream	Cost (£m)
LUCI Funding	TBC
Place Fund	TBC
Sustrans Places for Everyone Funding	TBC
Housing Association	TBC
National Lottery Heritage Fund	TBC
Place Fund	TBC
Cycle Walking Safer Streets Fund	TBC
Cycling Scotland Cycle-friendly grant	TBC
Sustrans cycle/scooter parking grant	TBC
Paths for All Community Paths	TBC
Total	

5.2.3 The budget does not include unrecoverable VAT costs. The project has been designed to ensure all VAT can be recovered by Glasgow City Council. Regular discussions will take place between the project's Principal Finance Officer and Glasgow City Council's VAT officer to ensure the project remains fully VAT compliant.

5.2.4 In order to prepare the estimate scheme cost (budget) cost for the scheme, provide confidence to the Local authority and central government for this application Glasgow City Council (GCC) have appointed an experience Chartered Quantity Surveyor to provide the estimate. The consultant Surveyor was provided with the concept design, which has been prepared on behalf of GCC using their extensive knowledge of the existing network and experience of implementing active travel schemes within the existing network.

5.3 Methodology

Risk and Contingency

5.3.1 The percentage contingencies applied are at their greatest in the early stages of the project when there are the greatest number of possible risks. These risks can then be reduced as better particulars about the project become available and some risks have passed or been overcome throughout the design development process. Based on our experience we believe that projects often track the following trend, set out below:

- Concept / Preliminary design – 20% risk and contingency.
- Detailed design - reduce to 15% for risk and contingency.

- Contract award - depending on the complexity of the project an allowance of 5-10% of will be held within the project forecast.

5.3.2 Risk and contingency have been incorporated within the cost estimate. It includes an allowance, for these items, at 20%, which has been supported through Risk Management that includes a risk assessment. It is considered that 20% risk and contingency will incorporate design development, estimating uncertainty and construction risk that could be experienced during construction. The Chartered Surveyor considers this to be an appropriate level of risk and contingency at this stage of the project development.

5.3.3 The Cost Estimate for the project is based on the latest market information, with the input of a Chartered Quantity Surveyor experienced in schemes of this nature and size. This means that the base estimate, is as secure as possible and that the allowances made for risk and contingency will cover construction issues and design development rather than estimate deficiencies.

5.3.4 Therefore, we believe that the allowance is sufficient to develop the design based on current assumptions and knowledge of the project.

Inflation

5.3.5 Inflation has also been included within the cost estimate at a rate of 11.5%. At present construction inflation is uncertain, this percentage is based on strategic advice provided to the City Council.

Risks and Cost Overruns

5.3.6 In the case of cost overruns, additional funding will initially be sought through the reallocation of contingency provisions. Where this redistribution of funding fails to meet any shortfall, further efforts will be made to attract additional funding from external organisations or sources. If this is not successful a further request for Capital will be made to GCC.

5.3.7 The City Council are experienced in the management of risk having adopted these procedures in the delivery of their investment programmes. The City Council have adopted a strict budget control procedure, where the design and costs are reviewed at each stage gate. If the project exceeds the funding available, then it will not proceed until the estimate is back within budget.

5.3.8 The main financial risks are presented below in Table 5-3. A full list of risks is provided within the risk register.

Table 5-3: Summary of top financial risks

Risk Event	Consequences	Mitigation
Client Scope Change	Change of scope leads to some or all of work undertaken becoming abortive.	Obtain client sign-off Undertake regular engagement meetings.
Council approvals process	Delay in Council approval process delays the project and increases the cost.	Develop a robust procedure to maximise the chance of obtaining project approval.

Hyperinflation - Actual costs exceeds estimate	The cost of goods and services are well above the norm due to an event locally, nationally or globally. Costs exceed/deviate from planned expenditure	Monitor economic situation and amend cash flow projection accordingly.
External consultant(s) fail to complete project delivery	External consultant(s) fails to adequately complete project delivery on time or on budget Company / organisation goes into administration / receivership; loses key personnel; or fails to ensure it retains capacity / expertise necessary for project delivery. Delays to programme and increasing costs	Establish good channels of communication with consultants and undertake regular progress meetings/ updates
Market buoyancy	Actual inflation differs from assumed inflation rates.	Monitor tendering trends and provide inflation allowance within contingency.

6 Commercial Case

6.1 Introduction

- 6.1.1 The purpose of the commercial case is to set out the procurement arrangements for the project's key outputs and activities. These arrangements need to be considered from the outset, in order to secure long-term public value during the operational phase of the project.

6.2 Procurement Strategy

- 6.2.1 Glasgow City Council will utilise internal Project Management, Design and Construction teams who have experience in designing and delivering projects of this type and scale. Where goods, services or works are required from external sources, these will be procured through a competitive tender process in line with Glasgow City Council's Procurement Strategy, Annex 21, which sets out key considerations in relation to a range of issues such as sustainability, community benefits and advertising through Public Contracts Scotland. This follows the approach that has been adopted recently for the delivery of Glasgow City Council's City Deal Infrastructure Programme and other significant Capital investment Programmes.
- 6.2.2 Procurement of necessary external consultants will ensure adherence to Glasgow's Climate Plan as part of the award process thereby ensuring the growth of green skills both within the Council and the supply chain. This will also extend to the materials and modern methods of construction that the Contractor supply chain will be required to provide green skills and sustainable working practices will increasingly be embedded in all projects. The Council has also developed a Circular Economy policy and will form part of any project.
- 6.2.3 Risk will be minimised through the use of internal resources (both design and build) where possible and the close working relationship and effective communication in place between parties as part of the Council's approved Project Management Toolkit. The core Toolkit and the principles within it, which this Capital Toolkit are based on, have been endorsed by the Corporate Management Team and this Toolkit, as it applies to the Council's Capital Investment Programme, has also been approved by the Capital Programme Board.
- 6.2.4 In order to facilitate the implementation of sound project management practices and principles, and to define robust and effective legal relationships, NEC Professional Services Contracts and Engineering and Construction Contracts will be recommended for use where appropriate. The contracts will be issued via Public Contracts Scotland. All contractors have, or will have, been through a competitive process in order to be on the relevant procurement frameworks.
- 6.2.5 Extensive consultation has already been undertaken with community stakeholders, and this will continue in an effort to identify the key physical, environmental, social and financial outcomes that will be delivered as part of the construction contract within the project area, and relevant community benefits and wealth building

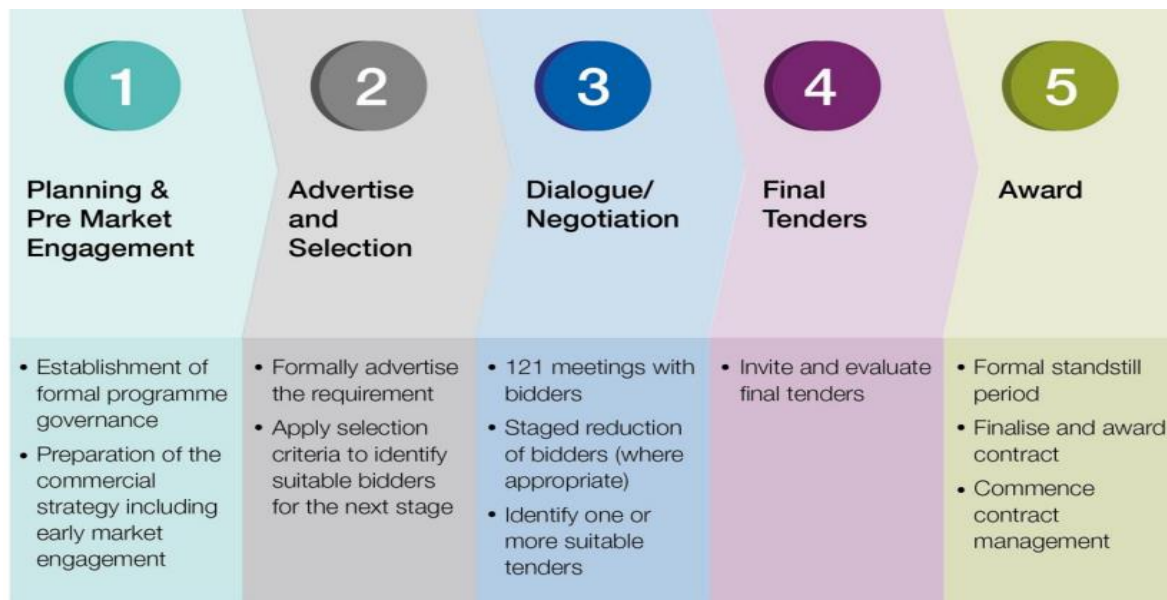
ambitions will be integrated into procurements and used as part of the award criterion.

- 6.2.6 Further information can be found in the GCC Capital Toolkit shown in Annex 16. The core Toolkit and the principles within it, have been endorsed by the Corporate Management Team and this Toolkit, as it applies to the Council’s Capital Investment Programme, has also been approved by the Capital Programme Board.

6.3 Procurement Process

- 6.3.1 Effective management of the contract will be influenced by the Procurement, Contract Management, and Project Management approaches to be adopted.
- 6.3.2 This project will be procured as a Design and Build Contract under the Competitive Dialogue Criteria. This procurement approach has been selected following consideration of the Procurement Route Decision Tree (Crown Commercial Service Action Note 12/15). This approach offers significant and clear benefits, in particular enabling risk and assumptions to be thoroughly tested, solutions to evolve and the foundations established for ensuring a successful contractual outcome and ongoing relationship for all parties and stakeholders.
- 6.3.3 The 5 Key Stages of the Competitive Dialogue Procedure (see Figure 6-1) will be used to effectively manage the contract and ensure that appropriate outcomes are delivered:

Figure 6-1: 5 Key Stages of the Competitive Dialogue Procedure



Planning and Pre-Market Engagement

- 6.3.4 A Prior Information Notice (PIN) will be issued as part of Pre-Market Engagement. Early engagement with the market will be used to confirm capacity and capability of the market, to seek initial response on the scope, risk and costs of the proposed works and to confirm the procurement strategy is optimal.

Advertise and Selection

- 6.3.5 A Contract Notice will be issued in the Official Journal of the European Union (OJEU).
- 6.3.6 The Contract Notice will establish that the contract will be awarded to the Most Economically Advantageous Tender. This approach enables the contracting authority to take account of criteria that reflect qualitative, technical and sustainable aspects of the tender submission as well as price when reaching an award decision.
- 6.3.7 Two Stage Procurement will be used with a European Single Procurement Document (ESPD) used to establish the Capability and Economic Standing of contractors that will be shortlisted to progress to the Competitive Dialogue Stage. At this stage it is anticipated that 4 contractors will be invited to progress.

Dialogue/Negotiation

- 6.3.8 The Competitive Dialogue Stage will be used to Test Deliverability of the proposal, remove assumptions, allocate Risk and drive Value for Money.
- 6.3.9 All shortlisted bidders will be invited to an Initial Dialogue session to ensure a common understanding of the project scope and procurement timetable. Thereafter ongoing dialogue sessions will take place to allow individual bidders to refine their proposal. The Dialogue Process will be closed once the Council is satisfied that it will receive at least 3 tenders that meet its requirements.

Final Tenders

- 6.3.10 Following closure of Dialogue all suppliers will be provided with additional time to refine, finalise and submit their final tenders. Tenders will be evaluated in line with the MEAT Criterion.

Award

- 6.3.11 Council approvals will be sought to allow the Contract Award Notice to be issued and the standstill period to commence. During this period the draft contract will be finalised and prepared for issue.
- 6.3.12 The Competitive Dialogue approach set out above is adopted by Transport Scotland for major infrastructure projects of this nature and is therefore accepted by the market.

Contract

- 6.3.13 The works will be delivered under NEC4: Engineering and Construction Contract. NEC4 embodies modern project management techniques and focuses upon collaboration between the Client and Contractor to ensure the early identification and mitigation of risks. NEC3 encourages the assessment of change in terms of time and cost as the project progresses. This provides the contractor, employer and project manager with greater predictability in terms of the outcome than more traditional forms of contract. The NEC4 contract will be administered by the project manager (PM). The PM will be assisted by a Supervisor, who will perform a quality control role.

Project Management

6.3.14 The project will be governed by PRINCE2 project management principles, in line with GCC Corporate Guidance. The PRINCE2 framework takes account of the most important variables of any project - Costs, Timescales, Quality, Scope, Risk and Benefits – through a careful and structured approach of planning tasks and delegation of duties. A Risk Management Approach will be established to ensure all project risks including those related to performance of the Contractor are identified, assessed, controlled and communicated within the Project Risk Register.

6.4 Project Delivery Experience

6.4.1 Glasgow City Council has extensive experience on project delivery including the Procurement and contractor Management. Procurement will be led by the Council's Corporate Procurement Unit in line with the procurement strategy outlined at 6.2.1. The Corporate Procurement Unit (CPU), located in the Chief Executive's Department has a team of 45 staff, overseeing procurement of goods, services and works across the council family. CPU has experience of the procurement of large civil engineering projects in recent years including:

- Govan-Partick Bridge (£29.5M);
- M8 Pedestrian Bridge (£18.5M); and
- South East Glasgow Surface Water Management Works (£8.5M).

6.4.2 In the year to end of March 2021 CPU completed 56 regulated, non-social care related, procurements during the reporting period with a total award value of £988,706,869. Additional information is available within the Annual Procurement Report 1 April 2020 - 31 March 2021 which is available at the following link:

<https://www.glasgow.gov.uk/CHttpHandler.ashx?id=42112&p=0>

6.5 Contract Management

6.5.1 The contract will be managed by an accredited Project Manager within the Council's Property and Consultancy Services (PCS). PCS have extensive experience in managing major projects, including:

- City Deal Glasgow projects (£400m).
- Sighthill Transformational Regeneration Area (£250m, Ongoing).
- The Burrell Collection Refurbishment (£66m, 2021).
- Carntyne Primary School (£8m, 2018).
- Emirates Arena Development (£113m, 2012).
- Riverside Museum development: (£74m, 2011).

6.5.2 Glasgow City Council will lead on delivery and design of all works.

7 Management Case

7.1 Introduction

7.1.1 The purpose of the management case is to put in place the arrangements for the successful delivery of the project.

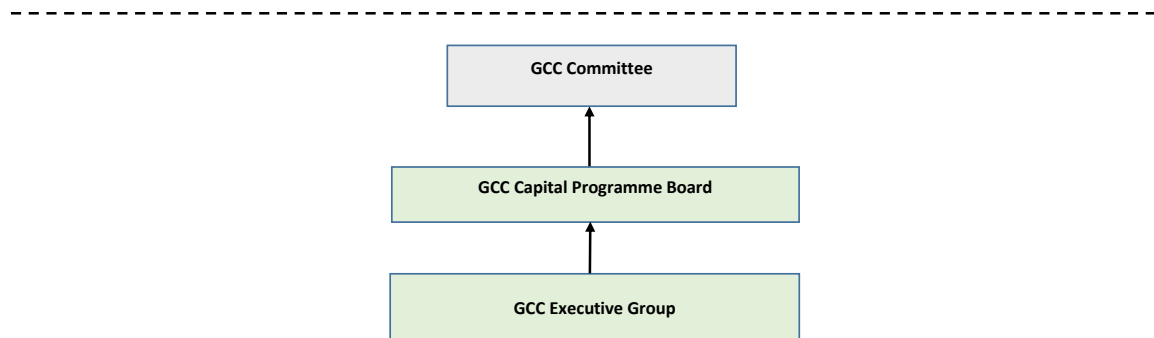
7.2 Project Management

Governance Structure

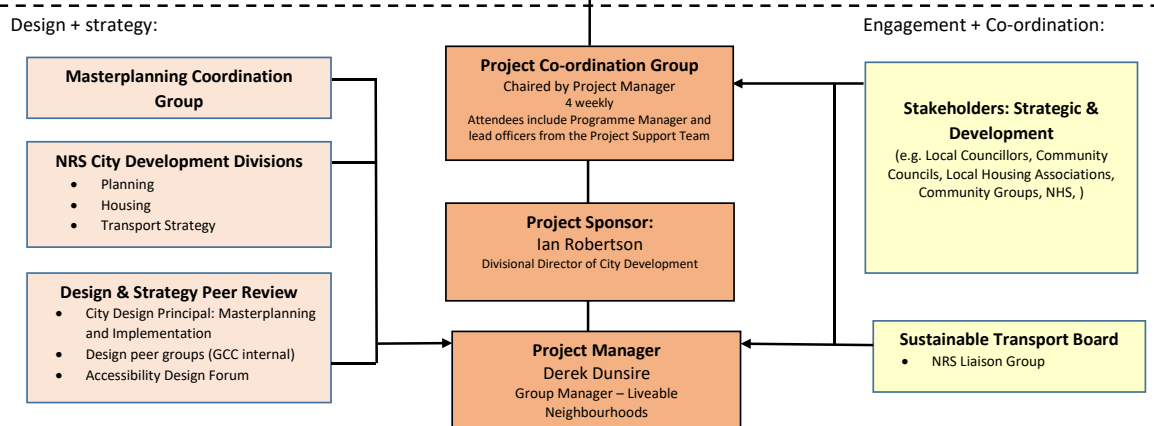
- 7.2.1 The Liveable Neighbourhoods scheme will be governed by the Environment, Sustainability and Carbon Reduction Committee and the Council Administration Committee, comprising Glasgow City Council officers from Neighbourhoods, Regeneration and Sustainability team and the Council Cabinet, and supported by partners from Glasgow City Region City Deal Team, Sustrans, NHS, and the Friends of Elder Park. The Steering Board will be chaired by the Project Sponsor from Glasgow City Council. Following is the organisational structure of the proposed team.
- 7.2.2 The reporting to the Project Steering Board will be as follows:
- Project Director/Bid manager – Group Manager for Liveable Neighbourhoods (NRS).
 - Project Co-ordination group chaired by Bid manager.
 - Programme Manager (to be appointed).
 - Work Package Project Manager (to be appointed).
 - Project Support -Finance and Legal representatives, procurement, Communication Department, Health and Safety representatives.
- 7.2.3 The representatives above will provide progress updates to the Steering Board from the project team/working groups. The Project Director/Manager will report to the Steering Board on progress in relation to the project brief, raise any significant issues or risks, seek decisions at key points in the project and support and coordinate the group.
- 7.2.4 Quarterly Meetings will be held in the project development to ensure timely and adequate decision-making to steer and progress work, or to address significant issues, risks or opportunities.
- 7.2.5 The project will follow a clear governance process, including tiered accountability, defined roles and responsibilities, and gateway review / decision making points. GCC governance structure can be found in *Figure 7-1*.

Figure 7-1: Governance Organogram

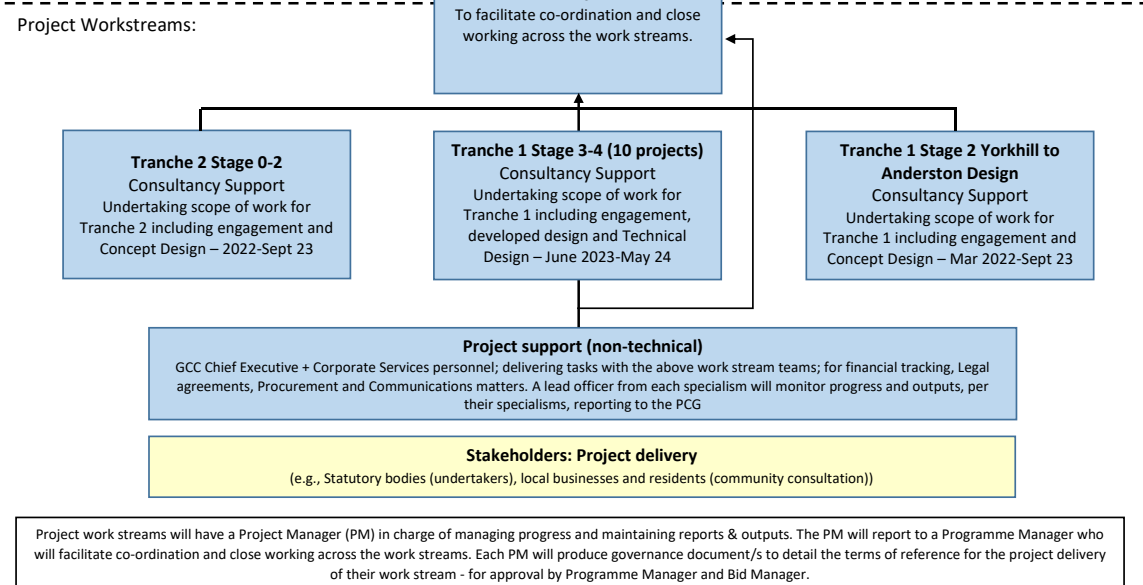
1. DIRECT



2. DRIVE



3. DELIVER



Project Plan

7.2.6 The Design and Construction Works will consist of the following: -

- RIBA Stage 2 Concept Design Review
- RIBA Stage 3 Spatial Coordination

- RIBA Stage 4 Technical Design
- RIBA Stage 5 Construction and Project Management
- Traffic modelling
- Surveys
- Public consultation and stakeholder engagement
- Utility investigations – analysis of potential diversion requirements across full project area
- Site investigations
- Traffic Regulation Orders
- Planning applications, as necessary

Project Delivery

- 7.2.7 Development and delivery of the project will be overseen and coordinated via a Project Team, led by the Project Director. This role will be crucial in integrating the capital development with operational activity/delivery, as well as leading workstreams to build the business plan, develop the funding strategy, establish long term legal / governance arrangements, and evaluate impact. The delivery of the project will be done via the four work packages identified in the delivery plan.
- 7.2.8 The Project Team will comprise a multi-disciplinary, cross-organisation group of skilled staff. It may include staff and volunteers from partner organisations as well as external consultants/contractors. This collaboration provides valuable expertise to the project, plays an assurance role and gives access to a wide range of supporters and stakeholders.
- 7.2.9 Project Team Meetings will be held monthly to ensure timely and adequate decision making to steer and progress work, or to address significant issues, risks or opportunities. Fortnightly Progress Update Meetings will be held between Project Manager / Work Package Manager and key Project Team representatives.

7.3 Change and Contract management

- 7.3.1 This project will be procured as a Design and Build Contract under the Competitive Dialogue Criteria. This procurement approach has been selected following consideration of the Procurement Route Decision Tree (Crown Commercial Service Action Note 12/15). This approach offers significant and clear benefits, in particular, enabling risk and assumptions to be thoroughly tested, solutions to evolve and the foundations established for ensuring a successful contractual outcome and ongoing relationship for all parties and stakeholders.
- 7.3.2 The 5 Key Stages of the Competitive Dialogue Procedure, Figure 6-1 **Error! Reference source not found.**, will be used to effectively manage the contract and ensure that appropriate outcomes are delivered:

Planning and Pre-Market Engagement

- 7.3.3 A Prior Information Notice (PIN) will be issued as part of Pre-Market Engagement. Early engagement with the market will be used to confirm capacity and capability of the market, to seek initial response on the scope, risk and costs of the proposed works and to confirm the procurement strategy is optimal.

Advertise and Selection

- 7.3.4 A Contract Notice will be issued in the Official Journal of the European Union (OJEU).
- 7.3.5 The Contract Notice will establish that the contract will be awarded to the Most Economically Advantageous Tender. This approach enables the contracting authority to take account of criteria that reflect qualitative, technical and sustainable aspects of the tender submission as well as price when reaching an award decision.
- 7.3.6 Two Stage Procurement will be used with a European Single Procurement Document (ESPD) used to establish the Capability and Economic Standing of contractors that will be shortlisted to progress to the Competitive Dialogue Stage. At this stage it is anticipated that 4 contractors will be invited to progress.

Dialogue/Negotiation

- 7.3.7 The Competitive Dialogue Stage will be used to Test Deliverability of the proposal, remove assumptions, allocate Risk and drive Value for Money.
- 7.3.8 All shortlisted bidders will be invited to an Initial Dialogue session to ensure a common understanding of the project scope and procurement timetable. Thereafter ongoing dialogue sessions will take place to allow individual bidders to refine their proposal. The Dialogue Process will be closed once the Council is satisfied that it will receive at least 3 tenders that meet its requirements.

Final Tenders

- 7.3.9 Following closure of Dialogue all suppliers will be provided with additional time to refine, finalise and submit their final tenders. Tenders will be evaluated in line with the MEAT Criterion.

Award

- 7.3.10 Council approvals will be sought to allow the Contract Award Notice to be issued and the standstill period to commence. During this period the draft contract will be finalised and prepared for issue.
- 7.3.11 The Competitive Dialogue approach set out above is adopted by Transport Scotland for major infrastructure projects of this nature and is therefore accepted by the market.

Contract

- 7.3.12 The works will be delivered under NEC4: Engineering and Construction Contract. NEC4 embodies modern project management techniques and focuses upon collaboration between the Client and Contractor to ensure the early identification and mitigation of risks. NEC3 encourages the assessment of change in terms of time and cost as the project progresses. This provides the contractor, employer and project manager with greater predictability in terms of the outcome than more traditional forms of contract. The NEC4 contract will be administered by the project manager (PM). The PM will be assisted by a Supervisor, who will perform a quality control role.

Project Management

- 7.3.13 The project will be governed by PRINCE2 project management principles, in line with GCC Corporate Guidance. The PRINCE2 framework takes account of the most important variables of any project - Costs, Timescales, Quality, Scope, Risk and Benefits – through a careful and structured approach of planning tasks and delegation of duties. A Risk Management Approach will be established to ensure all project risks including those related to performance of the Contractor are identified, assessed, controlled, and communicated within the Project Risk Register.

7.4 Monitoring and Evaluation

- 7.4.1 The monitoring and evaluation framework for this project will go beyond reporting against the delivery programme and financial performance. The evaluation will have both a summative and formative functionality to ensure that learning questions are answered with meaningful data. Findings from monitoring and evaluation will support the replication of good practice in future and allow for learning and provide data to inform the co-production of services.
- 7.4.2 The project contributes to the following Levelling Up White Paper Missions:
- Mission 1: Pay, Employment, and Productivity
 - Mission 2: Investment in R&D
 - Mission 3: Local Public Transport Connectivity
 - Mission 7: Healthy Life Expectancy
 - Mission 8: Well-being Improvements
 - Mission 9: Pride in Place
 - Mission 11: Crime Reduction
- 7.4.3 The M&E plan will set out the learning questions (relevant to the targeted Levelling Up Missions) which a Baseline Report will then be able to support by presenting the position prior to construction commencing. The learning questions may include:
- Has the Liveable Neighbourhood and 'people-oriented streetscapes' affected the proportion of active travel as part of everyday journeys?
 - Have improvements to the local environment affected the health and well-being of local residents?
 - Has the project affected feelings of pride in the local area among residents?
 - How safe do residents feel following the implementation of the project, the remediation of vacant and derelict land, and the reversal of wider environmental blight?
- 7.4.4 M&E is integral to the ROAMEF cycle and will be built into the delivery programme on a rolling basis, rather than simply carried out ex-post. This will build improvement into the fabric of the delivery programme to ensure ongoing learning. The onus of the empowerment evaluation approach will help build pride in place through meaningful participation at the ex-ante, interim and ex-post phases of the delivery programme.
- 7.4.5 The evaluation model will be housed within a Theory of Change framework to understand how this innovative project can affect change in a deprived community and to communicate the story of the project to different stakeholders.
- 7.4.6 To monitor the delivery of the project, Glasgow City Council proposes to create a comprehensive M&E model and methodology within three months of funding being awarded which will set out: baseline conditions, stakeholder power matrix and recruitment, key performance indicators; an evaluation report structure for the construction phase and a report structure for process evaluation.

- 7.4.7 Once the M&E framework is approved by the Council it will be published on the GCC website and will be available to the public. Local communities, businesses and services will be kept informed through, for example, local networks of third sector organisations.
- 7.4.8 Monitoring reports, using the framework provided by the DLUHC/DfT, will be completed by the project team and used through the project governance structure, see *Figure 7-1*).
- 7.4.9 Monitoring reports will also be reported to the Clyde Connectivity Liveable Neighbourhood project board on a quarterly basis produced by the project management team. Board members and terms of reference will be confirmed within three months of funding approval. The reports will provide updates on the progress against baseline and targets.
- 7.4.10 A Benefits Realisation Plan (BRP) will be produced as part of the project's delivery which will identify key benefit indicators. Indicators will include, for example, various indicators of health and wellbeing (including Healthy Life Expectancy, the percentage of residents with an antidepressant prescription, and life satisfaction ratings), the usual method of travel to work (using stakeholder engagement and collation of data from major local employers), and the percentage of adults who are satisfied with their local area as a place to live (collected through community/stakeholder satisfaction surveys). Community and stakeholder satisfaction surveys will help create an understanding of the added value of the project, particularly open-ended questions that collect qualitative data.
- 7.4.11 Mixed methods will allow us to understand the project benefits both in terms of physical elements (for example its buildings, natural spaces, and transport links) as well as in social terms (for example whether people feel safe, feel like they belong, and have a say in decision making). Hence, analysis of existing data sources will be complemented by surveys, interviews and focus groups. Additional tools such as the Place Standard, solution circles and cognitive mapping will be used as appropriate.
- 7.4.12 Data submitted to DLUHC and DfT as part of the programme-level monitoring process will be standardised as much as possible to enable aggregation at the programme level. Where possible, the data supplied will align with the standard outputs, outcomes and impacts set out in the M&E guidance.
- 7.4.13 The ongoing monitoring and evaluation after completion of the physical project works will be built into and resourced through the Glasgow Community Planning Partnership's (GCPP) Locality Planning structures. The Community Empowerment (Scotland) Act 2015 requires GCPP to set out resources and actions for short, medium, and long-term outcomes, 'agreed by it and the community'. The GCPP is also required to publish annual progress reports on locality plans for communities, with the aim of identifying improvements in the local outcomes. This is particularly

apt as the Liveable Neighbourhood is a core feature of locality planning in Greater Govan.

- 7.4.14 Helping the UK and Glasgow achieve collective sustainability goals, this project aims to be CEEQUAL certified. The certification process will complement the project's outlined approach to monitoring and evaluation by assessing a very wide range of environmental issues, thus promoting environmental best practice and measuring environmental performance in project specification, design and construction. GCC will appoint an officer to act as a CEEQUAL assessor; working with an external verifier to assess and rate the methods of civil engineering, infrastructure, landscaping, and public realm improvements used in this project.

7.5 Risk Management

- 7.5.1 The project will be managed in line with the methodology laid out the Glasgow City Region City Deal Programme Management Toolkit. This is a formal framework, based on core principles and tried and tested techniques that aim to ensure projects are appropriate, well managed, well-resourced and deliver on time, on budget and for the attainment of specific objectives and benefits.
- 7.5.2 Included within the toolkit are robust governance procedures which ensure that projects are monitored, barriers to the project, risks and issues, change controls and interdependencies are identified as soon as possible. This allows them to be managed and the impact or probability of the risk or issue occurring to be minimised.
- 7.5.3 The toolkit was developed based around the Glasgow City Council Project Management Toolkit, using experience of successful projects such as the delivery of the Commonwealth Games Infrastructure Programme.
- 7.5.4 The following categories for risk assessment are used – contractual, information technology, professional, environmental, people / societal, regulatory / legal, financial, physical / assets, political, schedule / timescales and reputation. As per ISO 31000, these risks will be assessed and classified in the context of both external and internal threats.
- 7.5.5 Specifically, risk will be assessed in respect of the combination of the probability of the risk happening and the impact of it happening. This will be considered in line with the Council's Risk Management Policy and Framework, and through the following steps:
- Project team will identify all risks facing the project
 - Risks will be assessed in terms of probability and severity of impact. Impact represents an assessment of the severity of the consequences upon the project should a risk materialise, while probability represents an assessment of the likelihood that it will materialise.
 - Risks will be allocated to named responsible officers.

- Risk owners will then put in place actions and controls to mitigate the impact and probability of each risk.
- All of the above will be recorded in a risk register which will be monitored and reviewed.

7.6 Project Assurance and Post-Project Evaluation

- 7.6.1 The project will be delivered through a similar governance framework already in place to oversee successful delivery of the Glasgow City Region City Deal programme.
- 7.6.2 GCC will use the Programme Management Toolkit, which has been approved by UK Government.
- 7.6.3 The project will be accountable to existing Glasgow City Council structures, including:
- City Administration Committee.
 - Finance and Audit Scrutiny Committee.
 - Capital Programme Board.
 - Neighbourhood, Housing and Public Realm City Policy Committee.
 - Environment, Sustainability and Carbon Reduction Committee.
 - Property and Contracts Committee.
- 7.6.4 Project resources will be committed to support its development and delivery. This will cover project management, legal, procurement, finance and accountancy and technical guidance. Allocation of these resources has been factored into project budgets.
- 7.6.5 The project will be governed by PRINCE2 project management principles, in line with GCC Corporate Guidance. It will report through the GCC City Deal PMO which will ensure compliance with project monitoring as per the GCC Corporate Guidance and the GCR Assurance Framework.
- 7.6.6 The project will report to a project coordination group on a 4-weekly basis. This will be chaired by the Project Manager and will manage project delivery through:
- Project Status Reports.
 - Risk and Issues Management.
 - Escalation.
 - Dependencies and Interdependencies.
 - Financial control and contingency management.
 - Change Control.
 - Monitoring and tracking of benefits.
- 7.6.7 The Capital Programme Board (CPB) oversees the effective management and delivery of the Council's Capital Investment Programme, with a remit to identify and monitor available resources across the Council Family to fund the Programme, as approved by the City Administration Committee, and support the successful

completion of individual projects within an agreed timescale and budget. The CPB is well-established and monitors the progress of those projects with a value of £2m and above, or that are of a particularly complex nature, high profile and/or to be delivered in a tight timescale. These are a subset of the Council's wider Capital Investment Programme that includes all capital projects, irrespective of scale and cost.

- 7.6.8 The CPB is chaired by the Director of Financial and Business Services and meets on a quarterly basis. Each period, project teams submit a highlight report to the Capital Programme Governance Team which is responsible for monitoring, managing and reporting on the performance of the projects that comprise that Capital Programme, as well as the Programme overall. The Team provides a programme management function and liaises with Project Teams to provide guidance and support for successful delivery of projects in line with the requirements of the Project Management Toolkit. The Team services the CPB and ensures that any significant matters arising are quickly brought to its attention.
- 7.6.9 Board Meetings are supported by ongoing six-weekly liaison between the Capital Programme Governance Team and Project Teams which provides interim exceptions reports to CPB members.
- 7.6.10 Reporting is based on asset classes - specifically land and property, ICT, infrastructure, and fleet. At CPB meetings, asset class leads present updates, and take questions, on the projects within their asset class.

Appendix A – Methods Used

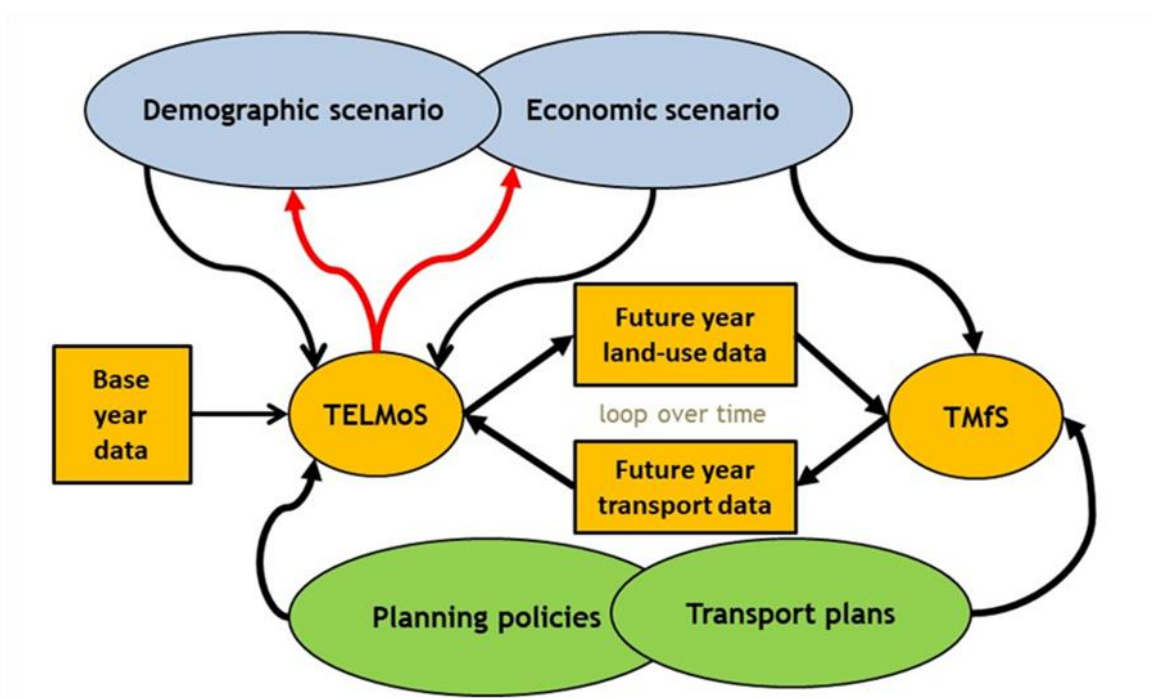
A.1 Introduction

- A.1.1 This Appendix provides a brief description of
- the TELMoS model
 - the ULTrA appraisal approach.

A.2 TELMoS

- A.2.1 TELMoS is one half of the national land-use/transport interaction model of Scotland. It is an application of the DELTA package, used in interaction with the Transport Model for Scotland as the main modelling framework for Transport Scotland's Land-Use And Transport Integration in Scotland (LATIS) programme. The overall structure of the TELMoS-TMfS system is shown in the figure below.

Land-use/transport interaction in TELMoS-TMfS



Geographical structure- zone system

- A.2.2 The TELMos18 model covers the whole of Scotland, with external zones representing English region. There are 787 in Scotland, and 16 external zones.
- A.2.3 The model also uses higher-level spatial units called macrozones. These are aggregations of sets of zones to functional economic areas (based on Census Travel to Work areas) which the regional economic model (REM) and migration model forecast to.

Base land-use data

- A.2.4 The base year for TELMoS18 and TMfS is 2018. The starting land-use databases have been developed in a slightly different method because of the length of time since the last Census. A version of TELMoS14 model was adapted to the slightly different TELMoS18 zone system and used to produce a “best yet” forecast of change from 2014-2018. This forecast was constrained to observed data on population, households, and employment as well as using observed information on planning policy to ensure consistent growth in the stock of residential and commercial property.

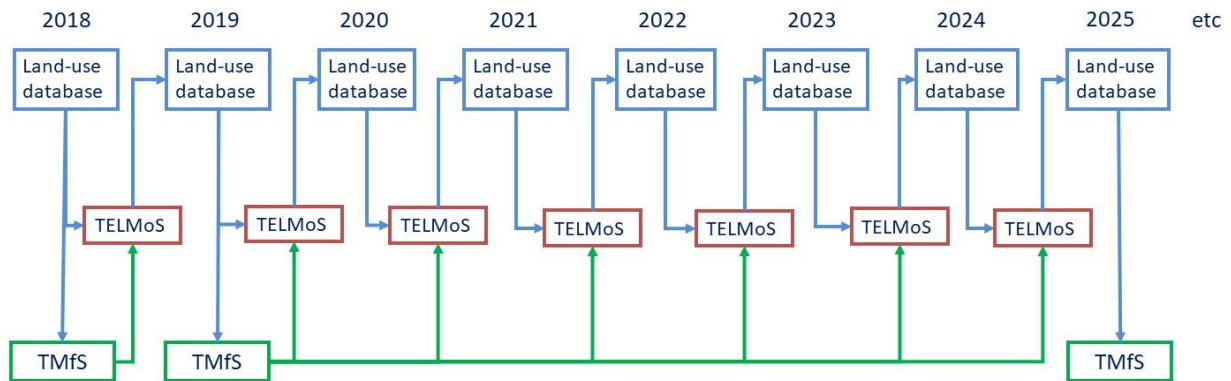
A.3 Transport data

- A.3.1 There is an interface between the Land use (TELMoS18) and Transport (TfMS18) Models that passes data between the two models.
- A.3.2 The transport model requires employment and demographic data as a basis for travel demand. These data, in the form of population and household data by type and socio-economic status, are output from TELMoS18 into formatted files by zones and transferred to the transport model. The output data also includes specific types of employment sectors.
- A.3.3 The land-use/economic model requires data describing how easy or difficult it is to travel or to move goods between any two zones, or within any zone (“intra-zonal” movements). Ease or difficulty of movement is measured in terms of generalised costs, which reflect the time taken for the journey (including, for public transport journeys, access to/from stations, waiting time, etc.), its money cost and key elements of “inconvenience” such as congestion on roads or the number of changes between trains.
- A.3.4 The transport data input to TELMoS18 consists of matrices of generalised costs by mode and purpose, for the base year and for each of the transport model forecast years: 2018, 2019, 2025 and every fifth year to 2045. In addition, estimates of generalized cost for active mode travel, based on distances, are used within TELMoS18 but are independent of TMfS.

Time horizon and modelled years

- A.3.5 The TELMoS18 model runs in one-year steps from 2018 to 2050. The extension of the forecast period beyond the last transport model year would allow the model to capture some (albeit limited) land use impact of that final transport forecast and reflects the types of land-use timelags present in responding to transport changes.

Time-marching sequence



Business, household and developer processes: choices and responses

- A.3.6 Business activity is measured mainly in terms of employment. National growth in employment (and the associated growth in production) is controlled to a given scenario. The present modelling work is concerned with how transport and land use interventions will affect the distribution of economic activity within Scotland and does not allow the totals to vary.
- A.3.7 Within each run of the model, the location of employment is determined through processes which represent business choices about
- where within Scotland to invest;
 - where to trade and to produce; and
 - at a more local level, about where to locate premises.
- A.3.8 For the majority of sectors, each choice is influenced by accessibility or transport cost terms, as well as by a range of other variables.
- A.3.9 The number of households and the size of the population are likewise constrained to a given national scenario. The location and mix of households and residents changes over time through
- migration (longer-distance moves, particularly influenced by employment prospects);
 - local moves (particularly influenced by housing availability, but also by accessibility to work and services); and
 - gaining or losing employment.
- A.3.10 Changes in the location of businesses affect households over time, by changing the demand for labour in each location; and changes in the location of households affect businesses over time, by changing the supply of labour and the demand for services.
- A.3.11 Developer choices are represented by models of how much floorspace to build, and where to build it. Developers' decisions are driven by expected profits, which in turn are driven by occupier demand: development therefore tends to follow businesses and households, whilst also being constrained by the inputs representing planning policy (which control the amount of development that can take place in any location at any time).

A.3.12 The sensitivities of businesses, households and developers to different stimuli are set mainly by adjusting the model so as to reproduce, as far as practical and appropriate, elasticities or other measures of response which have been drawn from previous research.

Planning policy inputs

A.3.13 The land-use policy inputs are one of the key inputs to the TELMoS model. They inform the modelling of development. They influence the model's forecasts of future floorspace, and hence can strongly influence where people live and work. They determine:

- where development may take place;
- in which year land for development is likely to come forward; and
- the maximum amount of development that may take place in any zone.

A.3.14 The APPI18 data are based upon information provided by the 34 local planning authorities (i.e. the 32 local authorities and two national park authorities) and describe the scale and location of planned development.

A.3.15 Information is included for all eight of the land uses modelled within TELMoS are provided below.

Land Use Categories modelled in TELMoS18

Floorspace Type	Description
1	Residential
2	Retail
3	Office
4	Industrial
5	Warehouse
6	Leisure / Hotel
7	Education
8	Health

Accessibility calculations

A.3.16 The data obtained from TMfS18 is combined with TELMoS18's own data on land-uses to calculate a range of accessibility measures for each zone and macrozone. These are recalculated in each year of each forecast, in non-transport model years, the most recent generalised costs are used as well as the land-use forecast for the given year. It is worth reinforcing the concept that accessibility in DELTA is opportunity measured, and changes in planning policy and development can affect accessibility and long with changes in generalised costs.

A.3.17 Within a single forecast model run, the other sub-models are sensitive to changes in accessibility over time.

A.3.18 It is the differences between the accessibilities based on Do-Something generalised costs and those based on Do-Minimum generalised costs that give rise to the different forecasts and hence show the impact of any interventions tested.

A.4 ULTrA

A.4.1 ULTrA stands for “Unified Land-Use/Transport Appraisal” is a method and software package for “accessibility-based land-use/transport appraisal” which DSC have developed over the last decade, partly in projects commissioned by Transport for London.

A.4.2 “Accessibility-based land-use/transport appraisal” is an approach to economic assessment (cost benefit analysis) which

- brings together the appraisal of land-use and transport changes, and hence (unlike conventional approaches) can be used to appraise integrated land-use/transport plans and proposals, as well as taking account of the impact of land-use interventions on transport and vice versa (which conventional methods cannot do)
- uses improvements in accessibility (how easily people or businesses can reach destinations, or be reached by others) rather than savings in travel time and cost, as the key measure of transport benefits. Critically, this recognizes benefits if destinations (e.g. work or shopping opportunities) are relocated closer to people who wish to reach them, as well as benefits if transport to existing destinations is improved; conventional transport appraisal can only recognize benefits from transport improvements.

A.4.3 The ULTrA application linked to TELMoS breaks down benefits by type of benefit (e.g. improved accessibility, increased income) and by beneficiary (households, firms, developers/landowners, government, other), as well as where the benefits are enjoyed. It therefore provides a considerable level of detail about the form and distribution of benefits (or malefits, since redistribution effects – e.g. one area gaining jobs at the expense of another – are common in the appraisal of land-use/transport proposals). Benefits are calculated from the differences between two TELMoS runs for each year of the appraisal period, and discounted to a present value in the usual way. The treatment of costs is conventional, except that if a proposal leads to private developers developing more housing or commercial floorspace, the costs of the development appear as negative benefits (malefits). (The returns they make on that development – the rents earned – appear as a benefit to them and (if rent levels increase) as a malefit to the occupiers.)

A.4.4 The following table sets out the full set of benefits estimated in the ULTrA application used here. (Only summary totals are used in the text, but the full results can be supplied on request.)

ULTrA output definitions

Sector	Item	Definition
Households	Accessibility	Benefit to households from improved accessibility to opportunities for work and services. NB improved accessibility may arise from any or all of: better transport provision; higher car ownership; more or better-located opportunities

Sector	Item	Definition
	Household environment	Benefit to households from reduced traffic (dependent on data passed from transport model – not currently available in TELMoS18)
	Housing consumption	Benefit to households from lower housing cost per household and/or improved space per household. NB all households are represented as renters.
	Income	Benefit to households from increased income net of income tax, Council Tax and VAT on household expenditure. Income per household may increase through more household members in work or higher wages per worker. Wages may increase due to higher wages in particular work zones or increased commuting to zones offering higher wages.
	Leisure time and commuting costs	Benefit to households in increased leisure time and reduced commuting costs if the number of workers per household decreases. (So if income increases due to more household members in work, this will be negative i.e. a loss of benefit.)
	Car ownership costs	Benefit to households from reduced expenditure on car ownership. (So if increased incomes lead to increased car ownership, some of the benefits in income and accessibility will be offset by a negative here representing increase expenditure on car ownership.)
	Housing quality	Benefit to households from improved quality of housing areas i.e. from externality effects of higher-quality new development or better maintenance/improvement by other residents
	Total - households	Sum of the household benefit components listed above
Firms	Productivity	Gains to firms' profits from productivity effects e.g. agglomeration effects (increase in GVA minus increase in wages paid), moves to more productive locations
	Accessibility	Benefit from improved accessibility to other businesses
	Rent	Benefit from reduced rents
	Tax paid	Benefit from reduced taxes on profits. This represents the part of the above gains that is taken in corporation tax, so will always be negative (more tax paid) if the sum of the above three items is positive (more profit made).
	Total - firms	Sum of the firms' benefits listed above
Developers	Rent income	Benefit to developers/property owners from increases in (gross) income from rents (housing and commercial floorspace)
	Development and maintenance costs	Benefit to developers/property owners from reduction in development and maintenance costs (housing and commercial) (so an intervention that increases floorspace supply will show a negative here)

Sector	Item	Definition
	Tax paid	Benefits from reduced taxes on profits. Equivalent to tax paid by firms (see above) except that a proportion of households are assumed to be owner-occupiers and not to pay tax on rent "income"
	Total – developers	Sum of the above benefits to developers/property owners
Public sector	Income tax revenue	Increase in government revenue due to more income tax paid
	VAT revenue	Increase in government revenue due to more value-added tax paid
	Unemployment benefit savings	Reduction in government expenditure due to less unemployment benefit paid
	Council tax revenues	Increase in (local) government from more council tax paid
	Business rates revenues	Increase in (local) government from more business rates paid
	Taxes on profits	Increase in government revenue due to more corporation tax paid
	Fuel tax revenues	Increase in government revenue due to more tax paid on motor vehicles fuels
	PT revenues	
	Total – public sector	Sum of above increases in revenue (or reduction in cost) to public sector
Other	Regeneration	Shadow value of net increases in employment for residents in most deprived local authorities
	Social infrastructure costs	Savings in cost of land for social infrastructure (schools, hospitals) from population locating in areas where land is cheaper
	Environmental	Shadow value of greenhouse gas reduction (and possibly other benefits)
	Total	Sum of the benefits to the "other" sector
PVB	Present Value of Benefits = sum of all benefits listed above	
PVC	Present Value of Costs (input exogenously)	
NPV	Net Present Value = PVB-PVC	

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