

LOCAL TRANSPORT PLAN 3

STRATEGIC REFRESH & DELIVERY PLAN 2020 - 2026

Foreword

Local Transport Plans (LTPs) set the strategy for the management, maintenance and development of an area's transport system. The LTP for Hull was last produced in 2011 by Hull City Council. It followed on from two previous 5-year plans and was drawn up to take a longer-term view. Hull's LTP3 covers the 15-year period from 2011-26. Whilst we are still in this period much has changed since 2011. For example:

- The declaration of a Climate Emergency by the City Council in recognition that a 'business as usual approach' will not achieve sufficient change quickly enough
- The development of the City Plan for Hull with a 10-year time frame to create jobs for local people, deliver major investment and reduce household & welfare bills
- The preparation and final adoption of a Local Plan to guide and shape future development in the City
- The establishment of Transport for the North as a statutory transport body and the production of a Transport Plan for the North

Much of the direction and actions of LTP3 remains relevant. However, we felt it was the right time to bring LTP3 up-to-date by producing this strategic refresh. In developing our own initiatives to transform the City and working with our partners and stakeholders it is important that we are clear about our transport priorities for the City and the wider area. In doing this we need to understand how transport fits in to a bigger and current picture of local, regional, national and international challenges and opportunities.

This version of the LTP3 Strategic Refresh document is a draft for consultation. We want to know what you think about how we make transport and movement in the City better.

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1 Transport Vision and Priorities

- 1.1 An effective transport system is integral to achieving our 'City Plan' led vison for Hull to support new jobs and homes being built, deliver fair growth and help efforts to ensure cleaner air, lower carbon and a healthier, more active city.
- 1.2 The way people travel how much they walk, cycle or use public transport and how dependent they are upon the private car– can have a significant impact upon people's health and well-being, opportunities to work and access services, the local environment and our climate. A transport system is needed which can bring people and jobs closer together and improve connectivity between businesses and their customers and suppliers.
- 1.3 Transport has a major influence upon the factors which make cities liveable, with a high quality of life. Many of the world's cities most noted for their liveable qualities have been planned, or re-planned, around sustainable forms of transport. This includes places such as Vienna, Zurich, Copenhagen and Melbourne.

Big Challenges

- 1.4 Four inter-related 'big challenges' have been identified that we think our local transport plan needs to help address:
 - Tackling the Climate Change Emergency current plans and actions are not enough to reduce carbon emissions, and at a fast-enough pace to make Hull carbon neutral by 2030 – for economic, social and environmental reasons.
 - Making Hull a Great Place to live and work in and visit, from our streets and neighbourhoods to the City Centre
 - Promoting Inclusive Economic Growth helping to ensure that opportunities are accessible and existing and new businesses can flourish
 - Promoting better Health and Well-Being, helping to support healthier lifestyles and addressing health inequalities in the City

Our Transport Priorities

1.5 We need to focus our activity on things that we need to do differently and/or do more of. Better urban transport and mobility is not an end in itself but should contribute to broader goals, such as enhanced quality of life and well-being. Transport systems enable businesses to move goods, services to be provided, visitors to get to the City and residents to access services, jobs, education, friends and families. The vision used in LTP2 and LTP3 reflected an extensive consultation process:

'To provide and develop a safe and efficient transport system that contributes to the social, environmental and economic well being of the residents, businesses and visitors to the City and provides equal opportunities for everyone to access key services using, where possible, 'green' alternatives to the private car'

1.6 As a broad statement of intent this vision remains relevant. The LTP3 vision was expanded into local objectives based on the Department for Transport (DfT) national policy framework. Our LTP3 strategic refresh is structured around four inter-related priorities as set out in the following table. The identification of these

transport priorities for Hull provides a clear focus to this refresh of our local transport plan and explaining how we can help tackle the big challenges:

LTP3 REFRESH PRIORITIES

Priority 1: A Cycling & Walking City

We want active travel, walking and cycling, to be the first choice for people making short journeys. Networks of safe and attractive routes for walking and cycling – to work, school, shops, local services and public transport stops - need to play a vital role in our communities. The city centre will continue to be transformed through a network of high-quality pedestrian streets and public spaces integrated with public transport services and cycling infrastructure – so that it isn't dominated by cars and other traffic.

Priority 2: City Transit Corridors

A fully integrated, high quality public transport system will help to keep the City moving and tackle congestion. We need high quality public transport services, networks and facilities to provide an alternative to the car enabling people to get to all parts of the city quickly. This is critical to reducing our emissions, enabling fair growth and people to access opportunities and tackling delays. In addition, we will address pinch-points on the network to address congestion and smooth traffic flow.

Priority 3: Strategic Connectivity

Good transport links are essential in ensuring that we can make the most of the opportunities provided by the Energy City, Port of Hull and the visitor economy through Destination Hull.

Hull is at the heart of the Humber Port complex which is the biggest in the UK, a gateway to Europe and the world. Strengthening the role of Hull as a key international gateway for the North of England is nationally important. Improving connections between Hull and other cities and economic centres will help Hull maximise its contribution to the Northern Powerhouse and improve economic interaction and productivity. This requires faster, more efficient, reliable and sustainable journeys on our rail, road and waterway networks.

Priority 4: Smart Green City

Embracing technology and innovation will keep the City moving with 'intelligent' transport networks. Modern methods of payment and mobile travel information are important customer expectations. Being a smart green city requires a combined focus on technology and the pressing need for carbon neutral and low emission transport networks and infrastructure. We need to be ready for the move away from petrol and diesel cars and enable our residents and businesses to increase the use of electric vehicle and alternative fuels.

1.7 This Plan will be backed up by a live Investment Plan document focussed on the implementation of the key actions on a rolling five-year basis.

2 City Priorities

2.1 Launched in 2013 the **City Plan** has a 10-year time frame and amongst its main priorities it aims to create 7,500 jobs for local people, deliver a £1 billion investment in the city, reduce the bills of every household, cut the city's carbon footprint by one million tonnes, and reduce the welfare bill. The plan is overseen by the Business Leadership Board (BLB), a 'guiding coalition' of the leaders of the private, public, voluntary and community sectors, charged with helping to shape the city's long-term future direction. The five City Plan priorities established in 2013 were to:

1. Harness all Hull's assets to become the leading UK Energy City.

Hull's location and its skilled workforce will see it become the UK hub for renewable energy industries and investment. Local businesses, agencies and communities will be trailblazers for producing and saving energy – creating jobs, cutting the city's carbon footprint and making Hull a sustainable city;

2. Make Hull a world-class visitor destination.

Hull will be known across the UK and beyond for its unique heritage and culture – a city with fascinating, world-class places to visit and great things to do. Visitor numbers will treble and more residents will take part in Hull's rich and varied culture, leisure and sporting activities. The designation of Hull as **UK City of Culture in 2017** is an important boost in meeting this theme. A key aspect of the programme is that the city is the venue, and therefore an ambitious plan for improving the quality of the city centre is currently underway;

3. Help residents to make their money go further.

Hull will be a place where people and organisations come together in imaginative ways to cut the cost of living and help families manage their finances so they're better able to cope during tough times. This includes exploring the potential for community food growing, which would have a land use impact;

4. Prevention and early intervention.

Hull will be a place where everyone matters and everyone has the opportunity to be the best they can be. Families will be supported, if and when needed, to strengthen them and help them play a fuller role in the community;

5. Safeguarding the most vulnerable residents.

Hull will be a place where vulnerable residents are supported to be as independent as possible, and enabled to keep as much control over their lives as possible.

2.2 Since the launch of the City Plan in 2013, Hull has seen significant economic benefits with thousands of jobs being created for local people and unprecedented levels of investment. In 2019 the ambitions of the City Plan continue to cover the themes of Energy City, Destination Hull and Community. Through its prime economic and geographic location on the Humber energy estuary, Hull has been placed the firmly at the heart of the UK hub for low carbon economy. Green Port Hull, which delivered Siemens Gamesa, Europe's largest wind turbine production and installation facilities at Alexandra Dock, is just the first step. Capitalising on the initial Siemens' investment, the Green Port Hub programme has delivered a local co-located value chain, establishing Hull, and the Humber, as a world class centre for renewable energy, delivering a capable workforce to meet the challenges of the new industry. Thereby, this project is making a major

- contribution to the ambitions of the Humber Local Enterprise Partnership, underpinning a new plan for the next phase of growing the UK's Energy Estuary, critical to any future Local Industrial Strategy for the Humber and to the benefit of our residents.
- 2.3 Hull, a gateway to Yorkshire, the UK and to Europe, and UK City of Culture 2017, delivered the wider **Destination Hull** capital programme of major cultural and transport infrastructure projects. The City firmly grasped this once-in-ageneration opportunity to create a sustainable thriving visitor economy; building on its rich heritage, culture and diversity, whilst embracing the future and the opportunities that it will bring. Putting Hull on the map provided opportunities for all our residents, communities and businesses not seen for generations whilst refocusing the city towards the legacy of building on what has been achieved and sustained. That legacy focus is the key to the future, building on the physical, cultural and social steps forward that have been achieved, not least, by our residents.
- 2.4 Hull aims to be a place of opportunity for all and looking to ensure that everyone in the city can benefit from its recent economic success. **Fair Growth**, often referred to as inclusive growth, will now be a key development area in the next phase of our City Plan journey. The City Plan will seek to support everyone to achieve their best by:
 - Ensuring people receive the services they need as early as possible through prevention and early intervention
 - Helping provide a city-wide coherent education system that enables every child and young person in Hull to fulfil their potential and talent
 - Encouraging entrepreneurial skills and attitudes, recognising the contribution that enterprise activity can make to people's lives, particularly the young and the very young
 - Providing opportunities to maximise people's personal income and reduce outgoings to make money go further with access to good jobs, training and skills development
 - Help with safeguarding the most vulnerable in our society, offering extra support where needed, helping them to live independently, leading to a happier, healthier, longer life
 - Encouraging fair growth across all the city's businesses, organisations and institutions, to support the collective wellbeing of the city's people
 - Helping to build strong, active, empowered and engaged communities
- 2.5 Hull City Council's **Corporate Plan** 2018-2022 sets out the Council's overall vision, priorities and values for this next year period. This guides what the Council will do, and how we will go about it, in working towards securing a positive and sustainable future for the city. The Council's role will be to ensure that all of its activity and work supports the delivery of the City Plan's priorities.

A Developing City

- 2.6 **The Hull Local Plan (2016 to 2032)** guides the direction of new development in the city for the next 15 years based on a Spatial Vision of Hull as "a thriving port city leading the way as the cultural urban heart of the Humber Energy Estuary. A city with a rich heritage and exciting entrepreneurial, digital and renewable focused future. A safe, great city others want to visit and be a part of". New housing growth is planned for the City the Local Plan sets a housing requirement for Hull of a minimum of 9,920 (net) new homes during 620 dwellings per year. There are significant development opportunities in the City.
 - The Albion Square development is a priority Enterprise Zone mixed-use development site at the heart of the city
 - Hull's regenerated Fruit Market is now a modern and vibrant district featuring art galleries, restaurants, music venues and an emerging digital hub.
 - ❖ The Heartlands Knowledge Zone Hull's waterfront setting, will be key to the next exciting stage of the city's development. As the place at which the city's story as a major global trading port began, the area is alive with industry and culture. The river is spanned by 13 distinctive bridges, including the Scale Lane Bridge, which has been recognised internationally for its innovative design, and Drypool Bridge, recently refurbished with an artist designed in tribute to Hull-born John Venn, originator of the world-famous Venn diagram. Its cultural significance is clearly visible in the medieval streets of Hull Old Town, where some of its finest museums, galleries and gardens overlook the river and more recently the emergence of a street art quarter in Bankside – sparked by a piece by celebrated artist Banksy.
 - ❖ Portside Energy District includes key Enterprise Zone sites near to the city's docks forming part of the wider Green Port Hull complex, which includes the Siemens wind turbine assembly and rotor blade manufacturing facility.
 - ❖ Kingswood an area action plan provides the vision and planning framework of this area of major change for the next 15 years. Kingswood is a modern community on the northern edge of the city. Work to provide new housing, retail, leisure and employment facilities started in the 1990s and Kingswood continues to thrive and grow today. So far over 3,600 new homes have been built and land is available at Kingswood for approximately 3,100 more homes.
- 2.7 Significant regeneration work has taken place to help re-balance the housing stock in certain areas of the city. Area Action Plans were prepared to guide this work, including for Newington & St Andrew's and the Holderness Road Corridor. Despite considerable changes in Government funding, schemes are still progressing in these intervention areas, with significant success. Other priority areas, at Orchard Park and North Bransholme, are now starting to see regeneration activity.
- 2.8 A priority element of the City Plan, is to make Hull a world-class visitor destination. The Hull City Centre **Public Realm Strategy** aims to unlock the full potential of this urban environment and to provide a high quality, accessible and safe public realm for the benefit of all those who live and work in the city or come here as visitors. This seeks a renewal of public life in the city centre through an approach

- which puts people first and building on the city's unique character and the need to provide spaces that are enjoyable, convenient, accessible and safe.
- 2.9 Digital and physical connectivity have a key influence on our lifestyles, work, education, training and access to services and facilities and on our prospects of improving economic growth, social inclusion and our environmental impact. Digital technology underpins almost every aspect of modern living across work, travel, leisure and health, and good Internet access is now widely viewed as the '4th utility'. Fast, reliable digital connectivity is vital to support business growth, help communities to thrive, improve health and well-being, and make it easier for people to get online and access public services.
- 2.10 The city is now pushing to be one of the UK's leading smart cities. Citywide 4G coverage and affordable ultrafast fibre optic broadband is already available to a quarter of business and residents. Hull has some of the UK's best international connections and a large amount of capital investment has meant the majority of homes and businesses in Hull now have access to full-fibre technology. Businesses are able to connect at one gigabit per second, while households enjoy download speeds of 250Mbps.

	Key Statistics	
Population	Hull	England
(2018 Mid-Year Estimates)		
Total Population	260,645	
Population Density (people per ha)	36.5	4.3
Area (Hectares)	7,145	13,027,843
Median Age	35.6	39.9
Gross Value Added ONS/Hull D	Hull	England
GVA per head	£21,217	£27,949
Manufacturing % of total GVA	26.5%	9.8%
Jobs (NOMIS Labour Market Statistics)	Hull	England
Total number of employee jobs	125,000	
Job Growth 2016-2017	4.2%	1.3%
Jobs in Manufacturing	16.8%	8.1%.
Full Time Jobs	67.2%	67.8%
Part Time Jobs	32.8%	32.2%

3 The Big Challenges

Tackling the Climate Emergency

- 3.1 Cities are uniquely placed to lead the world in reducing carbon emissions, as they are in many ways easier to decarbonise than rural areas and bold climate action can deliver economic benefits in terms of new jobs, economic savings and market opportunities.
- 3.2 Hull City Council declared a Climate Emergency in March 2019, recognising that in order to reduce the chance of runaway Global Warming and limit the effects of dramatic climate change, there must be a global reduction in our 'Carbon Dioxide Equivalent' emissions from their current 6.5 tonnes per person per year to less than 2 tonnes. The Council believes that current plans and actions are not enough with Cities needing to lead the world in reducing carbon emissions. It was resolved to do everything within the Council's power to make Hull carbon neutral by 2030, taking into account both production and consumption emissions working with partners across the city and region to deliver this new goal through all relevant strategies and plans.

What can transport planning do to help tackle the climate emergency?

- Helping to reduce the need to travel and reduce emissions
- Promoting more environmentally friendly forms of travel
- Supporting the Local Plan shift to a low carbon future
- Planning ahead to deal with the stopping of new petrol and diesel cars by 2040
- Providing more infrastructure to cope with the move to the mass adoption of ultra-low emission vehicles
- Enabling electric vehicle drivers to easily locate and access affordable, efficient and reliable charging infrastructure
- Making sure our transport infrastructure, networks and assets are resilient to cope with climate change and the effects of extreme weather events

Making Hull a Great Place a live and work in and visit

3.3 More than one million people live in the city and its immediate hinterland, with a further nine million people living within a two-hour drive. The city's population is rising as more professionals, families, students, artists and entrepreneurs choose Hull as a place to live, work, invest and create. The city's Local Plan will deliver almost 10,000 new homes in the city over the next 15 years. The city has a young population, with a largest five-year age group at 25 to 29, compared with 45 to 49 nationally. In 2018, Hull was named the third-most improved UK city as a place to live and work by the Demos-PwC Good Growth for Cities Index 2018, which ranks cities on a combination of economic performance and quality of life. Hull City Council's has a long-term vision for the City to be a world-class visitor destination. The successful Heritage Lottery Funding Bid for ' will enable the City to celebrate its rich maritime history, secure extensive maritime assets and collections and

become the north's next major visitor attraction'. An audience of five million people attended a host of world-class events, exhibitions and cultural activities as part of the Hull City of Culture in 2017. The city is continuing to produce a major programme of acts, festivals and installations for its residents and visitors. Major visitor attractions include The Deep aquarium, The Ferens Art Gallery and the historic Museums Quarter. The Hull New Theatre and Hull City Hall regularly attract international companies, while the Hull Truck Theatre is one of the UK's most well-known independent companies. The Bonus Arena, a £36 million state-of-the-art 3,500-seat music and events complex, is attracting the best UK and international acts.

What can transport planning do to help make Hull a great place?

- Better Streets 'Places that have cycling and walking at their heart'
- Supporting a walkable and high-quality city centre ensuring that streets are welcoming and safe, easy to navigate and thereby encourage greater use of the city centre
- Investment in the public realm provides an important opportunity to strengthen its 'sense of place' and support Hull as destination
- A wide choice of travel options can allow most daily journeys to be made easily without a car
- Better road safety supports streets and neighbourhoods where it is safe for people to walk and cycle and children to play

Supporting Inclusive Economic Growth

- 3.4 Employment in Hull is now the highest on record. The city has so far attracted more than £3 billion of investment, creating more than 6,000 new jobs since 2013 in the renewable energy, healthcare, telecommunications, ports and tourism sectors. Local wages are also growing faster than the national average. In 2017, Hull was named the most enterprising place in Britain at the Enterprising Britain Awards in recognition of its many programmes put in place to help local businesses to start up and grow. The city is home to more than 8,000 businesses, including major private sector employers such as RB, Cranswick plc, Arco, Willerby Group, Smith & Nephew and Siemens plus a raft of successful individuals, start-ups and SMEs.
- 3.5 Hull is known for its first-rate skills in engineering and manufacturing, with more people than ever employed in roles that require a degree or equivalent, and the number of people in apprenticeships at an all-time high. The Hull and Humber region is also becoming a centre of excellence for energy skills and the city is home to several world-class research and development (R&D) facilities, including new multi-million pound ventures by RB and Smith & Nephew. The University of Hull leads research into many fields that are important to local industries, including wound-care, renewable energy, and logistics. The C4DI (Centre for Digital Innovation) acts as a high-tech hub to support start-up companies in the digital sector.

What can transport planning do to help promote inclusive economic growth?

- Transport is critical to sustainable and inclusive economic growth
- It has a key influence on supply chains, labour markets, the movement of goods and people and the delivery of services.
- Good transport links are important for the competitiveness of existing businesses and the attractiveness of the City to inward investors
- Connecting firms to local, national and global markets, people to jobs, employers to talent, and innovators to wealth creators supports improved productivity
- The efficient movement of goods and people is a basic requirement for any successful port, through links to wider rail, road and water networks
- Transport services and costs affect how individuals can participate in the labour market through access to jobs and training opportunities
- Cutting transport emissions and the associated health and environmental has an important effect on the economy

Promoting Better Health & Well-Being

- 3.6 Hull is a changing City. Overall people are far healthier than they were in the past, but unfortunately, even today, not everyone has the same opportunity to thrive. This is what we mean when we talk about 'health inequalities. In some parts of Hull people will live 10 years fewer than in other parts. This difference is closely linked to poverty, housing, educational attainment, employment and social isolation.
- 3.7 Our Health and Well-Being strategy, to tackle health inequalities and improve health and wellbeing, has been developed by taking account of our assets, our challenges, The City Plan, Hull 2020 and the Joint Strategic Needs Assessment (JSNA). The strategy sets out how WE can work together to reduce health inequalities and improve people's health. Hull has a disproportionate share of low-income, poorly-qualified, unemployed and economically inactive residents living in what are statistically some of the most deprived wards of England. An above average proportion of residents suffer from poorer health outcomes and lower levels of educational attainment than national averages. Life expectancy at birth in Hull is 76.6 years for men and 80.5 years for women lower than the 79.5 years for men and 83.2 years for women in England. Hull is ranked as the third most deprived local authority out of 326.
- 3.8 High smoking prevalence, alcohol and substance misuse, poor educational attainment and lack of employment opportunities all impact on the health of Hull's population. Estimates for the annual costs to the NHS as a result of physical inactivity are between £1 billion and £1.8 billion and 61% of adults nationally are overweight or obese (Source: Towards an Active Hull). From the most recent **Active Lives survey** (2017/18), to achieve the same 'active' rate as England, Hull would require an additional 9,990 or 11.2% adults (aged 16+) moving from the

- 'inactive' or 'fairly active' categories (based on 2017 ONS mid-year population estimates) (Source: Towards an Active Hull).
- 3.9 The JHNS 2016 identified that in Hull the number of people aged 65 and over is expected to increase by 32% over the period 2016 to 2032, with a higher increase of 51% in the number of people aged 85 and over. This compares with overall population growth in the city of 3% over the same period. This is likely to be accompanied by an increase in the number of people with specific disabilities, such as dementia and mobility problems, as well as a general increase in the numbers with a long-term health problem or disability. Hull has one area that exceeds the annual average nitrogen dioxide air quality objective (AQO), and this is along an area of the A63 Trunk Road. The Health and Wellbeing Board wants Hull people to have the best start in life; to live healthier, longer, happy lives, safely and independently.

What can transport planning do to promote better health & well-being?

- Walking and cycling can address physical inactivity in day to-day life and this has huge potential to enhance our wellbeing
- Disabled people to have the same access to transport as everyone else, and to be able to travel confidently, easily and without extra cost.
- Built environments should support people taking part in physical activity.
- Travel needs to be recognised as a means of activity itself
- Cycling and walking should be the natural choices for shorter journeys, or as part of a longer journey
- Low and zero carbon technologies and addressing congestion helps to improve air quality and reduce emissions
- Improve people's access to services and facilities and support the delivery of services
- Provide greater choice in helping more people become economically active

4 Local Transport Context

- 4.1 Our transport networks and services move people, carry goods and enable services to be delivered. Transport connectivity is the lifeblood of the City enabling it to be a place where we live, work and play. Our ability and way in which we move in and around Hull influence a city's quality of life, shape its urban fabric, connects people with opportunities and determine the types of economic activity it supports. The existing characteristics of Hull as an urban area and its relationships with surrounding areas and places have a key influence on transport and movement within and beyond the City:
 - The city is compact and highly urbanised; with an area of just 7,145 hectares (27.6 square miles) and a population of 260,645 (ONS 2018)
 - The city boundary is roughly semi-circular with a radius from edge-of-centre of approximately 4.4 miles
 - It is the most densely populated local authority area in the Yorkshire and Humber region. It serves a large hinterland of countryside and coast in neighbouring local authorities.
 - The River Hull runs through the middle from north to south. Industries in Hull have traditionally located around the rivers Hull and Humber, forming an inverted T-shape.
 - The continuous urban area of the city extends outside the administrative boundary, particularly to the Haltemprice settlements to the west.
 - Hull, therefore, has a close relationship with its immediate neighbour, the East Riding of Yorkshire, many of whose resident's commute into the city for work and for retail, leisure and other activities.
- 4.2 Good local transport networks play a vital role in our communities, providing access to employment, health, leisure and education opportunities. Public transport, walking, cycling and the local road network are all vital to getting people, businesses and service providers moving around Hull. Our economic growth, carbon reduction and social inclusion objectives are as much dependent on 'local' transport and mobility as they are on 'strategic' connections. Transport has a key influence on our day-to-day lives and experience of living and working in Hull, and for people visiting the City.
- 4.3 Journeys to and from Hull for work are predominantly between the East Riding of Yorkshire as well as North and North East Lincolnshire. The Hull travel-to-work area has one of the highest levels of commuter self-containment in the country. This is mainly due to the fact the relative distance to Hull's nearest city neighbours and employment centres; York, is 40 miles away, and Leeds, the main economic centre of the Yorkshire region, is 60 miles away. Based on the 2011 Census:
 - Driving is the dominant method of travel to work in Hull at 54%.
 - In terms of sustainable travel, 12% travel to work on foot, 13% by bus and 8% by bicycle.
 - Only 1% of people travel to work by train
 - 56% of the distances travelled to work were under 5km
 - 75% of the distances travelled to work were under 10km.
 - 5% of people worked mainly from or at home

- 4.4 Our journeys can often include the use of a combination of 'local' and 'strategic' transport networks. Effective links between networks and between different transport modes and services all support the need to take a 'whole journey approach' as outlined in the Strategic Transport Plan for the North.
 - Hull is at the heart of the Humber Port complex which is the biggest in the UK, and is also the location of one of Europe's biggest wind turbine manufacturing plants, bringing forward the ambition for the city to become a major national centre for the offshore renewables sector. The Government recognises the importance of the renewable energy sector and has granted Enterprise Zone status in and around the Port of Hull to encourage complementary businesses and supply chain companies to locate there. A sustained redevelopment programme undertaken by Associated British Ports has made Hull one of the best-equipped freight and passenger centres in the UK, with additional capacity for growth.
 - Hull acts as a gateway to Europe and the world. Daily overnight ferry services from Hull to both Rotterdam and Zeebrugge, connecting passengers to major European motorway and rail networks. More than a million people and 12 million tonnes of cargo pass through the Port of Hull every year. A high-level freight line runs through the city from the west through to the port. The ports also bring important linkages between the city and the south bank of the Humber.
 - Hull is well connected by the road and rail networks. The A63 going west connects to the M62, stretching across northern England, The M62 motorway is one of the main east-west routes in the north of England, connecting Hull to Leeds, Manchester and Liverpool and the M1. The Humber Bridge, just to the west of the city, forms an important road link across the estuary to Lincolnshire. More than eight million vehicles cross the Humber Bridge annually, linking Hull to a growing economic area on the south bank of the Humber.
 - Regular passenger rail services run south to Doncaster, Sheffield and London, west to York, Leeds and Manchester, and north to Beverley, Bridlington and Scarborough. Seven direct rail services run to London from Hull Paragon Interchange, the city's major transport hub, every day from Monday to Friday in as little as two hours and 40 minutes. An hourly service connects the city to Leeds and Manchester Piccadilly and a twicehourly service runs to Doncaster and Sheffield, with connections to the Midlands.

5 Delivering the Transport Priorities

- 5.1 Securing improvements in transport and connectivity is vital to realising Hull's ambitions and fulfilling the City's potential as a hub of transformational and fair growth in the North of England. This section identifies key actions that will be critical to delivering the four transport priorities for Hull. It therefore provides a framework for the planning and delivery of transport infrastructure and services over the next decade and beyond. This Strategic Refresh will be backed up by a live Investment Plan document focussed on the implementation of the key actions on a rolling five-year basis.
- 5.2 Each of our four transport priorities set out in Section 1 is considered in more detail in this section. For each priority a table and supporting text sets out:
 - What we need to do the key actions
 - What the benefits will be how this will help to address the 4 big challenges
 - Some of the key background to the priority reflecting the local situation and wider relevant policies and strategies
- 5.3 A second table for each priority sets out a proposed broad-brush delivery programme of schemes and initiatives that have been identified for inclusion in a short, medium and long-term strategy subject to the availability of funding. The timescales identified in these delivery programme tables relate to the following:
 - Short Term by 2023
 - Medium Term (2023 2028)
 - Long Term (Beyond 2028)
- 5.4 There is no single solution to tackling Hull's big challenges: all four priorities are needed in combination.

Priority 1. A Walking & Cycling City

Transforming cycling and walking infrastructure in the City to make walking and cycling the natural choice for shorter journeys or as part of longer journeys.

Key Actions - What will we do?

- a) Provide a city-wide network of high quality, continuous and safe cycle routes
- b) Establish a comprehensive core strategic cycle network focussing on key local trip destinations/generators
- c) Encourage more people to cycle, catering for a range of needs and people who do not currently use a bike through infrastructure and behavioural change initiatives
- d) Improve walking routes/networks and improve facilities for pedestrians as part of all proposed infrastructure and public space improvements.
- e) Design and deliver a 'pedestrian first' public realm in the city centre and other centres across the City to create high quality spaces for pedestrians in areas of high footfall
- f) Safeguard and extend the Public Rights of Way (PROW) Network in the City
- g) Ensure new housing, commercial, shopping and leisure developments positively improve walking and cycling networks and facilities.

How does this help to address the big challenges?

Tackling the Climate Emergency

- Supports zero-carbon transports options
- Helps facilitate a major shift to sustainable travel away from car-based modes
- Reduces emissions from vehicles and energy use
- Caters for existing users and attracts new users to a sustainable travel option

Making Hull a Great Place a live and work in and visit

- Provides a people not vehicle focussed public realm
- Promotes the role of the city centre as a world class visitor destination a walkable high-quality place not dominated by cars and other traffic
- Helps deliver better and healthier streets more focussed on people
- Enables people to get to work, school, shops, local services and public transport stops via extensive, safe and attractive routes for walking and cycling

Supporting Inclusive Economic Growth

- Allows more people to commute to work by bike and on foot
- Provides greater transport choice, particularly for residents who don't own a car
- Reduces the cost of commuting for local people
- Helps to tackle congestion which impacts on the City's productivity

Promoting Better Health & Well-Being

- Helps people build walking or cycling into daily routines
- Encourages people to increase their levels of physical activity
- Promotes and supports healthier lifestyles and improve their health
- Contributes to reducing costs to the NHS from physical inactivity

Background to Priority 1

- 5.5 Walking and cycling have a key role to play in achieving national and local targets and priorities to address climate change and improve people's health. Increased levels of walking and cycling will help the UK to meet the legally binding target for net-zero emissions by 2050. The national Cycling and Walking Investment Strategy (2017) seeks to double cycling activity by 2025 and to reduce the rates of fatalities and injuries for cyclists on England's roads. 'Towards an Active Hull' highlights that to achieve the same 'active' rate as England, Hull would require an additional 9,990 or 11.2% adults (aged 16+) moving from the 'inactive' or 'fairly active' categories (based the most recent 2017/18 Active Lives survey and 2017 ONS mid-year population estimates. Costs to the NHS as a result of physical inactivity are between £1 billion and £1.8 billion and 61% of adults nationally are overweight or obese.
- 5.6 The Humber Infrastructure Review (2019) proposes a step change in active travel particularly for journeys less than 2km and highlights the positive impact this would have on the transport network and the environment. The Hull City Centre Public Realm Strategy (2014) aims to unlock the full potential of this urban environment and to provide a high quality, accessible and safe public realm for the benefit of all those who live and work in the city or come here as visitors.

Potential for Change

5.7 With a relatively young population, high population density, low car ownership and close access to local amenities the propensity for walking and cycling trips in Hull is high. Car ownership in Hull is below the national and regional average. A total of 40.6% of households in Hull do not have a car or van, compared to a national average of 25.8%. Residents have good access to day-to-day services such as employment, education and healthcare. Hull still has one of the highest cycle modal splits of any local authority area in the UK at 8.2% of all journeys to work, which compares to a national average cycle mode share of 3%. Travel to work on foot mode share increased by 1.6% between 2001 and 2011. However, Census data shows also that in Hull travel to work by cycle has declined steadily in mode share from 14.2% (1991) to 12.4% (2001) to 8.5% (2011 amended 2014) which is reflected in the steady increase in vehicle journeys across the network and rising congestion levels. The flat topography of the city, its compact nature and overall size make Hull conducive to walking and cycling.

Existing Networks

5.8 Hull has an established network of existing walking and cycling routes developed over a long period. There is already a comprehensive footway and footpath network in place to accommodate most walking trips - 1,500km of footways and 37km of Public Rights of Way (PRoW) across the city. The council has invested in the public realm in the city centre over recent years with the aim of creating a 'pedestrian first' environment, which has improved the walkability of the city centre for both residents and visitors. The existing cycling network includes approximately 65km of off-road cycle routes and approximately 70km of on-road cycle lanes which cover most areas of the city. There are advanced stop lines at the majority of signalised junctions across the city and there are also a number of signalised crossings for cyclists. The public realm works in the city centre have

helped to facilitate cycling across the city centre, providing cycle connections to amenities and places of employment.

Improving the Network

5.9 There is cycling provision on the majority of key routes which feed the city centre (including Anlaby Road, Beverley Road and Holderness Road), however the provision is generally on-road and shared with traffic, is of variable quality and is disjointed in parts, making it unattractive to some cyclists. Whilst there is a fairly dense network of off-road routes, the physical condition of some of the infrastructure is poor, with no wayfinding and gaps in provision, particularly at junctions. The majority of routes require significant improvements to make them more conducive to cycling. A Core Network of cycle routes represent the routes where cycle flows are the highest and are likely to be highest in the future. A Secondary and Tertiary cycle network helps to support a Core Network in communities and key trip generators as part of a City-wide approach. New developments will also play a role in the future of the walking and cycling network and the provision of cycle parking. The Local Plan requires new development proposals to make a positive contribution towards the walking and cycling network. Safety is a key imperative with the proportion of cycle collisions in Hull more than double the regional or national average.

Delivery Programme for A Walking & Cycling City						
		Timescale*				
Scheme	Description	Investigation	Delivery	Likely / Possible Risks	Comments	
Rights of Way Improvement Plan (2009-	Implement Action Plan	Ongoing		Funding availability 3rd party involvement		
2019)	Refresh required to be undertaken of existing plan					
Public Realm Improvement Works	Further enhancements to public realm in City Centre Issue re DF programme – to accelerate delivery of additional public realm works to those currently being funded by HCC	Ongoing			Availability of Funding	
Green Infrastructure	Provision of electric charging facilities	Ongoing			Availability of funding	
Preparation and delivery of Local Cycling Walking Infrastructure	Preparation of strategic Cycling Plan including Action Plan programme	ongoing		Short/ medium / Long term	Delivery Programme may be impacted by the availability of funding	

Delivery Programme for A Walking & Cycling City							
		Timescale*		1.91 also f			
Scheme	Description	Investigation	Delivery	Likely / Possible Risks	Comments		
Plan and associated delivery of improvements							

Priority 2. City Transit Corridors

Providing residents and visitors with a connected, modern mass transit network that provides a high-quality and faster alternative to the private car.

What will we do?

- a) Develop a comprehensive city-wide park & ride system
- b) Support quicker and more reliable bus and park & ride journeys by enabling services to have priority and the quickest journey times
- c) Promote key corridors as a focus for sustainable travel modes (bus, walking and cycling) within and beyond the City
- d) Support better integration and interchange between bus, rail, cycling, walking and car journeys
- e) Explore opportunities for future mass transit systems for the City
- f) Tackle pinch points on the network to ease congestion.

How does this help to address the big challenges?

Tackling the Climate Emergency

- Supports a major shift to sustainable/low carbon travel options
- Helps to reduce overall emission levels and the use of cleaner technologies
- Enables transport services to be more integrated & link with walking/cycling trips
- Encourages people to change their travel behaviour and choices

Making Hull a Great Place a live and work in and visit

- Helps to improve local air quality by getting people out of their cars
- Connects people to work, education, and leisure activities
- Makes the most of the City's radial routes and the physical space along these routes
- Helps connect new developments/communities to link with the wider City

Supporting Inclusive Economic Growth

- Allows more people to travel and commute to work by bus and by any future mass transit systems along the corridors
- Provides greater transport choice, particularly for residents who don't own a car
- Helps reduce congestion and travel delay
- Supports a cross boundary approach with corridors linking out to the wider functional economic and labour market area

Promoting Better Health & Well-Being

- Contributes to an age friendly City, helping people access opportunities
- Enables people to access health and community services and medical facilities

Background to Priority 2

- 5.10 Mass transit in Hull is currently made up of the network of bus and rail services that provides strategic and local access to residents and visitors to the city. The Humber Infrastructure Review (2019) highlights how mass transit for the Humber Region could in the future involve Bus Rapid Transit (BRT), tram and/or Autonomous Rapid Transit (ART).
- 5.11 Alongside more walking and cycling (priority1) the use of public transport needs to see significant increases. A major shift to sustainable travel and mobility is required to tackle Hull's climate emergency. Currently, 22% of Hull's emissions come from the transport sector. A full double decker bus can for example take up to 75 cars off the road.
- 5.12 Hull has high levels of congestion relative to the national average. According to DfT Road Congestion Statistics (2017), the national average delay on locally managed A roads is 46.9 seconds per vehicle per mile (all day). The average delay in Hull in 2017 is 86.8 spvpm (all day) up from 80.8spvpm in 2015, which, as well as being above the national average percentage, is also higher than other northern cities e.g. Leeds, impacting journey time, reliability, air quality and productivity costs. The TomTom traffic index (Dec 2017) identified that congestion was costing Hull businesses more than £16m each year.
- 5.13 Buses remain the most popular form of public transport. The 2011 Census highlights that 13% of people in Hull travelled to work by bus compared to 1% by rail. Bus passenger journeys in Hull have though reduced every year since 2010/11 from 24.7m to 20.5m in 2017/18 (17% reduction) and the bus punctuality data reveals a gradual worsening of services across the year.

Improving Mass Transit

- 5.14 The availability and attractiveness of sustainable travel choices, walking, cycling and public transport needs to be increased. Solutions also need to look beyond local authority boundaries.
- 5.15 New and enhanced **interchange facilities** have a key role to play as transport hubs. The Hull Paragon Interchange provides a key a transport interchange for rail, bus and coach services in the city centre. New mini-interchange facilities elsewhere in the City could provide important facilities for local communities and facilitate seamless interchange between more rapid and conventional bus services or onto an onward mode.
- 5.16 Park & Ride services can reduce congestion on routes within the City and keep down the amount of space to be given over to traffic and parking in the city centre. The commercially operated park and ride site at Priory Park in the west of the city comprises 581 spaces and 120 overflow spaces. Priory Park is well used but still only captures a small amount of traffic entering Hull from the A63. The vision is for new park and ride sites to be provided to the north and east of the city on sites just

- outside the Hull boundary within neighbouring East Riding of Yorkshire (at Dunswell roundabout and on land adjacent to A1033 Hedon Road).
- 5.17 **Strategic route corridors** are a key feature of Hull. They provide an important existing focus and future opportunity to support public transport. In certain locations, relatively competitive journey speeds and journey time reliability can be achieved. However, the network is generally characterised by discontinuity, whereby bus priority is provided only along certain sections of each corridor. This has a major impact on the attractiveness of the bus as a mode of transport, as the delays caused by even a small number of pinch points in specific places can have a significant negative impact on service performance and attractiveness.
- 5.18 The current layout of the Stoneferry Road Corridor is being upgraded including highway/congestion point, cycling and public transport improvements. Some radial route corridors offer the potential for radical redesign to enable dedicated cycle, bus or guided bus facilities arising from the wide central reserves and verges. There is opportunity for enhanced rail travel into Hull with an existing rail links running alongside the A63 and from Cottingham/Beverley. Improving stations and interchange facilities in the East Riding will help improve travel to and from Hull.

Delivery Programme for City Transit Corridors							
Scheme	Description	Times	cale*	Likely /			
Scheme	Description	Investigation	Delivery	Possible Risks	Comments		
Review of Bus Priorities	Review of existing bus priority measures within strategic corridors	Short		N/A			
Consideration of the introduction of mini interchanges at district centres	Introduction of facilities to assist in mode transfer and general connectivity in the sustainable network	Ongoing		Status and location of sites (Planning Definition) Funding Short Falls			
Improve main radial corridors for sustainable transport	Improvements for sustainable modes (Bus, Cycle and Walk) Address pinch points on the network	Ongoing		Funding availability Land availability Design resources Public acceptance			
Stoneferry Corridor Improvement Scheme	Capacity improvements and cycle facilities	Ongoing Ongoing		Unforeseen ground conditions	Works planned to be completed by summer 2022		
Strategic Route corridors	Addressing pinch points at key locations	Ongoing	Medium	Availability of funding. Road space available			

Northern Park & Ride Feasibility Study	Work to assess the viability of introducing a P&R in the north of the City	Short	Short		Dependant on feasibility and future funding
Bus Rapid Transit Feasibility Study	Investigate the opportunity to provide a bus rapid transit from the north of the City to the City Centre	Complete	Medium	Appropriate route identified No journey time benefits Land availability Availability of funding Public Objection	Results of the feasibility study will determine the way forward.
Delivery of Bus Rapid Transit subject to feasibility outcomes	Design and delivery of scheme	short	medium	Appropriate route identified No journey time benefits Land availability Availability of funding Public objection	Dependant on feasibility and future funding availability

Priority 3. Strategic Connectivity

What will we do?

- Support coastal and short sea shipping services and the greater use of inland waterways
- b) Continue to improve road, rail and waterway (multi-modal) links to the port including the A63/Castle Street Improvement
- c) Promote & support the improvement of Hull's rail links to major towns and cities across the North with further enhancements to rail frequency, capacity & journey times
- d) Promote & support the extensions/completion of the TransPennine Route Upgrade with electrification to Hull
- e) Promote & support Northern Powerhouse Rail proposals to increase frequency and line speed so as to provide high quality and resilient rail commuter services
- f) Promote & support the strengthen north-south road connections in the East of England including across the Humber Bridge

How does this address the big challenges?

Tackling the Climate Emergency

- Make the best use of rail and waterways to move freight
- Increase the use of rail for moving people and goods
- Supports the less polluting and more energy efficient water-based movement of freight, reducing the reliance on lorries

Making Hull a Great Place a live and work in and visit

- Enabling more people to work and visit the City
- Provide a greater pool of jobs for local residents
- Make the most of the City's distinctive maritime heritage

Supporting Inclusive Economic Growth

 Help fulfil Hull's role as a gateway to Europe and the world through the port complex as a key competitive advantage

- Make the most of the port of Hull as a local and national asset
- Enable and attract more visitors to come to Hull and the wider region
- Widen labour markets and enable businesses to grow their market areas with better connections to other towns, cities and economic centres

Promoting Better Health & Well-Being

• Using the City's transport assets to help create more employment opportunities

Background to Priority 3

- 5.19 The UK Industrial Strategy aims to boost productivity by creating good jobs & increasing the earning power of people throughout the UK with investment in skills, industries and infrastructure. The Clean Growth Strategy emphasises the need to grow the national income while cutting greenhouse gas emissions and to ensure an affordable energy supply for businesses and consumers The Northern Powerhouse provides a vison for a super-connected, globally-competitive northern economy with transport infrastructure to improve connections between and within the North's towns, cities and counties. The Northern Powerhouse Independent Economic Review (NPIER) has identified the lack of agglomeration, poor connectivity and transport links as key factors (among others) that hinder the economic development of the North. Improved connectivity between key settlements can help to promote a higher employment rate and higher productivity.
- 5.20 Transport for the North (TfN) Strategic Transport Plan (STP) includes a vision for "a thriving North of England, where world class transport supports sustainable economic growth, excellent quality of life and improved opportunities for all". TfN's investment programme in transport that could deliver a £100 billion boost to the north's economy and create 850,000 jobs. Central and Southern Pennine economic corridors in the STP place a key emphasis on improving east-west connectivity and improving connections to the Humber ports.
- 5.21 The Humber Infrastructure Review (2019) identifies that high-quality infrastructure is needed to support the ambitious plans for growth. The review promotes the key role of Hull as an internationally competitive regional city. It highlights that Hull does not have the kind of transport links that are expected of a major city with a notable absence of motorways, expressways and a ring road. Improved connectivity between the Humber ports and surrounding hinterland is critical in maximising the opportunities arising from the ports and logistics sector. The Humber Spatial Plan sets out that the Hull A63 Castle Street Improvements, Hull to Selby Rail Electrification and Park and Ride Facilities North and East Hull are key to supporting economic growth.
- 5.22 The Highways England improvements to A63 Castle Street aim to address how the Mytongate junction restricts the flow of traffic along the A63 to the port, causing congestion, and how the A63 acts as a barrier between the city centre to the north and the retail and dock areas to the south. A new cycle and pedestrian bridge has been installed and is due to open in 2020 linking the marina and the city centre.

5.23 Transport by inland waterway, short-sea, and coastal shipping is taking on an increasingly important role in the development of intermodal freight operations. These modes offer great potential for transferring freight traffic away from overcrowded road networks. Waterways are currently under-utilised and offer the potential for an environmentally beneficial transport alternative.

Delivery Programme for Strategic Connectivity						
Cohomo	Deceriation	Timescale*		Likely / Possible		
Scheme	Description	Investigation	Delivery	Risks	Comments	
A63 Castle Street Improvement	Grade separation of Castle Street to assist regeneration and access to Port of Hull and improved connectivity between city centre and waterfront	Short	Medium	Cost increases Civil Engineering Land availability Environmental impact Construction impacts Order confirmation	 Secretary of State Decision end of March 2020 Scheme Delivery March 2025 	
A1165 Great Union Street Improvement Feasibility Study	Completion of eastern side of orbital box to provide improved capacity	Short	Medium / Long	Funding Land availability Listed buildings		
Permanent Coach Parking facility	Investigate the provision of a permanent coach park	Short	Medium / long	Availability of suitable location Availability of funding		
Transport for the North	Rail Enhancements (Service provision, Rolling Stock etc)	Short	Medium			
Lobbying & Partner Working	Rail Electrification (Selby to Hull)	Long	Long			
Rail Freight Enhancements	Rail Gauge Enhancements	Long	Long	Funding Availability Land availability	For Network Rail to deliver	
	Electrification		J		Rail to deliver	
Sustainable shipping Smart shipping and logistics flows	Using digital technology could be targeted to align with boats docking in the region's ports. This would change dual carriage ways to being freight lanes only allowing smooth transportation of goods from the port					

	and onto the wider motorway network.				
New Sculcoates Bridge (River Hull)	Replacement for existing bridge	Long	Long	Funding Land availability Impact on historic structure	
Bridge Improvement Strategy		Ongoing	Long	Funding availability	
A63 Relief Road		Long	Long		
Kingswood Junctions Improvements	Junction improvements identified as part of the adopted Kingswood AAP	ongoing	Short / medium	Availability of Funding	
Pinch Point scheme Feasibility	Investigation and design	Short	Medium / Long	Funding Availability Land availability	Key locations identified

Priority 4. Smart Green City

What will we do?

- a) Promote the increased use of zero carbon emission transport through the use of electric and hydrogen powered vehicles
- b) Support the move way from diesel and petrol, and towards electric vehicles
- c) Deliver an electric vehicle infrastructure for the City including a public electric charging infrastructure and for properties without off street parking
- d) Support the development of hydrogen transport infrastructure for road, rail and shipping
- e) Support the use of intelligent systems including real time information and variable message systems
- f) Provide resilient infrastructure through new investment projects and asset management practices
- g) Support safety improvements to make the transport network safer for all road and transports users

How does this address the big challenges?

Tackling the Climate Emergency

- Enable residents and visitors to switch to lower emission vehicles and increase take up rates for electric vehicles
- Provide a safer network which encourages more pedestrians and cyclists
- Make more efficient and Intelligent use of transport networks to help reduce emissions

 Help people change their travel habits through live and better information provision

Making Hull a Great Place a live and work in and visit

- Use technology to make best use of the existing highway network, rather than building new roads that would generate more traffic
- Providing residents and households with the infrastructure or opportunities to use new and emerging technology

Supporting Inclusive Economic Growth

- Deliver economic benefits in terms of new jobs, economic savings and market opportunities by taking a lead role in reducing carbon emissions
- Benefit from international collaboration related to ports and shipping

Promoting Better Health & Well-Being

 Provide the infrastructure to enable the required carbon neutral step change will help support healthier lives and better places

Background to Priority 4

- 5.24 A smart city is a place where traditional networks and services are made more efficient with the use of digital and telecommunication technologies for the benefit of its inhabitants and business. Smarter urban transport networks can enable better resource use and less emissions. The rapid rate of change in digital technology and innovation is creating new opportunities to promote sustainable travel choices, make journey and travel planning easier and improve safety.
- 5.25 The Climate Emergency Declaration 21st (2019) resolves Hull City Council to do everything within its power to make Hull carbon neutral by 2030, taking into account both production and consumption emissions. Through the 2015 Paris Agreement 195 countries (representing over 90% of global economic activity) agreed stretching national targets to keep the global temperature rise below 2 degrees. The United Nations Inter-Governmental Panel on Climate Change has said that for the world to meet the aims within the Paris Agreement of keeping global warming "well below 2°c by 2050" that global emissions need to be at least half from where they are now in the next ten years. The UK in 2019 committed to bring all greenhouse gas emissions to net zero by 2050, compared with the previous target of at least 80% reduction from 1990 levels. Hull's vision is to become a leading carbon neutral city by 2030.
- 5.26 The national Road to Zero strategy sets out the Government's plans to end the sale of new conventional petrol and diesel cars and vans by 2040. The Humber Local Industrial Strategy, June 2019 Prospectus, targets the Humber being a net-zero carbon industrial economy by 2040 and aims for the Humber Estuary to be a global leader in clean energy generation and create a globally renowned hub for sustainable, shipping and logistics.
- 5.27 Opportunities for providing new charging infrastructure for homes and businesses will need to be explored and put in place. This will require significant investment in charging points as well as strengthening the capacity of the electricity network to provide the power requirements. New policy, funding and business models will need to be developed to address this situation.

- 5.28 The decarbonisation of shipping and port activity is a key challenge and opportunity for Hull as a major maritime city. Shipping decarbonisation is addressed through international agreement but there is the opportunity to work with international partner ports in the North Sea to develop collective approaches to support decarbonisation of ports and shipping. New commercially available carbon neutral solutions for heavy goods vehicles, freight trains or shipping need to be developed and development solutions include hydrogen fuel cell technology and in the short-term low carbon fuels.
- 5.29 Hull is flat and low lying over 90% of the city is located in areas of high flood risk. The City has had direct experience of extreme weather patterns and rising sea levels in recent years thousands of properties were flooded from excess surface water in the summer of 2007 and hundreds of properties were flooded from a tidal surge in December 2013. The City's infrastructure needs to be designed and adapted to be resilient to climate change and extreme weather events.

Delivery Programme for a Smart Green City							
		Time	escale*	Likely /			
Scheme	Description	Investigat ion	Delivery	Possible Risks	Comments		
Feasibility into Charging Networks	To review options / feasibility of different forms of charging network to cater for cars / buses and bikes	Short	Short / Medium	Land not available Funding not available Power Infrastructure not able to support proposals			
ITS / Traffic Signals Improvement Strategy		Ongoing	Medium				
Travel Planning	Workplace Residential School		Short/medi um	Limited resources available	Schools and business engagement is priority		
Asset Management Improvement Programme	Maintenance of Council Assets i.e. Carriageways, Footpaths, Street Lighting and Bridges	Ongoing	Funding availability				
Real Time Public Transport Passenger Information	Electronic signing and information at bus stops	Ongoing	Availability of funding				

	Mobile internet – Apps for Iphones and other smart phones				
Variable Message System (City Wide)	Car Park guidance and strategic route information	Ongoing		Ability to reach agreement with National Highways	
Road Safety	Local Area Safety Schemes, Safety Education and publicity	Complete subject to consultati on	Short		