

# Mobility Strategy for Milton Keynes 2018-2036 (LTP4)

## Transport Infrastructure Delivery Plan

October 2019



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# EXECUTIVE SUMMARY

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Milton Keynes is one of the UK's fastest growing and most productive cities. Strategically located at the heart of the Cambridge-Milton Keynes-Oxford growth arc, Milton Keynes has established itself as an attractive location to live and work. Part of its success is due to its original development principles of generous green spaces, low density housing estates and a grid-road network providing easy access around the city.

However, the grid road network in Milton Keynes along with its rural sub-region has contributed to a reliance on car use for travel within and into the Borough. The dispersed residential and employment locations within the Borough have resulted in difficulties in providing attractive and reliable public transport. The established segregated Redway pedestrian and cycle route network has also struggled to encourage walking and cycling due to concerns over personal safety, route directness and the ease of private car travel for short journeys.

To support continuing population and economic development and the needs of existing residents, the draft Milton Keynes Council Local Plan (Plan:MK) identifies a need to deliver at least 26,500 new dwellings and 28,000-32,000 new jobs within the Borough over the course of the plan period (2016 to 2031). The majority of the planned growth is focused in strategic urban extensions of Milton Keynes. In the longer term it is predicted that Milton Keynes will potentially grow to a city with a population of 500,000 by 2050.

Transport improvements are fundamental to achieving sustainable growth in Milton Keynes, tackling inequality, improving health and supporting business and community needs. Improving walking, cycling and public transport will enable existing and future residents, visitors and employees to choose cleaner and healthier ways to travel.

Milton Keynes Councils Mobility Strategy 2018-2036 (LTP4) sets out the strategic framework for the Milton Keynes transport system along with a series of interventions needed to achieve the growth ambitions outlined in Plan:MK and support the longer-term growth planned by MK Futures 2050. This Transport Infrastructure Delivery Plan (TIDP) builds on the Mobility Strategy and sets out the transport vision for Milton Keynes, highlighting the challenges and opportunities along with the transport infrastructure that needs to be delivered within the short and medium term to enable growth to come forward sustainably as well as supporting the existing local communities.

This transport infrastructure presented in the TIDP has been sifted from an initial list of schemes which have been subject to stakeholder challenge and appraisal and prioritisation using a bespoke Strategic Assessment tool and a Department for Transport's (DfT) based Early Assessment and Sifting Tool (EAST). An Action Plan has then been produced to take forward the recommended options along with a series of next steps.

# 1 INTRODUCTION

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## 1.1 INTRODUCTION

- 1.1.1. This Transport Infrastructure Delivery Plan (TIDP) sets out the objectives and short to medium term transport infrastructure required to support existing and new communities in Milton Keynes within the Local Plan (Plan:MK) period to 2031.

## 1.2 FUTURE READY

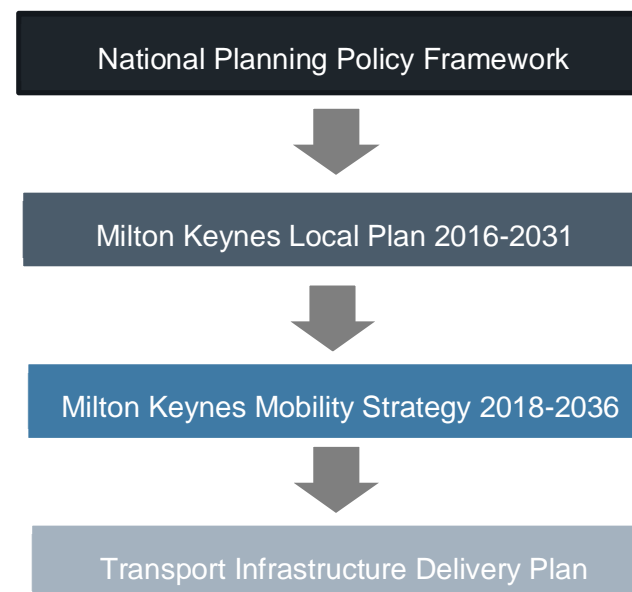
- 1.2.1. The TIDP also recognises that transportation is at the cusp of significant change due to the digital and technological revolution, resulting in uncertainty concerning the future of transport and in particular the demand for car travel. The transport infrastructure identified in this TIDP has therefore been subjected to resilience testing against a series of potential future scenarios.

## 1.3 SCOPE

- 1.3.1. The TIDP focuses on the infrastructure requirements of the urban area of Milton Keynes due to the location of planned growth to 2031, but recognises the importance of the local rural communities and the wider sub-region.
- 1.3.2. The development of this TIDP was led by WSP and has been produced through engagement with a range of stakeholders.

## 1.4 PLANNING POLICY FRAMEWORK

- 1.4.1. This TIDP has been developed to support the vision, strategic objectives and planned growth set out in Plan:MK Local Plan (2016-2031) and complement the Mobility Strategy for Milton Keynes (2018-2036).
- 1.4.2. The TIDP sits alongside the Plan:MK Infrastructure Delivery Plan, which sets out wider infrastructure requirements, including site-specific transport infrastructure to deliver Plan:MK



## 1.5 THE VISION

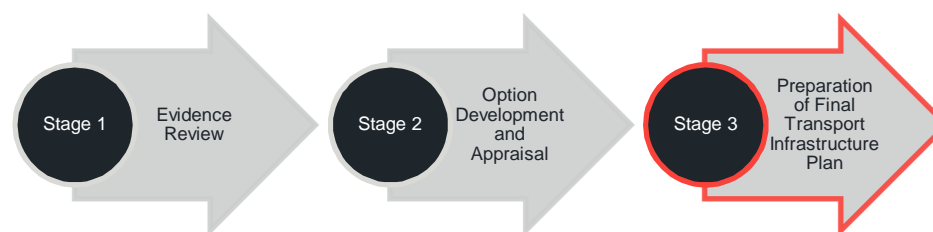
- 1.5.1. The Plan:MK transport vision for Milton Keynes is for a transport system that makes its facilities easily accessible to all by using smart methods of travel that combine effective use of road and parking space with improved personal mobility.
- 1.5.2. A good transport system connects people with jobs, businesses with their local, regional and global markets, provides access to services, education, leisure opportunities and reduces social exclusion.
- 1.5.3. Current travel patterns in Milton Keynes are unsustainable against a backdrop of high levels of population and employment growth planned in Milton Keynes and its sub-region.
- 1.5.4. To achieve the Plan:MK vision and support the substantial levels of growth planned for in Milton Keynes, there needs to be a continual transition away from the traditional private car dominated transport system that has served the Borough well in the past to a transport network that enables behavioural change by offering attractive modal choice for all journeys.

## 1.6 PURPOSE OF THE TIDP

- 1.6.1. The purpose of this TIDP is to set out the transport infrastructure required to support planned growth in Milton Keynes. The plan sets out prioritised transport infrastructure schemes by spatial area, with an outline Action Plan and set of policy enablers. The identified infrastructure, actions and policies will provide a better service to residents, business and visitors to Milton Keynes.
- 1.6.2. This TIDP is a living document and will be regularly reviewed to ensure the prioritised transport infrastructure supports emerging transport technologies and the MK Futures 2050 workstreams.

## 1.7 TIDP DEVELOPMENT

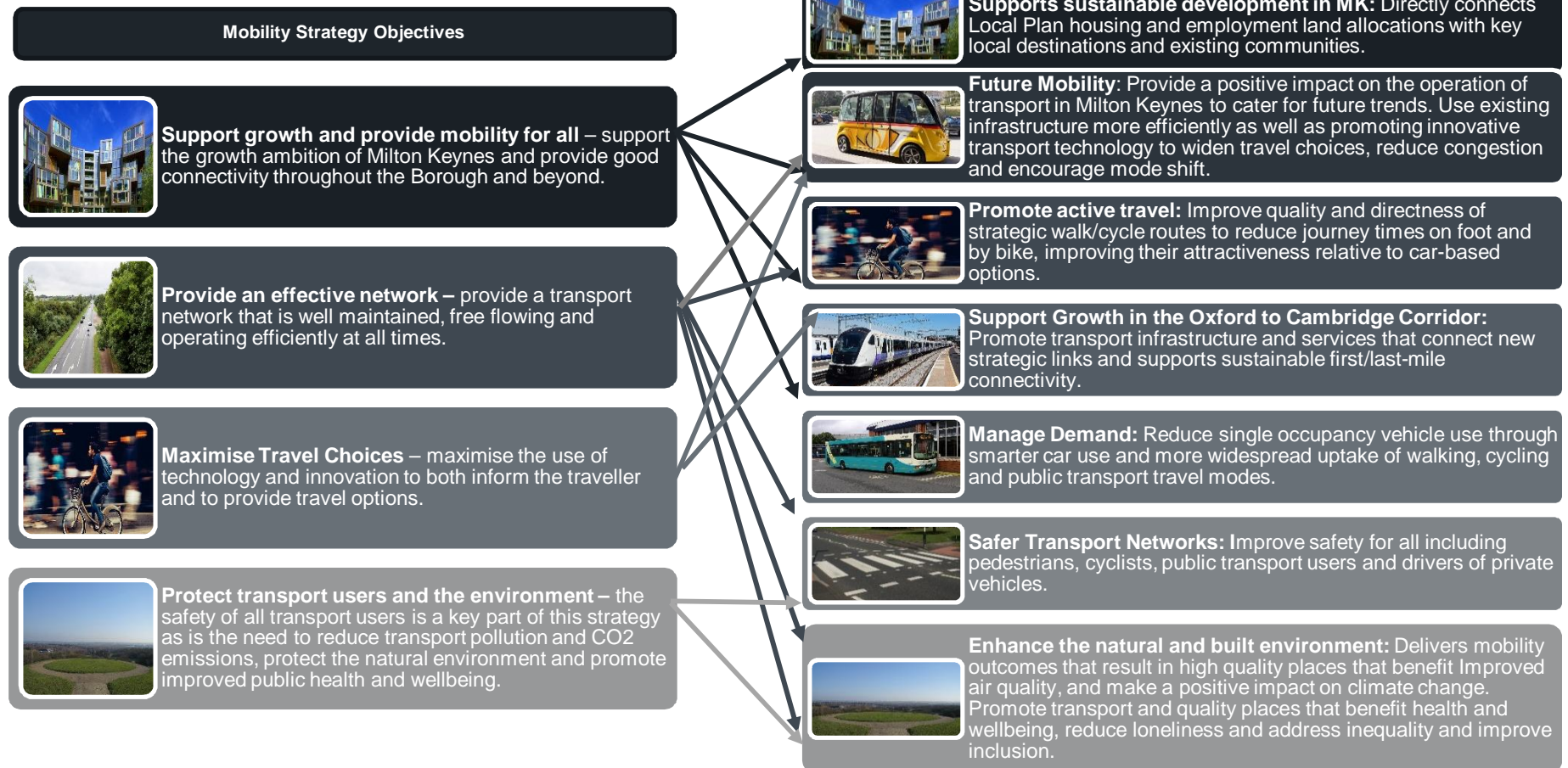
- 1.7.1. In developing this TIDP, there has been an evidence base review (Stage 1), stakeholder engagement, transport infrastructure option development and appraisal (Stage 2) and production of the TIDP (Stage 3).





## 2 OBJECTIVES

2.1.1. The overall objectives of the transport infrastructure identified in this TIDP are set out below. This infrastructure objectives are linked to the Mobility Strategy objectives to ensure an integrated approach to infrastructure delivery is adopted in Milton Keynes.



## 3 TRANSPORT CHALLENGES AND OPPORTUNITIES

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### 3.1 MILTON KEYNES AS A PLACE TO LIVE AND WORK

- 3.1.1. Over the past 50 years, Milton Keynes has established itself as an attractive place to live and work. It has become the service centre of its sub-region and is strategically located at the heart of the Cambridge-Milton Keynes-Oxford growth arc. Part of its attraction is its original development principles of open green spaces, low density built-form connected by a grid road network and segregated Redway pedestrian and cycle network.



#### 3.1.2 GREEN INFRASTRUCTURE STRATEGY

The strategy combines spatial information on the network of green infrastructure across the borough and how this network links into neighbouring areas to help establish an interconnected system of strategic, landscape scale

green corridors, as well as more granular opportunities to enhance green space management across the city, including promoting active travel within Milton Keynes.

<https://www.milton-keynes.gov.uk/planning-and-building/planning-policy/green-infrastructure-strategy>

### 3.2 MILTON KEYNES WITHIN THE STRATEGIC CAMBRIDGE-MILTON KEYNES-OXFORD ARC

- 3.2.1. Milton Keynes has a key role to play in maximising the potential of the Cambridge-Milton Keynes-Oxford arc. The National Infrastructure Commission (NIC) identify that Milton Keynes is amongst the UK's most productive cities in the arc that requires investment in its continued growth to support the ambitions of the arc and the UK.



- 3.2.2. Transport infrastructure is a vital part of the sub-regional investment package including the delivery of East-West Rail and the proposed Oxford-Cambridge Expressway. Both these schemes will substantially enhance east-west connectivity across the arc, providing new opportunities for people to live and work in Milton Keynes. The transport challenge is to maximise the benefits of these strategic schemes for inclusive and sustainable growth in Milton Keynes



### 3.3 CURRENT TRANSPORT PROVISION

#### ACTIVE TRAVEL

- 3.3.1. Milton Keynes is well served by the Redway segregated network of pedestrian and cycle routes. However, the Redway network has not proved to be as popular as originally envisaged due to concerns over personal safety, wayfinding, maintenance and the ease of local travel by private car.
- 3.3.2. The Redways were primarily designed as leisure routes and therefore lack the directness to make them attractive to commuters. This is being addressed by the introduction of Redway Super Routes, however gaps in the network remains an issue along with ensuring connectivity to the planned strategic growth sites.



**Challenge 1:** Encouraging active and healthy travel and improved local connectivity

#### PUBLIC TRANSPORT

- 3.3.3. Bus services have struggled to operate on a commercially viable basis due to the low density suburban residential developments, resulting in long journey times and indirect routes. Journey time reliability and indirect routing means bus routes have struggled to compete with the ease and convenience of the private car.
- 3.3.4. Milton Keynes is served by the West Coast Main Line and the Marston Vale Line. The main stations in Milton

Keynes have experienced high levels of patronage growth and the challenge is to ensure users can access the stations by a range of sustainable modes.

- 3.3.5. Local rail connectivity is impacted by the lack of direct rail connection between the Marston Vale line and West Coast Mail line, with interchange required at Bletchley to travel between Bedford and Milton Keynes.



**Challenge 2:** Making better use of public transport

#### ROAD

- 3.3.6. The unique single and dual carriageway grid road system with national speed limits provides good network performance due to its high capacity and routing option resilience.
- 3.3.7. However, traffic volumes have increased over time resulting in pinch point congestion at a number of junctions on the local and strategic road network.
- 3.3.8. Increased travel demand by private car will continue to have an impact on congestion and thus impact on public transport journey times and speeds in the future.



**Challenge 3:** Managing performance of the highway network

## 3.4 CURRENT TRIP MAKING PATTERNS

- 3.4.1. The Borough of Milton Keynes has a high level of resident commuting self-containment. The 2011 Census identified that 74% of Milton Keynes residents live and work within the Borough.
- 3.4.2. Outside of Milton Keynes the main employment catchment stretches north into Northamptonshire, east towards Bedford, south towards Luton and Aylesbury and west towards Buckingham and Brackley.
- 3.4.3. Within Milton Keynes 15% of residents travel less than 2km to work (reasonable walking distances) and 40% travel less than 5km (reasonable cycling distance).
- 3.4.4. Therefore, there are substantial opportunities to improve local trip making within Milton Keynes by sustainable modes of travel.



### Challenge 4: Behavioural Change and Travel Demand Management

## 3.5 SUPPORTING PLANNED GROWTH

### LOCAL PLANNED GROWTH

- 3.5.1. Plan:MK sets out plans to accommodate at least 26,500 new dwellings and 28,000-32,000 new jobs within the district over the plan period (2016 to 2031).

- 3.5.2. Housing growth will be focused on sites in the eastern and western expansion areas, Central Milton Keynes, build out of existing city grid squares and the Strategic Land Allocation in the south east of the city. In addition, there are new allocations at Eaton Leys and an urban extension at South East Milton Keynes.
- 3.5.3. An allocation of Milton Keynes East has also been made in Plan:MK, with its delivery contingent on the funding of necessary strategic infrastructure (including highways and transport infrastructure) to enable delivery of the site prior to 2031.
- 3.5.4. It is acknowledged that not all growth in the area will be within the Milton Keynes boundary, and we will look at the developments in the surrounding areas and the impacts of these on the transport network.

### COMMITTED INFRASTRUCTURE IMPROVEMENTS

- 3.5.5. Milton Keynes are implementing a number of committed transport schemes including:
  - i Redway Super Routes
  - i A421 Dualling (Eagle Farm roundabout to Junction 13 M1)
  - i Broughton Brook Crossing and Fen Street completion
  - i Calverton Lane/Fairways Junction consolidation;
  - i H10 Extension; and
  - i V2 Extension.

- 3.5.6. On the strategic road network owned and operated by Highways England, the M1 Junctions 13 to 19 are being upgraded to a SMART Motorway.

### **MK FUTURE 2050 AND SUB-REGIONAL GROWTH ASPIRATIONS**

- 3.5.7. The NIC identify that the Cambridge-Milton Keynes-Oxford arc has the potential to accommodate one million additional homes and jobs by 2050. To achieve this aspiration would require a substantial increase in the allocation and delivery of housing and jobs, supported by major transport infrastructure investment including East West Rail and the Oxford to Cambridge Expressway.
- 3.5.8. The MK Future 2050 programme has produced a long-term vision for the Borough which includes planning for a population of 500,000. Workstreams being progressed by the MK 2050 programme include assessing the potential for Mass Rapid Transit to support the longer-term growth to 2050.
- 3.5.9. To ensure the maximum benefit is gained from the NIC's aspirational and transformational growth plans, longer term transport solutions will need to build upon the short-medium term infrastructure schemes identified in this TIDP.
- 3.5.10. Further work will be required with local and strategic stakeholders including Highways England, Network Rail and England's Economic Heartland to ensure Milton Keynes existing and future residents have access to a transport system that provides mobility for all.

## **3.6 POTENTIAL DISRUPTIVE IMPACT OF TRANSPORT TECHNOLOGY**

- 3.6.1. A number of future transport trends including shared mobility, Mobility as a Service (MaaS), electric, connected and autonomous vehicles could have a transformational impact on the demand for car travel, road infrastructure and place making in Milton Keynes.
- 3.6.2. Due to the uncertainties in the availability, applicability and uptake of these new technologies it is very difficult to predict what the transport network and car travel demand will look like by 2031 and beyond to 2050. Therefore, the infrastructure proposed in this TIDP has been subjected to resilience testing against three possible future scenarios.



### **Challenge 5: Embracing Innovation**



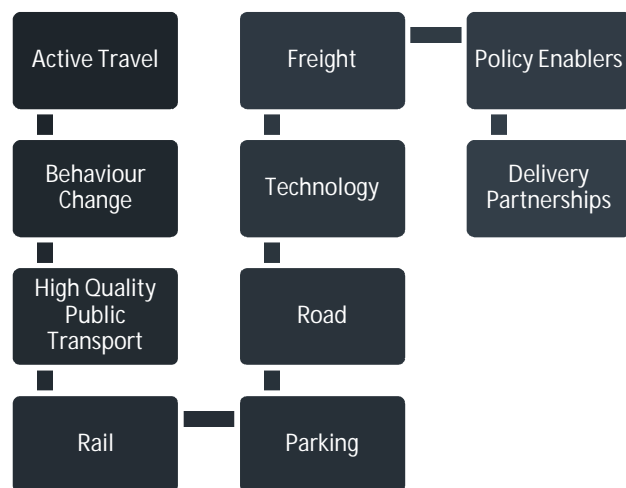
## **3.7 ACCESSIBILITY BY DESIGN**

- 3.7.1. Supporting alternative modes to car use will support our aim of having due regard to the needs of older people, people with a disability and families with small children. The quality and breadth of transport options have a strong influence on the quality of people's lives. Decisions regarding the design, management and implementation of this plan can enhance or restrict opportunity, independence and a sense of belonging.
- 3.7.2. Although transport accessibility has improved in the last decade, inequalities remain in the access to transport. In the future, local demographic changes suggest that the number of people affected by mobility issues will significantly increase. However, getting around is more than accessible buses and trains, the challenge is the creation of a well-designed and well-managed system. One that links people with employment, social venues, but at the same time is affordable and easy to use.
- 3.7.3. This plan, and the strategy upon which it is based, will promote such an inclusive transport design, supporting people to get around and moving away from the need for expensive or unsustainable alternatives.

## 4 PRIORITISED TRANSPORT INFRASTRUCTURE SCHEMES

### 4.1 INITIAL TRANSPORT INFRASTRUCTURE SCHEME DEVELOPMENT

- 4.1.1. The initial short, medium and long-term transport infrastructure investment schemes have been developed from the evidence base including the Mobility Strategy together with feedback from stakeholders.
- 4.1.2. No one type of transport infrastructure scheme is considered to be capable of solving all the identified issues or achieve all the Mobility Strategy objectives. Therefore, a number of overarching transport themes that are complementary to each other have been used to group the initial schemes. The transport themes are:



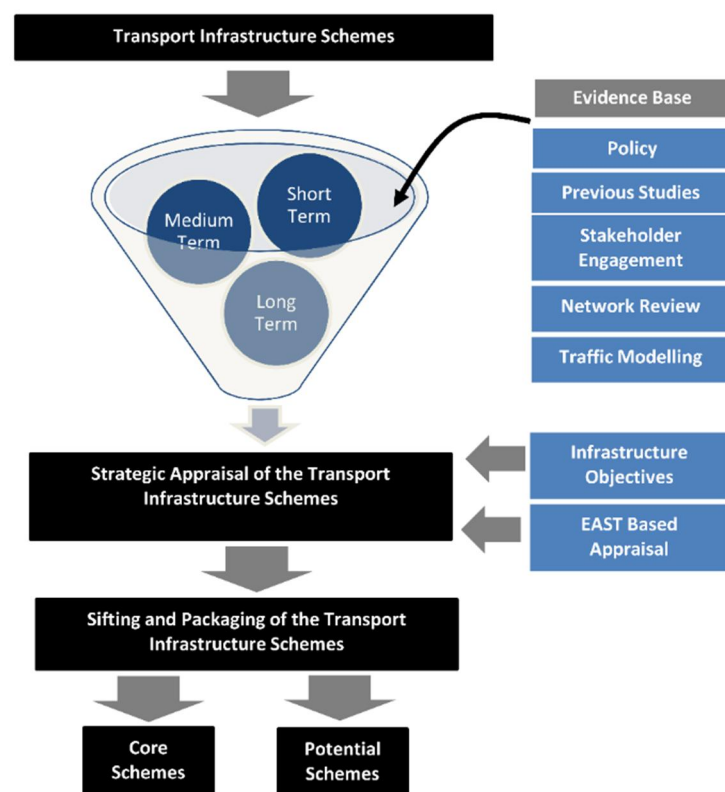
- 4.1.3. In total 103 schemes were identified with a breakdown of the initial schemes provided below:

- 18 No. Active Travel schemes;
- 13 No. Behaviour Change schemes;
- 16 No. High Quality Public Transport schemes;
- 11 No. Rail schemes;
- 8 No. Parking schemes
- 17 No. Road schemes;
- 13 No. Technology schemes
- 2 No. Policy schemes;
- 2 No. Delivery Partnership schemes; and
- 3 No Freight schemes.

### 4.2 SCHEME APPRAISAL

- 4.2.1. An appraisal has been undertaken to generate a prioritised set of short, medium and longer-term schemes presented in this TIDP.
- 4.2.2. The 103 schemes have been appraised using a bespoke Multi Criteria Appraisal Framework (MCAF) that assesses the likely impact of each option against the seven study specific scheme objectives and relevant strategic themes from the DfT Early Assessment and Sifting Tool (EAST).
- 4.2.3. Following the appraisal, the schemes have been reviewed and conflicting schemes removed and complimentary schemes packaged together.

- 4.2.4. Schemes have also been assigned as a core or potential transport scheme. Core schemes are considered essential to help support the objectives of the Mobility Strategy. Potential options are considered opportunities that merit further consideration and development. Some of the schemes have the potential to be considered more controversial / transformational than others, and therefore require careful consideration and consultation.



## 4.3 STAKEHOLDER ENGAGEMENT

- 4.3.1. Stakeholder engagement has helped shape the final transport schemes identified in the TIDP. The consultation that has informed this TIDP includes:
- Stakeholder Workshop October 2018;
  - Youth Council Workshop December 2018
  - Stakeholder Workshop January 2019
  - Milton Keynes Council Officer Meetings
- 4.3.2. Stakeholder consultation has helped to provide the evidence base and issues with travel and transport in Milton Keynes and what the priorities for investment should be.
- 4.3.3. The main perceived transport challenges, identified through consultation, are:
- Lack of alternatives to the car (modal choice);
  - Lack of sustainable transport infrastructure; and
  - Congestion.
- 4.3.4. The main transport investment priorities supported with the consultation were identified as:
- Promoting modal choice to encourage reduced private car usage;
  - Be prepared for and embrace future transport technology and mobility trends; and
  - Integrate with the wider Oxford to Cambridge strategic transport schemes (East West Rail and the Expressway).



## 5 AN INTEGRATED TRANSPORT INFRASTRUCTURE DELIVERY PLAN

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5.1.1. This TIDP sets out a robust package of transport investment schemes to support planned growth to 2031. This section summarises how the core schemes will contribute towards addressing the main transport challenges throughout the plan period.

5.1.2. Collectively the package of core measures will support the objectives of the Mobility Strategy including supporting the delivery of new homes and jobs, provided an effective network that maximises travel choices, encourages active travel, protects all transport users and reducing transport pollution.

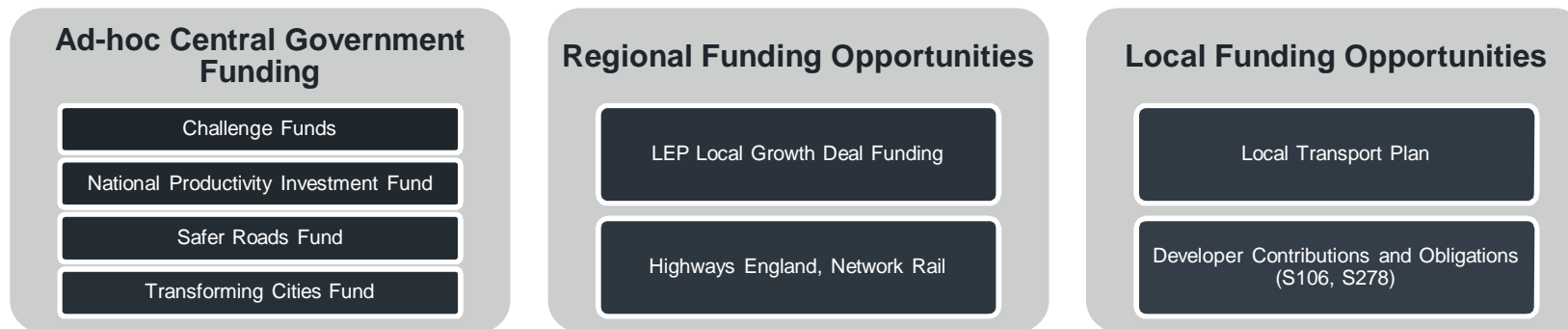
### 5.2 THE SPATIAL AREAS

5.2.1. To present the schemes, a series of spatial areas have been identified and assigned to each scheme. There is no one size fits all approach to delivering transport improvements in Milton Keynes. A scheme that works well in one area of the Borough may not be appropriate in another area. The schemes have therefore been tailored for different areas of the Borough. Five distinct spatial areas have been identified where schemes can be delivered. The five spatial areas are:

- i **Central Milton Keynes** – Transport infrastructure improvements located in the business and retail centre, bounded by the A5 and the West Coast Mainline, A509 Portway, including Campbell Park, using the Grand Union Canal as the eastern border and H6 Childs Way;
- i **Urban Milton Keynes** – Transport infrastructure improvements within the wider built-up area of Milton Keynes;
- i **Rural Milton Keynes** – Transport infrastructure improvements supporting the rural areas of the Borough;
- i **Borough wide** – Transport infrastructure improvements that provide connectivity and across the Borough; and
- i **Strategic** – Sub-regional schemes that will impact on strategic travel movement patterns.

## 5.3 INFRASTRUCTURE FUNDING

- 5.3.1. The delivery of the package of core transport schemes identified in the TIDP will be reliant on public and private organisations and stakeholders working together to achieve the vision and Mobility Strategy objectives. It will require collaboration between Highways England, Network Rail, developers, transport operators and other stakeholders to achieve success.
- 5.3.2. Achieving an efficient and safe transport system that meets to mobility needs of all existing and future residents and employees will require a substantial funding package. Funding of the identified schemes can be delivered through a range of public and private investment.



## 5.4 INFRASTRUCTURE DELIVERY

- 5.4.1. To deliver the core package of measures an infrastructure delivery working group should be set-up to include relevant stakeholders to co-ordinate the scheme development, appraisal, funding and implementation.
- 5.4.2. The schemes identified in this TIDP are at a concept stage of development. The concept schemes will need to be subjected to feasibility, business case, funding, design, consultation and programming. Chapter 6 provides a summary of the proposed schemes for the periods 2019-2031.

## 6 TRANSPORT INFRASTRUCTURE AND DELIVERY PLAN

6.1.1. The section sets out the package of local and strategic transport infrastructure to support planned growth within Milton Keynes over the next 10-15 years as well as the longer-term growth of the city to 2050. This does not include the site-specific transport infrastructure requirements that are set out in the Plan:MK Infrastructure Delivery Plan.

6.1.2. The identified investment options are presented by spatial area and are at a concept stage of development. Scheme development will need to take place to ensure to identified concepts align with policy priorities, provide value for money, deliverability and take account of opportunities for funding that may become available.

Key	
Outline Cost	£ - Up to £1 million ££ - £1-5 million £££ - £5-10 million ££££ - £10-£50 million ££££+ - Greater than £50 million
Priority	Priority ranking is based on the MCAF scoring for each spatial area: 1: High Priority 2: Desirable 3: Low Priority
Phasing Period	Phasing refers to when the infrastructure could be operational Short – 1 to 5 years Medium – 5 to 10 years Long – Greater than 10 years
Supporting Actions	Summarises the main initial actions, interventions and policies that need to take place to enable the concept scheme to be developed.
Funding	Sets out potential sources of funding that may become available.

## 6.2 CENTRAL MILTON KEYNES INFRASTRUCTURE

### CORE TRANSPORT STRATEGY OPTIONS

Ref	Name	Description	Phasing	Priority	Outline Cost	Supporting Actions	Funding Options
<b>Encouraging Active and Healthy Travel and Improved Local Connectivity</b>							
59	High Quality Destination Cycle Parking	Implementation of secure, covered, high-quality cycle parking at key destinations including: regional centres; CMK; schools; nurseries and employment sites.	Short	1	£	<ul style="list-style-type: none"> <li>Site identification</li> <li>Develop detailed schemes</li> </ul>	<ul style="list-style-type: none"> <li>Milton Keynes Council</li> <li>Central Govt Funding Bids</li> <li>S106 Funding</li> </ul>
1	Redway Expansion within CMK	Expansion of the existing Redway cycle routes into CMK. The extensions would provide direct, high-quality segregated cycle routes and can be packaged with access to High-Quality Destination Cycle Parking (Option 59).	Short	1	£££	<ul style="list-style-type: none"> <li>Feasibility Study – to identify route options, feasibility and costs</li> <li>Public Consultation</li> <li>Option Selection</li> <li>Detailed Design</li> <li>MK Walking and Cycling Strategy</li> </ul>	<ul style="list-style-type: none"> <li>Milton Keynes Council</li> <li>SEMLEP,</li> <li>Central Govt Funding Bids</li> <li>S106 Funding</li> </ul>
14	District Centre Public Realm Improvement	Improve connectivity in district centres including between to public transport interchanges through improvements to the public realm. Reducing the car dominance and improving connectivity will bring social, environmental and economic benefits along with the opportunity for new community and commercial land-uses.	Medium	1	££££	<ul style="list-style-type: none"> <li>Develop a CMK Masterplan with stakeholders</li> <li>Feasibility Study of options, costs and initial business case</li> <li>Produce and adopt a CMK Supplementary Planning Document (SPD) to guide future development</li> </ul>	<ul style="list-style-type: none"> <li>Milton Keynes Council</li> <li>SEMLEP</li> <li>Central Govt Funding Bids</li> <li>S106 Funding</li> </ul>
<b>Making Better Use of Public Transport</b>							
46	Bus Interchange	Bus interchange hub in CMK. A new bus interchange accessible from Redway routes / expansions, including cycle facilities (lockers, cycle parking) and real-time travel information. The location and design of the new interchange needs to be future-proofed to facilitate the introduction of a mass transit scheme.	Medium	1	££££	<ul style="list-style-type: none"> <li>Engagement with MK2050 over fit with emerging Mass Rapid Transit aspirations</li> <li>Feasibility study – identify location options, outline costs.</li> <li>Public Consultation</li> <li>Business Case Development</li> <li>MK Public Transport Strategy</li> </ul>	<ul style="list-style-type: none"> <li>Milton Keynes Council</li> <li>SEMLEP,</li> <li>Central Govt Funding Bids,</li> <li>S106 Funding</li> </ul>

Ref	Name	Description	Phasing	Priority	Outline Cost	Supporting Actions	Funding Options
<b>Embracing Innovation</b>							
64	Central Car Park Management	Review and revise the Central MK car parking management, including simplifying the types of car parking, reviewing the car parking charges and adopting a data led approach to demand management (increasing EV spaces). This could include dynamic supply/demand charging regime supported by Option 89 (SMART Sensors).	Short	1	£	<ul style="list-style-type: none"> <li>MK Council led review of car parking charges and split of car parking types (free, short stay, long stay)</li> <li>Review of EV and car share space provision</li> <li>Review of technology options including parking sensor technology</li> </ul>	<ul style="list-style-type: none"> <li>MK Officer Time Potential for additional revenue generation</li> </ul>
<b>Behavioural Change and Travel Demand Management</b>							
61,62,63	CMK Car Parking Review	Undertake a CMK parking review study to understand where demand may increase and the potential for capped or reduced parking provision to support modal shift ambitions.	Short	2	£	<ul style="list-style-type: none"> <li>Stakeholder Engagement</li> <li>Review of technology and charging options for improving car parking efficiency</li> <li>Review of MK Car Parking Policy</li> </ul>	<ul style="list-style-type: none"> <li>Milton Keynes Council</li> </ul>
60	Powered Two-Wheeler Parking	Implementation of secure high-quality powered two-wheeler (scooters and motorcycle) parking at key destinations in CMK. The powered two-wheeler parking should be secure (hoops for locks), well-overlooked and provide for a range of powered two-wheelers.	Short	2	£ (per site)	<ul style="list-style-type: none"> <li>Site identification study</li> <li>Develop detailed schemes</li> </ul>	<ul style="list-style-type: none"> <li>Milton Keynes Council</li> </ul>

## POTENTIAL STRATEGY OPTIONS

- 6.2.1. The options listed below have the potential to form part of the recommended package of CMK transport investments period, but require further study to determine whether there is the stakeholder support to take them forward for implementation within the Local Plan period.

Ref	Name	Description	Phasing	Priority	Outline Cost	Supporting Actions	Funding Options
<b>Making Better Use of Public Transport</b>							
42	CMK Shuttle Bus Trial	Review the CMK shuttle bus trial provided by the Business Improvement District for employees. If successful the scheme would be implemented on a permanent basis, with upgrades to the service being implemented as technology advances, for example, Autonomous People Movers (Option 38).	Short	1	£	<ul style="list-style-type: none"> <li>Undertake a post-implementation survey/review</li> <li>Review potential technology options if scheme becomes established and viable</li> </ul>	<ul style="list-style-type: none"> <li>Privately funded</li> <li>Or run on a commercial basis in the medium-long term</li> </ul>
43	CMK Bus Only Route	A public transport only spine route (Midsummer Boulevard) through Central MK (banning all private car access). As technology evolves this could be used by Autonomous People Movers (Option 38). Could also evolve into a mobility corridor providing a direct walk and cycle spine through CMK	Short	1	£	<ul style="list-style-type: none"> <li>Engagement with MK2050 over fit with emerging Mass Rapid Transit aspirations</li> <li>Feasibility Study – identify options and model traffic impacts</li> <li>Public Consultation</li> <li>Detailed Design</li> <li>MK Public Transport Strategy</li> </ul>	<ul style="list-style-type: none"> <li>Milton Keynes Council</li> <li>SEMLEP,</li> <li>Central Govt Funding Bids,</li> <li>S106 Funding</li> </ul>
<b>Behavioural Change and Travel Demand Management</b>							
30	Workplace User Charging	Introduction of a workplace user car parking charge to encourage modal shift to more sustainable modes of travel for commuting and business journeys. Employers are responsible for paying the car parking charge, acting as an incentive for employers to manage their workplace parking provision. The revenue generated is then invested into sustainable transport measures.	Long	3	£	<ul style="list-style-type: none"> <li>Feasibility Study to include: identifying the funding gap between the proposed infrastructure and forecast income (S106/CIL);</li> <li>Employer interviews and survey of workplace parking spaces</li> <li>Financial appraisal</li> <li>Business impact assessment</li> <li>Engagement with MK2050 over fit with emerging Mass Rapid Transit and Park and Ride aspirations.</li> </ul>	<ul style="list-style-type: none"> <li>Milton Keynes Council</li> </ul>

Ref	Name	Description	Phasing	Priority	Outline Cost	Supporting Actions	Funding Options
31	Zero Emission Zone	Introduction of a Zero Emission Zone across CMK, banning the use of all petrol and diesel vehicles from the designated area. This option could be implemented in phases, excluding the most polluting vehicles from a smaller area initially, before increasing the area and vehicle types excluded from the central area as electric vehicle ownership increases and technology advances.	Long	3	£	<ul style="list-style-type: none"> <li>i Feasibility and Implementation Study including:</li> <li>i Stakeholder engagement</li> <li>i Vehicle technology</li> <li>i Scheme options</li> <li>i Economic Assessment</li> <li>i Implementation and enforcement</li> </ul>	<ul style="list-style-type: none"> <li>i Milton Keynes Council</li> <li>i SEMLEP,</li> <li>i Central Govt Funding Bids</li> </ul>

**Figure 6-1 - Concept Plan CMK**





## 6.3 URBAN MILTON KEYNES INFRASTRUCTURE

### CORE TRANSPORT STRATEGY OPTIONS

Ref	Name	Description	Phasing	Priority	Outline Cost	Supporting Actions	Funding Options
Encouraging Active and Healthy Travel and Improved Local Connectivity							
5,6	Redway Network Upgrades	Upgrade the Redway network including improved wayfinding; widening; cycle priority at junctions / side roads; surface quality enhancements; improving lighting (Council's city-wide LED street lighting programme); providing CCTV and taking opportunities to improve junction safety, reduce the number of crossings and remove street furniture obstructions.	Short	1	££	<ul style="list-style-type: none"> <li>Audit of existing Redway Network to identify existing condition and level of usage</li> <li>Development of route based improvements strategies</li> <li>Network wide wayfinding strategy</li> <li>Redway technical standards guidance document</li> </ul>	<ul style="list-style-type: none"> <li>Milton Keynes Council</li> <li>SEMLEP</li> <li>Central Govt Funding Bids</li> <li>S106 Funding</li> </ul>
3	New Urban Redway Super Routes	Expansion of the Redway Super Routes programme to provide additional links along key routes and desire lines.	Short	1	££££	<ul style="list-style-type: none"> <li>Feasibility Study – identify route options, feasibility and costs</li> <li>Public Consultation</li> <li>Option Selection</li> <li>Detailed Design</li> <li>MK Walking and Cycling Strategy</li> </ul>	<ul style="list-style-type: none"> <li>Milton Keynes Council</li> <li>SEMLEP</li> <li>Central Govt Funding Bids</li> <li>S106 Funding</li> </ul>
59	High Quality Destination Cycle Parking	Implementation of secure, high-quality cycle parking at key destinations including: regional centres; schools; nurseries and employment sites.	Short	1	£	<ul style="list-style-type: none"> <li>Site identification study</li> <li>Develop detailed schemes</li> <li>Provide a fund for schools, private business to bid for cycle parking improvement funding</li> </ul>	<ul style="list-style-type: none"> <li>Milton Keynes Council</li> <li>SEMLEP,</li> <li>Central Govt Funding Bids</li> <li>S106 Funding</li> </ul>
15	Wayfinding	Implementation of a comprehensive wayfinding scheme, for Milton Keynes. The wayfinding scheme would provide a consistent set of information totems with local maps, walking and cycling times and directions to key local destinations. The wayfinding markers would be situated in key strategic locations on the main pedestrian and cycle routes (Redways), transport hubs and destinations.	Short	1	£	<ul style="list-style-type: none"> <li>Wayfinding Strategy – identify options, branding feasibility and costs</li> <li>Scheme options for city wide signage</li> <li>Options for signage locations</li> <li>Scheme cost and phasing</li> </ul>	<ul style="list-style-type: none"> <li>Milton Keynes Council</li> <li>SEMLEP,</li> <li>Central Govt Funding Bids</li> <li>S106 Funding</li> </ul>

Ref	Name	Description	Phasing	Priority	Outline Cost	Supporting Actions	Funding Options
9, 10	Cycle Hire Schemes	Expand and promote cycle hire schemes (Santander, Lime, Dockless Bikes) to cover a larger area. New hire stations can be incorporated into existing and new developments, local centres and transport hubs. If legislation and technology advances this could expand to include electric scooters (Option 11).	Short	1	£	<ul style="list-style-type: none"> <li>Work with scheme providers to promote and expand the existing schemes</li> </ul>	<ul style="list-style-type: none"> <li>Scheme Operator</li> </ul>
14	District Centre Public Realm Improvement	Improve connectivity in district centres including between to public transport interchanges through improvements to the public realm. Reducing the car dominance and improving connectivity will bring social, environmental and economic benefits along with the opportunity for new community and commercial land-uses.	Medium	1	££££	<ul style="list-style-type: none"> <li>Identify district centres that would benefit from improvements and identify issues and options with stakeholders.</li> <li>Feasibility Study of options, costs and initial business case</li> </ul>	<ul style="list-style-type: none"> <li>Milton Keynes Council</li> <li>SEMLEP</li> <li>Central Govt Funding Bids</li> <li>S106 Funding</li> </ul>
8	Bike Loan Scheme	Introduction of a cycle loan scheme (implemented and operated by Milton Keynes Council or a partner organisation). The scheme would include a range of cycles to suit all individuals, including adapted cycles and e-Bikes. The would be available direct from the scheme provider. Initiatives, such as trial periods, free hire to the unemployed and reduced prices for low-income groups could be implemented to encourage uptake.	Short	2	£	<ul style="list-style-type: none"> <li>Work with scheme providers to promote and expand the existing schemes</li> </ul>	<ul style="list-style-type: none"> <li>Scheme Operator</li> </ul>
16	Local Community Pedestrian Connectivity Improvement	Package of local walking connections to enable improved local community connectivity. Implementation of a permeable network of direct, open and overlooked pedestrian routes that embrace the principles of the Manual for Streets. The pedestrian routes would be attractive to users by providing local connectivity to schools, shops, bus stops and adjacent residential areas and communities. The pedestrian network could provide high-quality at grade crossings that reduce the existing severance caused by the grid road network between neighbouring communities.	Medium	2	£ (per location)	<ul style="list-style-type: none"> <li>Work with local community groups to identify district improvement packages</li> <li>Identify, appraise and prioritise key areas/corridors suffering from pedestrian severance</li> <li>Develop options and scheme costs</li> <li>Detailed Design</li> <li>Engagement with MK2050 with fit with potential Mass Rapid Transit stops</li> </ul>	<ul style="list-style-type: none"> <li>Milton Keynes Council</li> <li>SEMLEP,</li> <li>Central Govt Funding Bids</li> <li>S106 Funding</li> </ul>

Ref	Name	Description	Phasing	Priority	Outline Cost	Supporting Actions	Funding Options
7	Grand Union Canal Upgrade	Upgrade the quality of the Grand Union Canal towpath, through Milton Keynes to Wolverton Railway Station, in order to improve connectivity and accessibility and encourage walking and cycling. Potential upgrade measures include improving access, surface quality enhancements; cutback of overhanging and overgrown vegetation; improving lighting and providing CCTV along the route for safety purposes.	Short	3	££	<ul style="list-style-type: none"> <li>Feasibility Study – identify route upgrade options</li> <li>Public Consultation</li> <li>Option Selection</li> <li>Detailed Design</li> <li>MK Walking and Cycling Strategy</li> </ul>	<ul style="list-style-type: none"> <li>Milton Keynes Council</li> <li>SEMLEP</li> <li>Central Govt Funding Bids</li> <li>Canals Trust</li> </ul>
<b>Behavioural Change and Travel Demand Management</b>							
19,20, 21,22, 23	Travel Planning	Smarter Choices Travel Planning Team to work with schools, residential developers and employers to encourage travel behaviour change through the delivery of strategies (Travel Plans) and initiatives to decrease car dependency and increase sustainable travel	Short	1	££	<ul style="list-style-type: none"> <li>Set-up a dedicated Smarter Choices/Travel Planning Team that provide a range of services including:</li> <li>School Travel Planning support</li> <li>Travel Plan Implementation and Monitoring (on behalf of developers);</li> <li>Travel Plan support services.</li> <li>Sustainable Travel Incentives</li> <li>Mass Personalised Travel Planning</li> </ul>	<ul style="list-style-type: none"> <li>Milton Keynes Council</li> <li>SEMLEP</li> <li>Central Govt Funding Bids</li> <li>S106 Funding</li> <li>Private Businesses</li> <li>Residential Developers</li> </ul>
28	Urban Car Clubs	Expansion of car clubs across Milton Keynes, located at new developments, community centres, employment locations, and CMK. Car clubs are a cheaper alternative to owning your own vehicle, and only require a membership to a car club company to get started. Use of the vehicles is carried out through online booking systems or on the telephone.	Short	2	£	<ul style="list-style-type: none"> <li>Stakeholder engagement with scheme operators</li> </ul>	<ul style="list-style-type: none"> <li>Scheme Operator</li> <li>S106</li> <li>Milton Keynes Council</li> </ul>

Ref	Name	Description	Phasing	Priority	Outline Cost	Supporting Actions	Funding Options
25	Multi-Modal Urban Travel Hubs	Multi-modal travel hubs would provide access to sustainable transport options. Urban Travel Hubs would provide: access to bus and Redway routes, car parking; cycle facilities (lockers, cycle parking) and real-time travel information. This option could also provide car-club vehicles, car-share pick-up points, cycle-hire, electric cycles and Demand Responsive Transit pick-up points.	Medium	2	£ (per site)	<ul style="list-style-type: none"> <li>Feasibility Study – identify potential locations, feasibility and costs</li> <li>Stakeholder Engagement</li> <li>Option Selection</li> <li>Detailed Design</li> <li>Engagement with MK2050 fit with Mass Rapid Transit</li> <li>Inclusion in the Public Transport Strategy</li> </ul>	<ul style="list-style-type: none"> <li>Milton Keynes Council</li> <li>SEMLEP</li> <li>Central Govt Funding Bids, S106</li> </ul>
88	Variable Message Signage	Provision of city-wide Variable Messaging Signs (VMS) located on the main radial routes into Milton Keynes and throughout CMK, in order to encourage efficient usage of the existing car parking provision and routing through the city.	Short	1	£	<ul style="list-style-type: none"> <li>VMS/UTMC Strategy – identify locations, technology and costs</li> <li>Engage with potential suppliers</li> </ul>	<ul style="list-style-type: none"> <li>Milton Keynes Council</li> <li>S106</li> <li>Funding bids</li> </ul>
60	Powered Two-Wheeler Parking	Implementation of secure high-quality powered two-wheeler (scooters and motorcycle) parking at key existing destinations including: regional centres; CMK; and key employment sites. The powered two-wheeler parking should be secure (hoops for locks), well-overlooked and provide for a range of powered two-wheelers.	Short	2	£ (per site)	<ul style="list-style-type: none"> <li>Site identification study</li> <li>Develop detailed schemes</li> </ul>	<ul style="list-style-type: none"> <li>Milton Keynes Council</li> </ul>
<b>Making Better Use of Public Transport</b>							
55	Rail Hubs	Milton Keynes West Coast Mainline station improvements including enhanced cycle access, high-quality cycle facilities (lockers, cycle parking, tools and pumps); high-quality bus and taxi interchange facilities and real-time travel information. This option could also provide car-club vehicles, cycle hire, electric cycles and Demand Responsive Transit pick-up points.	Short	1	££££	<ul style="list-style-type: none"> <li>Feasibility Study for each station</li> <li>Public consultation on options</li> <li>Develop preferred scheme</li> </ul>	<ul style="list-style-type: none"> <li>Milton Keynes Council,</li> <li>SEMLEP,</li> <li>Central Govt Funding Bids</li> <li>Train Operating Companies,</li> <li>S106 Funding</li> </ul>

Ref	Name	Description	Phasing	Priority	Outline Cost	Supporting Actions	Funding Options
34	MK Demand Responsive Transit	Expansion of Demand Responsive Transit (DRT) bus services, operated on a commercial basis. DRT is a form of micro-mass transit. Shared minibuses are booked, on demand, using a smartphone application, internet portal or by telephone. The shared minibus is then routed to collect passengers and take them to their destinations. A trial is currently in place in Milton Keynes with ViaVan, which, if successful, could be expanded across a Milton Keynes.	Short	1	££	<ul style="list-style-type: none"> <li>Undertake a post-implementation survey/review of ViaVan</li> <li>Review potential technology options if scheme becomes established and viable</li> <li>Work with scheme provider to expand across urban MK</li> </ul>	<ul style="list-style-type: none"> <li>Scheme Operator</li> </ul>
39,40, 72	Bus Priority Corridors	Bus priority measures to support bus service enhancements (Option 41). Option would include corridor improvements to junctions, implementation of extensive bus lanes / segregated routes and enhanced bus stop infrastructure. Bus lane usage policy will also be reviewed. Where bus priority measures are introduced, consideration will be given to permitting other vehicle classes to use the infrastructure where this aligns with the strategy.	Medium	1	£££ (per corridor)	<ul style="list-style-type: none"> <li>Engagement with MK2050 over fit with emerging Mass Rapid Transit aspirations</li> <li>Feasibility Study – identify corridor options, feasibility and costs</li> <li>Public Consultation</li> <li>Option Selection</li> <li>Detailed Design</li> <li>MK Public Transport Strategy</li> </ul>	<ul style="list-style-type: none"> <li>Milton Keynes Council</li> <li>SEMLEP</li> <li>Central Govt Funding Bids</li> </ul>
41	Premium Bus Network	Implementation of a premium bus network. This could be achieved by providing higher frequency services (every 10-15 minutes), operating throughout the week from early in the morning to late at night. The network would be branded, use high-quality vehicles (Wi-Fi and leather seats), potentially electric powered (Option 87). The option is supported by Bus Priority Corridors (Option 40), and Integrated Ticketing (Option 91).	Short	1	£-££	<ul style="list-style-type: none"> <li>Stakeholder engagement with bus operators</li> <li>Adopt a new Public Transport Strategy</li> </ul>	<ul style="list-style-type: none"> <li>Central Govt Funding Bids</li> <li>Bus Operators</li> </ul>

Ref	Name	Description	Phasing	Priority	Outline Cost	Supporting Actions	Funding Options
<b>Embracing Innovation</b>							
89	SMART Sensors	Installation of SMART Sensors covering roads, Redways and parking spaces to enable the collection of real-time information. This data can then be linked to transport models, monitoring transport scheme impacts, network resilience, air quality, traffic conditions, asset maintenance, emergency planning, and providing open data to transport network users via a SMART Milton Keynes Travel Portal (Option 93) including car parking space availability, bus locations and dynamic vehicle routing.	Short	1	££	<ul style="list-style-type: none"> <li>Feasibility and Implementation Study including:</li> <li>Technology option review</li> <li>Scheme options</li> <li>Economic Assessment</li> <li>Implementation and data hub</li> <li>Milton Keynes UTMC Strategy</li> </ul>	<ul style="list-style-type: none"> <li>Milton Keynes Council,</li> <li>SEMLEP,</li> <li>Central Govt Funding Bids,</li> <li>Innovation Funds</li> </ul>
84	UTC Expansion	Expansion of the Urban Traffic Management Control System. This will include signalised bus priority measures at key pinch-point junctions (Option 40), signalisation at junctions and traffic and cycle counters. This option aims to gather data and maximise junction efficiency with the ability to monitor success.	Short	1	££££ (per corridor)	<ul style="list-style-type: none"> <li>Feasibility Study – identify corridor options, feasibility and costs</li> <li>Public Consultation</li> <li>Option Selection</li> <li>Detailed Design</li> <li>MK UTMC Strategy</li> </ul>	<ul style="list-style-type: none"> <li>Milton Keynes Council</li> <li>SEMLE,</li> <li>Central Govt Funding Bids</li> </ul>
103	Autonomous Deliveries	Expansion of the autonomous 'last mile' delivery trial across Milton Keynes. The Co-op are currently trialling the use of hi-tech six-wheeled driving machines to deliver groceries ordered on a smartphone to customers. The use of autonomous / remote-controlled robot delivery vehicles could be expanded to other companies / services, including; pharmaceuticals, library services, groceries and electronic commerce (for example, Amazon deliveries).	Long	3	£	<ul style="list-style-type: none"> <li>Undertake a post-implementation survey/review of Co-op scheme</li> <li>Review potential technology options if scheme becomes established and viable</li> <li>Milton Keynes Freight Strategy</li> <li>Work with scheme providers to expand across urban MK</li> </ul>	<ul style="list-style-type: none"> <li>Scheme Operator</li> </ul>

Ref	Name	Description	Phasing	Priority	Outline Cost	Supporting Actions	Funding Options
<b>Managing Performance of the Highway Network</b>							
83	Speed Reduction	Speed reduction on the urban grid road network to supports its safe operation. This would entail a 10mph reduction on both dual carriageways and single carriageways currently subject to national limits, resulting in speed limits of 50pm or 60mph.	Short	2	££	<ul style="list-style-type: none"> <li>Technology option enforcement review</li> <li>Public Consultation</li> <li>Traffic Regulation Order development</li> <li>Implementation</li> </ul>	<ul style="list-style-type: none"> <li>Milton Keynes Council</li> </ul>
66	On-street Parking Controls	Implementation of on-street parking controls in locations that suffer from high-levels of on-street parking stress, in order to control and manage parking and encourage modal shift to more sustainable travel modes. To improve parking provision for residents, a permit based system could be introduced.	Short	2	£	<ul style="list-style-type: none"> <li>Review Parking Strategy including process for identifying areas of high parking stress and the development of potential solutions with local stakeholders.</li> </ul>	<ul style="list-style-type: none"> <li>Milton Keynes Council</li> </ul>

## POTENTIAL STRATEGY OPTIONS

- 6.3.1. The options listed below have the potential to form part of the recommended package of urban Milton Keynes transport investments period, but require further study to determine whether there is the stakeholder support to take them forward for implementation within the Local Plan period.

Ref	Name	Description	Phasing	Priority	Outline Cost	Supporting Actions	Funding Options
<b>Behavioural Change and Travel Demand Management</b>							
27	Multi-Modal Hospital Travel Hub	Multi-modal travel hub at Milton Keynes University Hospital providing access to sustainable transport options. The Travel Hub would provide: a bus interchange; high-quality waiting facilities; cycle-hire points; cycle parking; car-share points and Demand Responsive Transit pick-up points.	Medium	1	££	<ul style="list-style-type: none"> <li>Stakeholder Consultation</li> <li>Feasibility study – identify location options, outline costs.</li> <li>Business Case Development</li> <li>Engagement with MK2050 over fit with Mass Rapid Transit Aspirations</li> <li>MK Public Transport Strategy</li> </ul>	<ul style="list-style-type: none"> <li>Milton Keynes Council, SEMLEP,</li> <li>Central Govt Funding Bids,</li> <li>S106</li> </ul>
<b>Making Better Use of Public Transport</b>							
47	Orbital Bus Routes	The existing network of bus routes are largely radial from CMK. This option will review the existing bus routes, and assess the opportunity to introduce orbital bus services to improve connectivity between jobs, homes, retail and leisure developments.	Short	1	£	<ul style="list-style-type: none"> <li>Feasibility study – identify potential route options,</li> <li>Bus company engagement</li> <li>Route trials</li> <li>Explore the potential for Demand Responsive Transport to satisfy demand</li> <li>MK Public Transport Strategy</li> </ul>	<ul style="list-style-type: none"> <li>Scheme Operator</li> </ul>
35, 36, 37	Mass Rapid Transit	Implementation of a high-quality Mass Transit Scheme delivering a fast and attractive service on segregated routes across Milton Keynes, potentially linked to Park & Ride Sites (Option 32) and Travel Hubs (Options 25 & 26). The system would provide: dedicated running lanes; priority at junctions; distinctive stops with real-time passenger information; cashless payment systems (Option 90) and network branding	Medium	1	££££+	<ul style="list-style-type: none"> <li>Engagement with MK2050</li> <li>Feasibility Study – identify corridor options, vehicle technology options, feasibility and costs</li> <li>Public Consultation</li> <li>Option Selection</li> <li>Detailed Design</li> <li>MK Public Transport Strategy</li> </ul>	<ul style="list-style-type: none"> <li>Milton Keynes Council</li> <li>SEMLEP,</li> <li>Central Govt Funding Bids</li> <li>S106</li> <li>Funding</li> </ul>



Ref	Name	Description	Phasing	Priority	Outline Cost	Supporting Actions	Funding Options
32	Park and Ride Sites	Implementation of Park & Ride sites strategically located at key radial locations into Milton Keynes. The sites would provide access to high frequency bus services and could also include access to bicycles (Park and Pedal). Suitable bus priority (Option 39 & 40) will be needed to support continued route development and reliability.	Medium	2	££ (per site)	<ul style="list-style-type: none"> <li>Feasibility study – site identification and initial viability assessment</li> <li>Stakeholder engagement</li> <li>Engagement with MK 2050</li> <li>Business case development</li> <li>MK Public Transport Strategy</li> </ul>	<ul style="list-style-type: none"> <li>Milton Keynes Council</li> <li>SEMLEP</li> <li>Central Govt Funding Bids</li> <li>S106 Funding</li> </ul>
53	Salden Chase Rail Station	Provision of a new railway station at Salden Chase (on the East-West Rail route) in order to support the delivery of new development in south-west Milton Keynes.	Long	3	££££	<ul style="list-style-type: none"> <li>Feasibility study – site identification and initial viability assessment</li> <li>Network Rail/EWR engagement</li> <li>Business case development</li> <li>Engagement with MK 2050</li> <li>MK Public Transport Strategy</li> </ul>	<ul style="list-style-type: none"> <li>Milton Keynes Council</li> <li>SEMLEP</li> <li>Central Govt Funding Bids,</li> <li>Network Rail</li> <li>S106 Funding</li> </ul>
51	Bletchley Chord	Provision of a direct rail connection between the Marston Vale Line and the West Coast Mainline, enabling direct services from Bedford to Milton Keynes Central. This option could be implemented as an extension to, and linked with, East-West Rail. The provision of an extra and direct service into Milton Keynes Central may require an extra rail line into Milton Keynes Central.	Long	2	££££+	<ul style="list-style-type: none"> <li>Stakeholder Engagement</li> <li>Feasibility study</li> <li>Network Rail/EWR engagement</li> <li>Business case development</li> </ul>	<ul style="list-style-type: none"> <li>Central Govt Funding Bids</li> <li>East West Rail Company,</li> <li>Network Rail</li> </ul>
<b>Embracing Innovation</b>							
38	Autonomous People Movers	Trial and introduce micro-autonomous people movers for short local trips. The transit vehicles can be personal, or shared. Example journeys that could be undertaken using autonomous people movers include: movements between shopping centres in CMK; movements between key employment centres and Transport Hubs (Milton Keynes Central Railway Station); movements between Central Milton Keynes and key trip attractors such as the Milton Keynes University Hospital, Stadium MK and Bletchley.	Medium	3	££	<ul style="list-style-type: none"> <li>Feasibility and Implementation Study including:</li> <li>Technology option review</li> <li>Scheme options</li> <li>Economic Assessment</li> </ul>	<ul style="list-style-type: none"> <li>Scheme Operator</li> </ul>

Ref	Name	Description	Phasing	Priority	Outline Cost	Supporting Actions	Funding Options
11	Electric Scooters	Introduction of shared electric scooter hire scheme(s). The scheme would require registration via a smartphone application, with the ability to locate and track the scooters. The scheme could also include a strategy for geofencing (the use of GPS to create a virtual geographic boundary), enabling software to trigger a response when a scooter leaves the scheme area. Currently, scooters are defined as 'power transporters', which can only be used legally on private land.	Medium	3	£-££	<ul style="list-style-type: none"> <li>Requires legislation change to enable legal use on the public highway;</li> <li>Stakeholder engagement with potential operators</li> </ul>	<ul style="list-style-type: none"> <li>Scheme Operator</li> </ul>
<b>Managing Performance of the Highway Network</b>							
67	Pinch Point Junction Improvements	Physical improvements at junctions identified as pinch points on the road network in and around Milton Keynes, where public transport improvements are a priority. Enhancements could include the introduction of traffic signals, junction widening and improving crossing provision, subject to traffic modelling to demonstrate overall network benefits.	Medium	2	££	<ul style="list-style-type: none"> <li>Undertake assessment to understand impact on junctions as growth comes forward</li> <li>Identify junction improvement options</li> <li>Develop preferred scheme</li> <li>Detailed design</li> </ul>	<ul style="list-style-type: none"> <li>Milton Keynes Council</li> <li>SEMLEP</li> <li>Central Govt Funding Bids</li> <li>S106 Funding</li> </ul>
69	A5 Kelly's Kitchen Roundabout	This option would upgrade the A5 Old Kelly's Kitchen Roundabout to a grade-separated junction allowing the A5 to be free-flow with on / off-slips.	Medium	3	££££	<ul style="list-style-type: none"> <li>Undertake assessment to understand impact of planned growth on the junction operation</li> <li>Stakeholder Engagement with Highways England</li> <li>Engagement with MK 2050</li> <li>Identify junction improvement options including on Expressway Route</li> <li>Develop preferred scheme</li> <li>Detailed design</li> </ul>	<ul style="list-style-type: none"> <li>Milton Keynes Council</li> <li>SEMLEP</li> <li>Central Govt Funding Bids</li> <li>S106 Funding</li> <li>Highways England</li> </ul>
68	A5 Old Stratford Roundabout	This option would upgrade the A5 Old Stratford Roundabout to a grade-separated junction allowing the A5 to be free-flow with on / off-slips.	Long	3	££££	<ul style="list-style-type: none"> <li>Undertake assessment to understand impact of planned growth on the junction operation</li> <li>Stakeholder Engagement with Highways England</li> <li>Engagement with MK 2050</li> <li>Identify junction improvement options</li> <li>Develop preferred scheme</li> <li>Detailed design</li> </ul>	<ul style="list-style-type: none"> <li>Milton Keynes Council</li> <li>SEMLEP</li> <li>Central Govt Funding Bids</li> <li>S106 Funding</li> <li>Highways England</li> </ul>

Ref	Name	Description	Phasing	Priority	Outline Cost	Supporting Actions	Funding Options
49	Marston Vale Level Crossing Closures	Closure of the at-grade level crossings along the Marston Vale Line (Bletchley to Bedford), due to the increase in rail frequency anticipated as a result of East-West-Rail. Locations where level crossings are proposed to be closed include: Simpson Road, V10 Brickhill Street and A5130 Station Road.	Medium	3	££££ (per crossing)	<ul style="list-style-type: none"> <li>Undertake assessment to understand base level of delay and impact of growth and EWR</li> <li>Stakeholder Engagement with EWR and Network Rail</li> <li>Identify crossing options</li> <li>Develop preferred scheme</li> <li>Detailed design</li> </ul>	<ul style="list-style-type: none"> <li>Central Govt Funding Bids</li> <li>EW R</li> <li>Network Rail</li> </ul>
76	Bletchley Southern Bypass	Delivery of the Bletchley Southern Bypass linking the A421 and A4146 to provide congestion relief to the A421 and Buckingham Road and support the delivery of strategic growth in the southwest. The indicative route for the Bletchley Southern Bypass would connect the A4146 Stoke Hammond Bypass to the A421, west of Bletchley.	Medium	3	££££+	<ul style="list-style-type: none"> <li>Undertake assessment to understand impact of planned growth on the highway network</li> <li>Stakeholder Engagement</li> <li>Engagement with Highways England on Expressway and Connectivity Study being delivered by England's Economic Heartland.</li> <li>Identify route options</li> <li>Develop preferred scheme</li> <li>Detailed design</li> </ul>	<ul style="list-style-type: none"> <li>Milton Keynes Council SEMLEP</li> <li>Central Govt Funding Bids S106</li> <li>Funding</li> </ul>
<b>Freight Strategy</b>							
85, 101, 102	Urban Logistics Network	Assessment of the need for first-last mile goods delivery infrastructure. This option could include Freight Consolidation Centres and the provision of Collection Hubs (Click and Collect) at key local destinations including transport hubs and regional centres. Deliveries to the Collection Hubs can be made by consolidated delivery vehicles and electric low emission vehicles (vans / cargo bikes).	Medium	2	£-££	<ul style="list-style-type: none"> <li>Stakeholder engagement with potential operators</li> <li>Develop an evidence base of options for implementation</li> <li>Safeguard land to support delivery</li> <li>MK Freight Study</li> </ul>	<ul style="list-style-type: none"> <li>Scheme Operator</li> </ul>

Figure 6-2 - Concept Plan Urban MK (1)

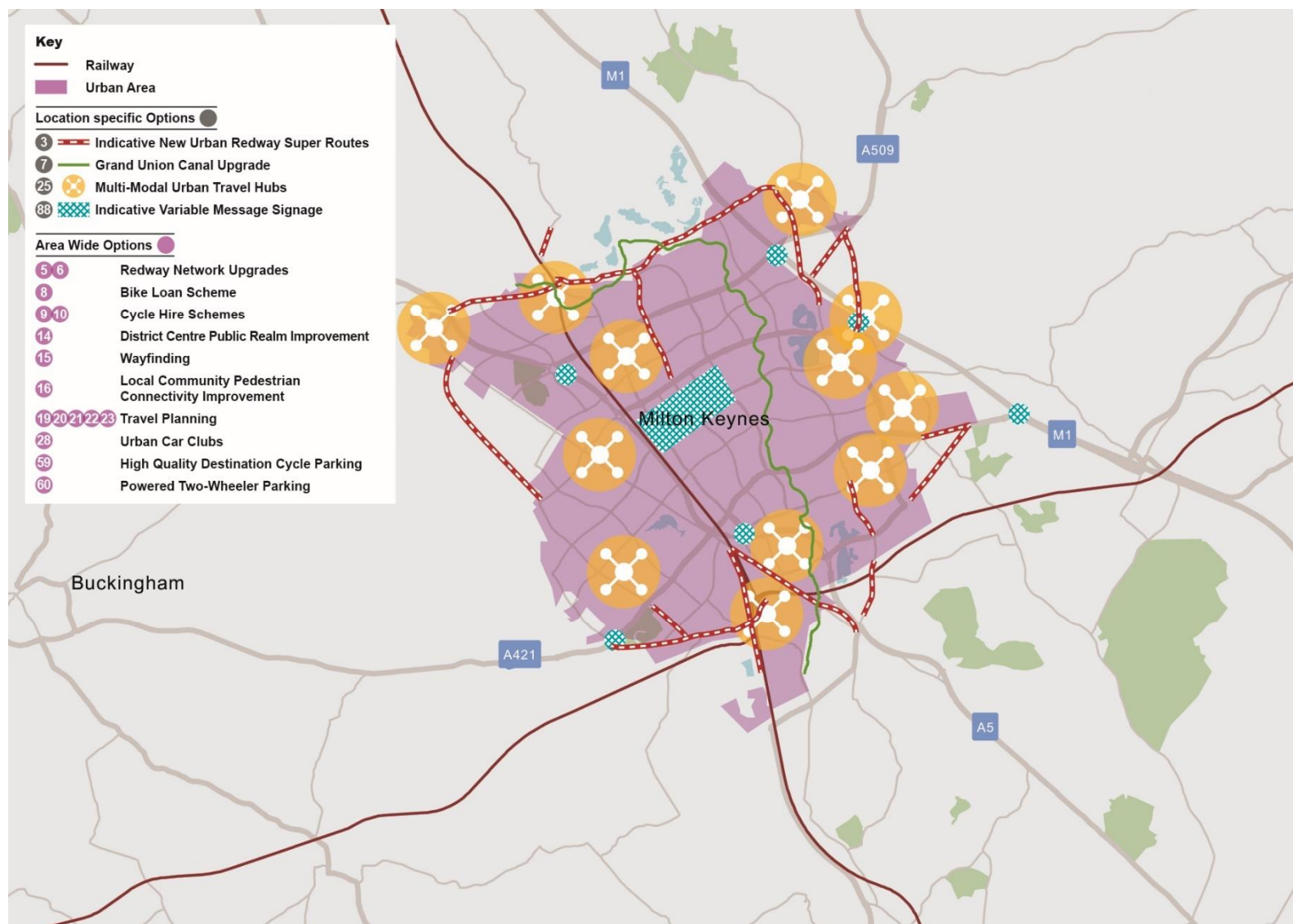
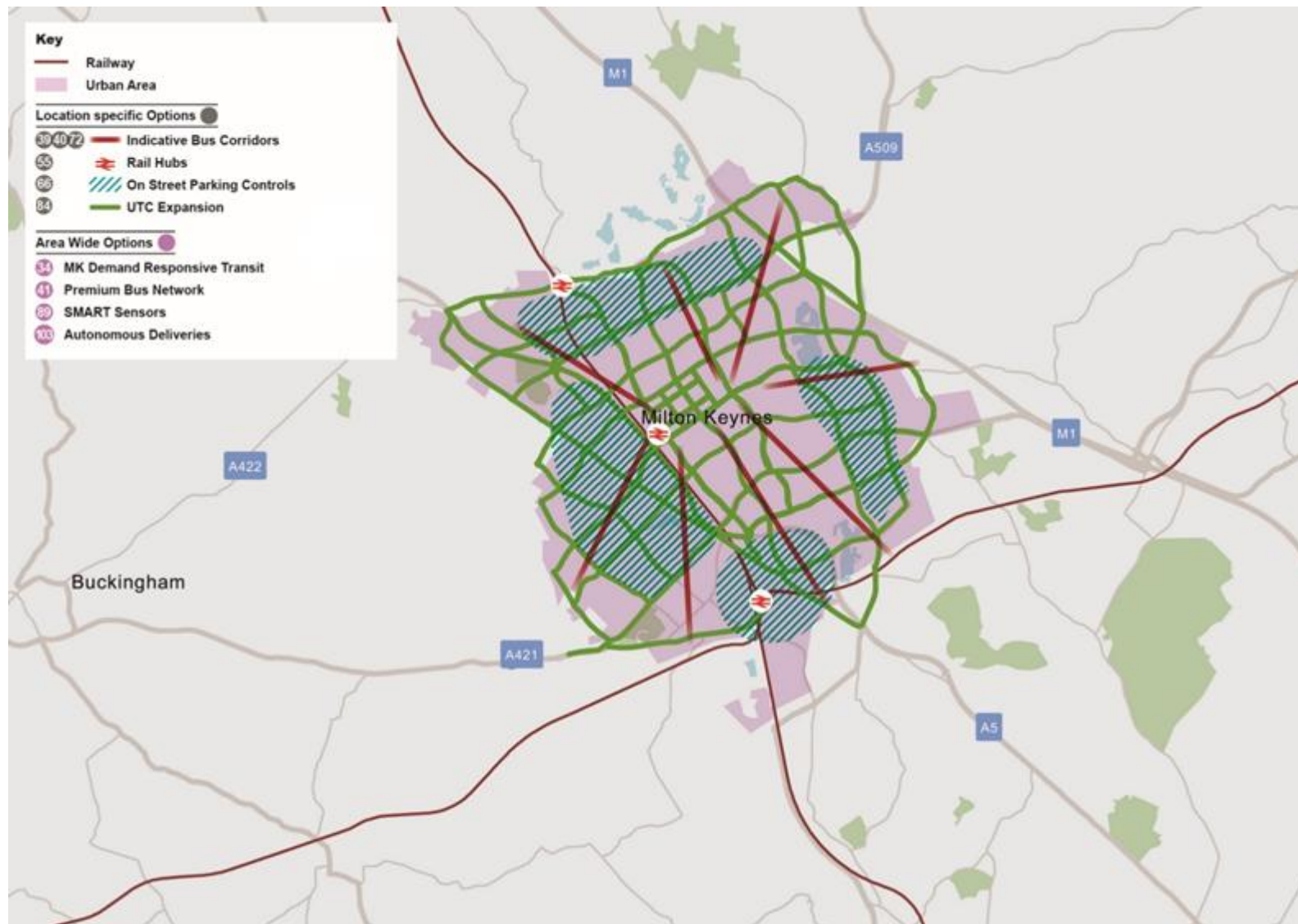


Figure 6-3 - Concept Plan Urban MK (2)



## 6.4 RURAL MILTON KEYNES INFRASTRUCTURE

### CORE TRANSPORT STRATEGY OPTIONS

Ref	Name	Description	Phasing	Priority	Outline Cost	Supporting Actions	Funding Options
<b>Encouraging Active and Healthy Travel and Improved Local Connectivity</b>							
4	Rural cycle routes	Expansion of existing cycle routes, beyond Milton Keynes, to provide a network of longer-distance cycle routes connecting to villages and rural employment centres and encourage the uptake of cycling.	Medium	1	££££	<ul style="list-style-type: none"> <li>Feasibility Study – identify route options, feasibility and costs</li> <li>Public Consultation</li> <li>Option Selection</li> <li>Detailed Design</li> <li>MK Walking and Cycling Strategy</li> </ul>	<ul style="list-style-type: none"> <li>Milton Keynes Council</li> <li>SEMLEP</li> <li>Central Govt Funding Bids</li> </ul>
9, 10	Cycle Hire Schemes	Expand and promote cycle hire schemes (Santander, Lime, Dockless Bikes) to cover a larger area. New hire stations can be incorporated into existing and new developments, local centres and transport hubs. If legislation and technology advances this could expand to include electric scooters (Option 11).	Medium	1	£	<ul style="list-style-type: none"> <li>Work with scheme providers to promote and expand the existing schemes</li> </ul>	<ul style="list-style-type: none"> <li>Scheme Operator</li> </ul>
8	Bike Loan Scheme	Introduction of a cycle loan scheme (implemented and operated by Milton Keynes Council or a partner organisation). The scheme would include a range of cycles to suit all individuals, including adapted cycles and e-Bikes. The would be available direct from the scheme provider. Initiatives, such as trial periods, free hire to the unemployed and reduced prices for low-income groups could be implemented to encourage uptake.	Short	2	£	<ul style="list-style-type: none"> <li>Work with scheme providers to promote and expand the existing schemes</li> </ul>	<ul style="list-style-type: none"> <li>Scheme Operator</li> </ul>
<b>Behavioural Change and Travel Demand Management</b>							
29	Rural Car Clubs	Introduction of a car club outside the built-up area of Milton Keynes. Rural car club schemes are typically run by Community Interest Companies (CIC), charities or Trusts, and provide a cheaper alternative to owning your own vehicle, and only require a membership to a car club company to get started. Use of the vehicles is carried out through online booking systems or on the telephone. Rural car clubs could make an important contribution to rural accessibility and reduce social exclusion.	Short	2	£	<ul style="list-style-type: none"> <li>Stakeholder engagement with scheme operators</li> </ul>	<ul style="list-style-type: none"> <li>Scheme Operator</li> <li>S106 Funding</li> </ul>



Ref	Name	Description	Phasing	Priority	Outline Cost	Supporting Actions	Funding Options
26	Multi-Modal Rural Travel Hubs	Implementation of multi-modal travel hubs in the rural settlements outside Milton Keynes, in order to intercept car trips and provide access to sustainable transport options at small, flexible transport interchanges. The rural travel hubs would provide: access to bus and Redway routes / expansions; car parking; cycle facilities (lockers, cycle parking) and real-time travel information. This option could also provide car-club vehicles, car-share meeting points, cycle-hire, electric cycles and Demand Responsive Transit pick-up points.	Medium	2	£ (per site)	<ul style="list-style-type: none"> <li>Feasibility Study – identify potential locations, feasibility and costs</li> <li>Stakeholder Engagement</li> <li>Option Selection</li> <li>Detailed Design</li> </ul>	<ul style="list-style-type: none"> <li>Milton Keynes Council SEMLEP</li> <li>Central Govt Funding Bids, S106 Funding</li> </ul>
<b>Making Better Use of Public Transport</b>							
34	MK Demand Responsive Transit	Expansion of Demand Responsive Transit (DRT) bus services, operated on a commercial basis. DRT is a form of micro-mass transit. Shared minibuses are booked, on demand, using a smartphone application, internet portal or by telephone. The shared minibus is then routed to collect passengers and take them to their destinations. A trial is currently in place in Milton Keynes with ViaVan, which, if successful, could be expanded across a Milton Keynes to include rural settlements.	Medium	1	££	<ul style="list-style-type: none"> <li>Undertake a post-implementation survey/review of ViaVan</li> <li>Review potential technology options if scheme becomes established and viable</li> <li>Work with scheme provider to expand across urban MK</li> </ul>	<ul style="list-style-type: none"> <li>Scheme Operator</li> </ul>
45	Taxibus	Provision of Taxibus services throughout Milton Keynes. The service would use taxi vehicles operating on fixed routes, providing connections between main trip attractors, including Milton Keynes Central Railway Station and key employment, leisure and social destinations. The service can be shared by multiple passengers, but unlike buses, users can alight anywhere on the route.	Short	2	£	<ul style="list-style-type: none"> <li>Feasibility study – identify potential route options,</li> <li>Taxi company engagement</li> <li>Route trials</li> <li>MK Public Transport Strategy</li> </ul>	<ul style="list-style-type: none"> <li>Scheme Operator</li> </ul>
<b>Embracing Innovation</b>							
103	Autonomous Deliveries	Expansion of the autonomous 'last mile' delivery trial across Milton Keynes. The Co-op are currently trialling the use of hi-tech six-wheeled driving machines to deliver groceries ordered on a smartphone to customers. The use of autonomous / remote-controlled robot delivery vehicles could be expanded to other companies / services, including; pharmaceuticals, library services, groceries and electronic commerce (for example, Amazon deliveries) in rural settlements.	Long	3	£	<ul style="list-style-type: none"> <li>Undertake a post-implementation survey/review of Co-op scheme</li> <li>Review potential technology options if scheme becomes established and viable</li> <li>Work with scheme providers to expand across urban MK</li> </ul>	<ul style="list-style-type: none"> <li>Scheme Operator</li> </ul>

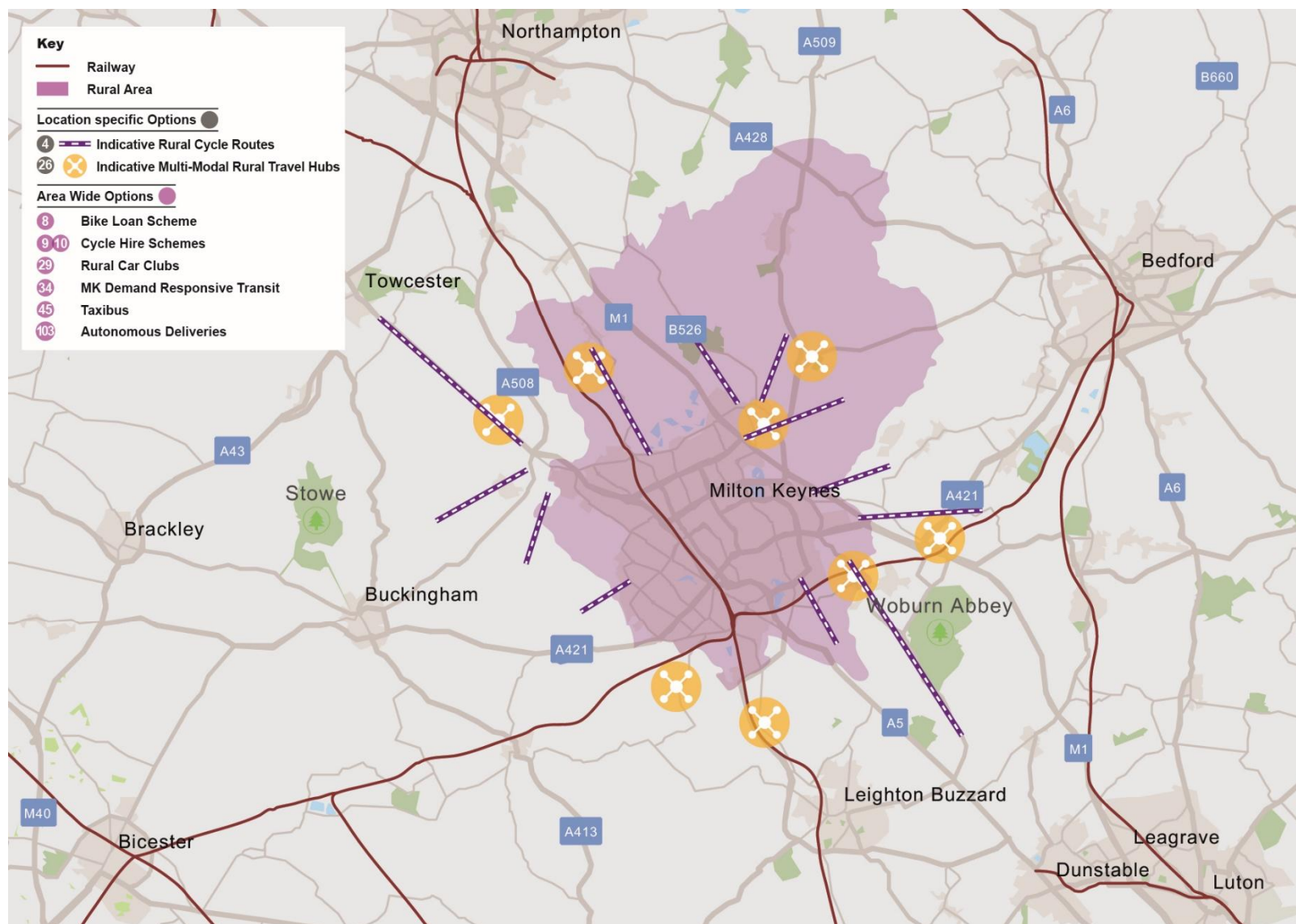
## POTENTIAL STRATEGY OPTIONS

- 6.4.1. The options listed below have the potential to form part of the recommended package of rural Milton Keynes transport investments period, but require further study to determine whether there is the stakeholder support to take them forward for implementation within the Local Plan period.

Ref	Name	Description	Phasing	Priority	Outline Cost	Supporting Actions	Funding Options
Managing Performance of the Highway Network							
77	Olney Bypass	Provision of a bypass of Olney Village on the A509.	Medium	3	££££+	<ul style="list-style-type: none"> <li>Undertake assessment to understand impact of planned growth on the highway network</li> <li>Stakeholder Engagement</li> <li>Engagement with MK2050</li> <li>Identify route options</li> <li>Develop preferred scheme</li> <li>Detailed design</li> </ul>	<ul style="list-style-type: none"> <li>Milton Keynes Council SEMLEP</li> <li>Central Govt Funding Bids</li> <li>S106 Funding</li> </ul>



**Figure 6-4 - Concept Plan Rural**



## 6.5 DISTRICT WIDE MILTON KEYNES INFRASTRUCTURE

### CORE TRANSPORT STRATEGY OPTIONS

Ref	Name	Description	Phasing	Priority	Outline Cost	Supporting Actions	Funding Options
<b>Encouraging Active and Healthy Travel and Improved Local Connectivity</b>							
13	Cycle Training	Fund cycle training for businesses, schools and local communities through the Bikeability programme. The programme provides trainees with an understanding of how to cycle on roads safely, whilst learning the practical skills to gain confidence in cycling on the road. The programme has a variety of levels which take trainees from the basics of balance and control, to planning and undertaking an independent journey.	Short	1	£	Engage with potential scheme providers	Milton Keynes Council, Scheme Operator
<b>Behavioural Change and Travel Demand Management</b>							
24	Car/Cycle Share Scheme	Implementation and promotion of a city-wide car-share / cycle-share scheme, by providing a free web-based matching service for both car and cycle journeys, for everyone who lives, works and travels in and around Milton Keynes. The database tool will also have the capability to match experienced cyclists with those less experienced who are keen to try cycling.	Short	1	££	Set-up bespoke website of contract existing service provider for example Liftshare	Milton Keynes Council Liftshare Private operators
<b>Making Better Use of Public Transport</b>							
44	Bus Stop Infrastructure	Upgrades to existing bus stop infrastructure throughout Milton Keynes. Improvements would include: the introduction of real time passenger information; interactive travel dashboards for live bus tracking; cashless ticket payment; improved access for people with reduced mobility and cycle parking facilities.	Short	1	£ (per stop)	<ul style="list-style-type: none"> <li>Audit of existing bus stops</li> <li>Identification and prioritisation of bus stop improvements</li> <li>Adopt minimum standards for all new bus stop infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>MK Council</li> <li>SEMLEP</li> <li>Central Govt Funding Bids</li> <li>S106 Funding</li> </ul>
45	Taxibus	Provision of Taxibus services throughout Milton Keynes. The service would use taxi vehicles operating on fixed routes, providing connections between main trip attractors, including Milton Keynes Central Railway Station and key employment, leisure and social destinations. The service can be shared by multiple passengers, but unlike buses, users can alight anywhere on the route.	Short	2	£	<ul style="list-style-type: none"> <li>Feasibility study – identify potential route options,</li> <li>Taxi company engagement</li> <li>Route trials</li> <li>MK Public Transport Strategy</li> </ul>	Scheme Operator

Ref	Name	Description	Phasing	Priority	Outline Cost	Supporting Actions	Funding Options
<b>Embracing Innovation</b>							
93	SMART MK Travel Portal	Creation and promotion of a SMART Milton Keynes web-based travel portal that provides users with real-time travel information, in conjunction with a network of SMART Sensors (Option 89). This can include: parking data (space availability); live bus tracking; bus timetables; train departures; traffic maps; weather forecasts; incident messages; car club availability; cycle scheme availability; air quality and journey planning information.	Short	1	£-££	<ul style="list-style-type: none"> <li>Re-establish SMART MK programme</li> <li>Establish an intelligent city platform to collate and process real-time data from city sensors to be used in MK Travel Portal</li> </ul>	<ul style="list-style-type: none"> <li>MK Council</li> <li>Web developer</li> <li>Transport Systems</li> <li>Catapult</li> </ul>
65	Electric Vehicle Charging Points	Increase the number of electric car charging points across Milton Keynes to encourage the use of a more environmentally form of car travel. Additional charging infrastructure would be installed at key locations and trip attractors throughout Milton Keynes – including Central Milton Keynes, new development sites and employment sites – to increase accessibility to charging facilities for all users.	Short	1	£	<ul style="list-style-type: none"> <li>Stakeholder engagement with charger suppliers</li> <li>Review and update MK Parking Policy</li> </ul>	<ul style="list-style-type: none"> <li>Scheme Operator</li> </ul>
94	Superfast Broadband	Support for the delivery of superfast broadband across Milton Keynes, to support Mobility as a Service (MaaS) schemes (Option 92), access to application and web-based services and home working. The majority of Milton Keynes benefits from superfast broadband, and working with neighbouring councils, Milton Keynes Council are looking to extend fibre coverage throughout.	Short	1	Privately Funded	<ul style="list-style-type: none"> <li>Stakeholder engagement with suppliers</li> </ul>	<ul style="list-style-type: none"> <li>Scheme Operator</li> </ul>
87	Electric Public Transport Fleet	Electrification of the taxi and bus fleet through Quality Partnership agreements and funding bids. The introduction of electric buses and taxis can help to improve air quality in the city centre and an increased frequency of bus services could help to break the reliance on personal vehicles.	Short	2	££-£££	<ul style="list-style-type: none"> <li>Stakeholder engagement with operators</li> <li>Establishment of Bus Quality Partnerships</li> <li>Vehicle Trials</li> <li>Submit Funding Bids</li> </ul>	<ul style="list-style-type: none"> <li>MK Council</li> <li>SEMLEP</li> <li>Central Govt Funding Bids</li> <li>Innovation Funds, Bus Operators</li> </ul>
86	MK Council Electric Vehicle Fleet	Replacement of the existing Milton Keynes Council's vehicle fleet with electric vehicles – for waste collection, maintenance vans and pool cars. A cycle pool could also be introduced to the Council fleet.	Short	2	££££	<ul style="list-style-type: none"> <li>Vehicle Trials</li> <li>Submit Funding Bids</li> </ul>	<ul style="list-style-type: none"> <li>MK Council</li> <li>SEMLEP</li> <li>Central Govt Funding Bids</li> <li>Innovation Funds,</li> </ul>

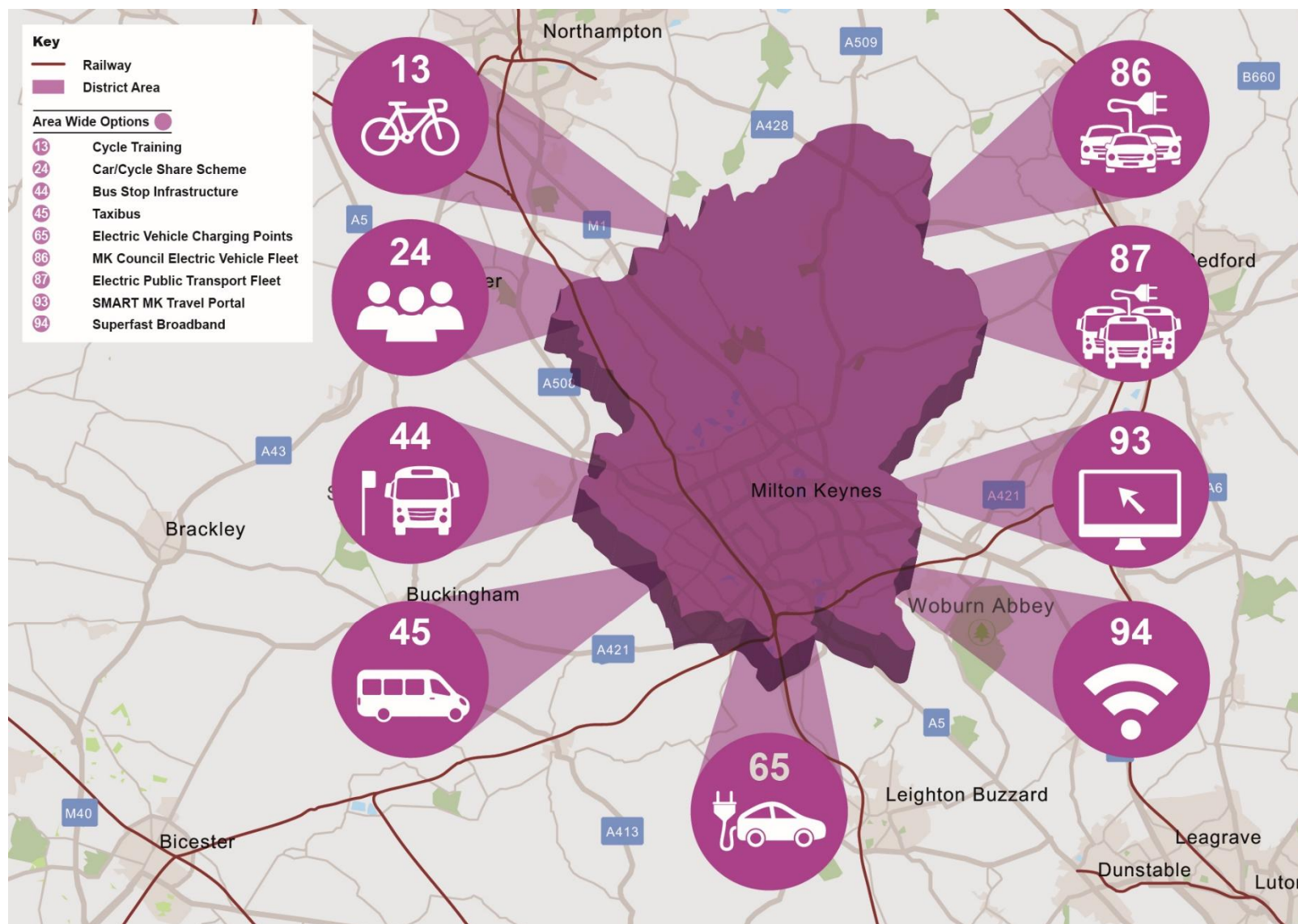
## POTENTIAL STRATEGY OPTIONS

- 6.5.1. The options listed below have the potential to form part of the recommended package of district wide transport investments period, but require further study to determine whether there is the stakeholder support to take them forward for implementation within the Local Plan period.

Ref	Name	Description	Phasing	Priority	Outline Cost	Supporting Actions	Funding Options
<b>Embracing Innovation</b>							
92	MaaS	Implementation of a Mobility as a Service (MaaS) scheme (for example, Whim in Birmingham) by a private operator. MaaS schemes provide an application service which provides integrated access to public transport, taxis, cycle share schemes, Demand Responsive Transit (DRT), car clubs and car hire schemes on a pay as you go and monthly plan basis. Suitable bus services, taxi operators, cycle hire, car club, car hire will need to be provided to support the technology platform.	Short	1	£-££	<ul style="list-style-type: none"> <li>Stakeholder engagement with MaaS scheme operators</li> </ul>	<ul style="list-style-type: none"> <li>Scheme Operator</li> </ul>
90, 91	SMART Ticketing	Introduction of cashless and integrated ticketing payment capability across all public transport operators (bus, rail, cycle hire) in Milton Keynes	Short	3	£	<ul style="list-style-type: none"> <li>Feasibility Study – identify options, feasibility and costs</li> <li>Transport Operator Engagement</li> </ul>	<ul style="list-style-type: none"> <li>Milton Keynes Council,</li> <li>Public Transport Operators,</li> <li>SEMLEP,</li> <li>Central Govt Bids</li> </ul>
96	Shared Autonomous Vehicle Solution	Implementation of a widescale shared autonomous vehicle solution for Milton Keynes. The technology allows riders to have larger amounts of time available for work, play or to socialise, as they no longer need to be in control of the vehicle. Autonomous vehicles could also allow those who cannot currently operate a vehicle, to gain a new independence, as they no longer need to rely on driving themselves to destinations.	Long	3	Privately Funded	<ul style="list-style-type: none"> <li>Vehicle Trials</li> <li>Submit Funding Bids</li> </ul>	<ul style="list-style-type: none"> <li>Milton Keynes Council</li> <li>SEMLEP</li> <li>Central Govt Funding Bids</li> <li>Innovation Funds,</li> </ul>
95	Personal Autonomous Vehicle Solution	Implementation of a widescale personal autonomous vehicle solution for Milton Keynes. The technology allows users to have larger amounts of time available for work, play or to socialise, as they no longer need to be in control of the vehicle. Autonomous vehicles could also allow those who cannot currently operate a vehicle, to gain a new independence, as they no longer need to rely on driving themselves to destinations.	Long	3	Privately Funded	<ul style="list-style-type: none"> <li>Vehicle Trials</li> <li>Submit Funding Bids</li> </ul>	<ul style="list-style-type: none"> <li>Milton Keynes Council</li> <li>SEMLEP</li> <li>Central Govt Funding Bids</li> <li>Innovation Funds,</li> </ul>



**Figure 6-5 - Concept Plan District Wide**

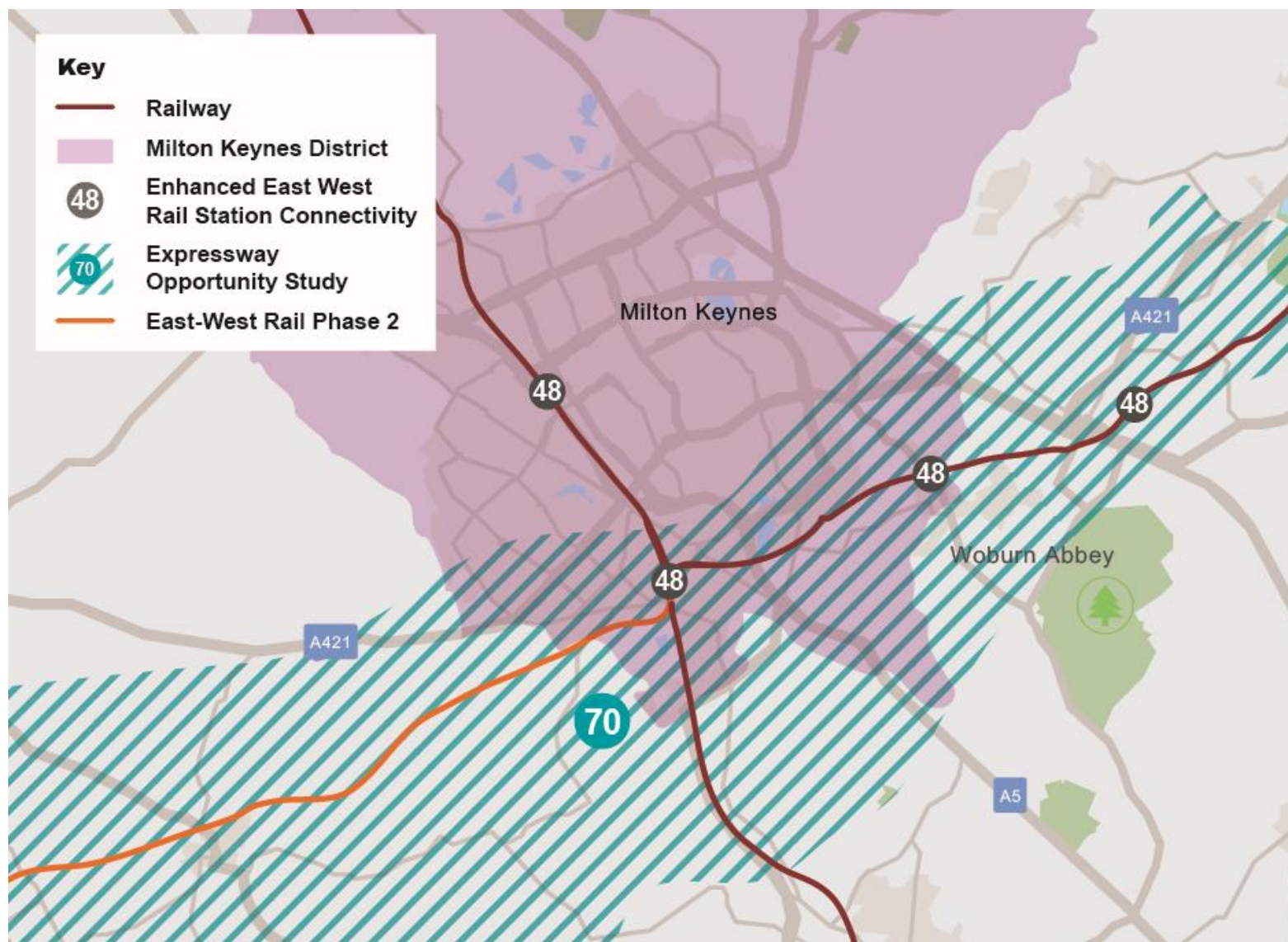


## 6.6 STRATEGIC MILTON KEYNES INFRASTRUCTURE

### CORE TRANSPORT STRATEGY OPTIONS

Ref	Name	Description	Phasing	Priority	Outline Cost	Supporting Actions	Funding Options
<b>Behavioural Change and Travel Demand Management</b>							
70	Oxford to Cambridge Expressway	The Oxford to Cambridge Expressway is a dual carriageway proposal by Highways England broadly aligned with the East-West Rail route. Working with Highways England and wider stakeholders, benefits of the proposed Expressway can be maximised for local residents and businesses. This option includes: identifying potential junction locations with the Major Road Network and A-Roads (for example, the A4146 and A5); unlocking strategic growth sites and taking opportunities to deliver Park & Ride Sites (Option 32) and Travel Hubs (Options 25 & 26).	Long	2	££££	<ul style="list-style-type: none"> <li>Stakeholder Engagement with EEH, NIC and Highways England</li> <li>Identify potential junction locations that maximise growth opportunities</li> <li>Undertake a study to identify package of measures to encourage sustainable 'last mile' travel from the Expressway</li> </ul>	<ul style="list-style-type: none"> <li>Highways England</li> <li>SEMLEP</li> <li>EEH</li> <li>Funding Bids</li> <li>S106 Funding</li> <li>EWB Company</li> </ul>
<b>Making Better Use of Public Transport</b>							
48	East West Rail	Enhancing connectivity to the railway stations on the western section of the East-West Rail route (particularly along the Marston Vale Line). Enhancements at stations along the Marston Vale Line would provide access to bus routes and Redway routes / expansions, cycle facilities (lockers, cycle parking) and real-time travel information.	Short	1	££	<ul style="list-style-type: none"> <li>Engage with East West Rail company, train operators and Network Rail</li> <li>Feasibility Study for each station</li> <li>Public consultation on options</li> <li>Develop preferred scheme</li> </ul>	<ul style="list-style-type: none"> <li>Milton Keynes Council</li> <li>SEMLEP</li> <li>Central Govt</li> <li>Funding Bids</li> <li>S106 Funding</li> <li>EWB Company</li> </ul>

Figure 6-6 - Concept Plan Strategic Infrastructure





## 7 INFRASTRUCTURE RESILIENCE

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### 7.1 FUTURE SCENARIOS

7.1.1. In order to assess the future resilience of interventions to potential technological and mobility change three potential scenarios were developed for future Milton Keynes.

7.1.2. These scenarios are distinct but overlapping and were specifically developed to consider how interventions would fare (on a simple positive / negative assessment) should the scenario come to fruition.

7.1.3. Adopting this simple resilience testing helped understand which types of interventions were at risk of change and which had the potential to positively contribute to developing technological and service agendas.

7.1.4. The following paragraphs describe the three scenarios.

#### **SCENARIO 1: SUSTAINABLE MILTON KEYNES (SUSTAINABLE MAX)**

7.1.5. Focus on sustainable modes to encourage a shift from the private car to reduce congestion, accidents, noise impacts and improve air quality, and to enable a healthy community.

- | Capitalise on Redways to encourage walking and cycling for all journey purposes;
- | Encourage e-bike uptake for personal and delivery use;
- | Encourage demand responsive shared / public transport services for those who walking and cycling is not an option;
- | Enable network of Park and Ride facilities with supporting public transport / transit services to provide access to the city;
- | Reduce availability of central Milton Keynes / workplace parking and increase charges in real terms; and
- | Actively encourage the use of further zero emission (at point of use) vehicles within the city core.

#### **SCENARIO 2: AUTONOMOUS, SEAMLESS AND SHARED MILTON KEYNES (E-AV MAX)**

7.1.6. Embrace all forms of electric autonomous vehicles (e-AV) to provide for digitally enabled, seamless, shared door to door trips in a near zero emission (at source environment).

- | Encourage uptake of innovative shared e-AV services providing shared door-to-door services for all;
- | Encourage autonomous trunk haul public transport services to provide rapid links within and across Milton Keynes;
- | Reduce access to the city core by private car / single occupancy vehicles;
- | Encourage Mobility as a Service solutions across all modes to reduce vehicle ownership and capitalise upon AV services; and
- | Capitalise on existing highways assets to provide for seamless anywhere to anywhere AV services.



### SCENARIO 3: MOBILITY CHOICES MILTON KEYNES (CHOICES MAX)

7.1.7. Build upon Milton Keynes unique spatial and highway layout to allow the provision of private / public / shared transport solutions.

- i Continue to provide choice and access for car users (human driven and in the future autonomous);
- i Provide for an integrated local public transport network;
- i Enable future on demand point to point mobility services;
- i Enable trips by walking and cycling (people and deliveries);
- i Allow the market and individuals to determine what solutions work best for Milton Keynes; and
- i Enable AV solutions as required to meet the above

7.1.8. It should be noted that these scenarios are only theoretical and may or may not come to ultimate fruition in part or in combination.

## 7.2 PACKAGE RESILIENCE

7.2.1. As shown in the summary table, certain types of interventions (as detailed in the transport themes) are potentially more resilient to

change than others (dark and light green denotes resilient interventions).

- 7.2.2. Overall, only road based interventions are determined to be at risk, largely because of the potential for a shift away from the private car should new services models (including in the long-term automation) result in reduced private car use.
- 7.2.3. Also noteworthy is the potential for active travel and high quality public transport solutions to be impacted under a shared autonomous future, recognising the vulnerability of both the what could be new, cheaper, more accessible forms of mobility.
- 7.2.4. Whilst technology, is fundamental to many interventions it is considered resilient in all scenarios, the inherent danger exists of obsolescence as a result of external changes.
- 7.2.5. In short, most of the interventions are resilient to change within the three scenarios. However, care will need to be taken to monitor change and carefully specify schemes to be Future Ready as so far as is practicably possible.

	Sustainable MK	Autonomous, Seamless and Shared MK	Mobility Choices MK
Active Travel	3	0	3
Behaviour Change	2	1	2
HQPT	3	1	2
Rail	2	2	2
Parking	2	1	0
Road	0	1	2
Technology	2	2	2
Policy	1	3	0
Delivery Partnerships	2	2	2
Freight	1	3	0

## 8 NEXT STEPS

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### 8.1 OVERVIEW

- 8.1.1. This TIDP has identified a series of core and potential non-committed transport infrastructure schemes to address the transport issues and opportunities in Milton Keynes.
- 8.1.2. All of these schemes are at a concept level of development. The schemes identified in this TIDP are intended to steer the development of more detailed schemes at a variety of spatial scales.
- 8.1.3. This section sets out the work required to progress the options presented in this TIDP further.

### 8.2 COLLABORATIVE ACTION

- 8.2.1. One of the first actions will be to set-up an infrastructure delivery working group to help guide the development and delivery of the schemes. Stakeholder involvement could include:
  - i Milton Keynes Council,
  - i Highways England,
  - i South East Midlands Local Enterprise Partnership,
  - i Network Rail;
  - i England's Economic Homeland
- 8.2.2. The level of collaboration and stakeholders required will depend on the scale of the schemes being progressed.

The priority of the working group meetings will be to establish the delivery priority of schemes, progress the development of schemes and identify possible funding opportunities.

### 8.3 POLICY ENABLERS

- 8.3.1. To enable the development of some of the core and potential schemes will require the production of new mode and topic specific policy and strategy documents including:
  - i **Parking Strategy:** To include extensive research on how parking spaces are currently used and should be managed and delivered in central Milton Keynes, in the future;
  - i **Public Transport Strategy:** To identify bus priority schemes and MK Future 2050 Mass Rapid Transit and potential for Park and Ride;
  - i **Cycling and Walking Strategy:** To include the identified schemes to provide a comprehensive walk and cycle network
- 8.3.2. The mode and topic specific plans are being developed from 2019 to 2020 in supporting strategy position papers. An outline of recommended focus of transport development is set out within a 3-year horizon action plan at the end of this chapter.

## 8.4 SCHEME DEVELOPMENT

8.4.1. The TIDP has presented a series of short and medium-term schemes recommended for delivery by the end of the current local plan period (by 2031). However, before the options can be delivered, further work will be needed to develop the design and detail.

8.4.2. The following steps will need to be undertaken:

- Further engagement with Stakeholders
- Public consultation on draft recommendations
- Ensure that the schemes align with Stakeholder's existing and emerging strategies
- Undertaking feasibility assessments to ensure the scheme is deliverable.
- Undertake a high-level costing exercise to assist with identifying and securing scheme funding.
- Scheme impact assessment
- Business Case development

## 8.5 A LIVING DOCUMENT

8.5.1. Transport is on the cusp of significant change as a result of advances in transport technology. The availability, applicability and uptake of new technologies and their social acceptance will have a major impact on transportation in Milton Keynes over the coming years.

8.5.2. For this reason, the TIDP will need to be agile to change. This TIDP will therefore be a 'living plan' that will be regularly reviewed throughout the plan period as further studies are undertaken and as more detail on proposed schemes becomes available. This will include:

- Additional clarity and detail on the schemes proposals
- Updates to the list of planned improvement schemes,
- Updates to the delivery timescale, and
- Updates to scheme funding sources.

## 8.6 INITIAL ACTION PLAN

8.6.1. An initial Modal Action Plan has been produced covering the infrastructure priorities for the next 3 years.

Transport Theme	Policy Enabler	3 Year Scheme Implementation Plan	3 Year Scheme Development Plan	Outcomes
Active Travel	Produce and adopt a Milton Keynes Cycling and Walking Strategy	<p><b>Enhance the existing Redway Network (Option 5 &amp; 6)</b> – Adopt a set of Redway design standards. Undertake a detailed network wide audit, identified a prioritised list of routes and develop a route corridor improvement programme and implement the schemes.</p> <p><b>Expand the Redway Network (Option 3)</b> – Identify gaps in the existing network and develop a set of schemes to enhance the existing network and link to strategic development sites.</p> <p><b>Redway Expansion into Central Milton Keynes (Option 1)</b> – undertake a CMK Redway feasibility study, identify a preferred option(s), develop a business case, consult and design and implement the preferred scheme.</p> <p><b>Consistent Wayfinding Signage (Option 15)</b> – develop and implement a Milton Keynes Legible City wayfinding scheme.</p>	<p><b>New Rural Cycle Routes (Option 4)</b> - start planning new rural cycle routes to extend the Redway network.</p> <p><b>Local Community Connectivity (Option 16)</b> – work with stakeholders and developers to ensure safe pedestrian routes are provided within developments and between local communities and to bus stops and rail stations. Develop a prioritised list of improvement schemes.</p>	<p>Enhanced Redway Network: Identification, prioritisation and enhancement of the Redway routes across the city including central Milton Keynes.</p> <p>Design Standards: Adoption of design standards for Redway routes</p> <p>Enhanced Wayfinding: Provision of comprehensive wayfinding information across the city</p> <p>Redway Network Expansion: Identification and planning for new rural routes</p> <p>Improve local connectivity: Identification and planning of local pedestrian improvements including footpaths to bus stops, rail stations, lighting and safe crossing facilities.</p>
Parking	Produce and adopt a Milton Keynes Parking Strategy and Electric Vehicle Strategy.	<p><b>Provide high quality destination cycle parking (Option 59)</b> – Work with stakeholders to identify key destinations and implement high quality covered cycle parking (schools, university, district centres, bus stops, rail stations, central Milton Keynes).</p> <p><b>Central Milton Keynes Parking (Option 64)</b> – Undertake a review of car parking in central Milton Keynes and identify a data led pricing and demand management strategy.</p> <p><b>Provide Car Club and electric vehicle parking (Option 65)</b> – Work with stakeholders (car club providers, developers) to increase the number of car club and electric vehicle charging spaces</p>	<p><b>On-street parking controls (Option 66)</b> – Work with stakeholders to identify areas of high on-street parking stress and consult on the potential for on-street parking controls.</p> <p><b>Workplace user charging (Option 30)</b> – Undertake a feasibility study assessing the potential to introduce a workplace parking levy to fund substantial public transport improvements.</p>	<p>Adoption of a New Parking and Electric Vehicle Strategies: Including data led evidence on parking use to inform pricing and demand management strategies.</p> <p>Increased Cycle Parking: Enabling cycling to employment, education, retail, leisure and public transport destinations across Milton Keynes.</p> <p>CMK Parking Strategy: A clear strategy for the future management, charging, enforcement, parking information provision and number and types of spaces in central Milton Keynes.</p> <p>Increased number of Car Club and Electric Vehicle Charging Spaces supporting reduced car ownership and uptake of electric vehicles.</p>

Transport Theme	Policy Enabler	3 Year Scheme Implementation Plan	3 Year Scheme Development Plan	Outcomes
				<p>Consider a series of resident parking zones identified through stakeholder consultation.</p> <p>Initial feasibility assessment completed on the potential for a workplace parking levy to be implemented in Milton Keynes.</p>
Behaviour Change	Produce and adopt a Milton Keynes Smarter Travel Strategy	<p><b>Smarter Travel Programme</b> – enhance the Smarter Travel Team services to support, undertake and monitor residential, education and employment travel planning.</p> <ul style="list-style-type: none"> <li>- Promote and provide sustainable travel measures and incentives and travel information via social media portals and MK Smarter Travel website.</li> <li>- Investigate potential funding schemes including paid membership, S106 and MKC taking on the Travel Plan co-ordinator roles for new and existing developments.</li> </ul>	<p><b>Multi-Modal Hospital Travel Hubs (Option 27)</b> - undertake a study to explore the potential to introduce a Hospital Travel Hubs.</p> <p><b>Multi-Modal Urban and Rural Travel Hubs (Option 25 &amp; 26)</b> - undertake a study to explore the potential to introduce Urban Travel Hubs.</p>	<p>Increased production, implementation and monitoring of effective Travel Plans</p> <p>Raised awareness and increase in sustainable travel (walking, cycling, public transport, car-sharing, incentives).</p> <p>Initial feasibility assessments completed on the potential for a Hospital Travel Hub and Urban and Rural Travel Hubs. Including location and option identification and stakeholder engagement.</p>
High Quality Public Transport	Produce and adopt a Public Transport and Electric Vehicle Strategy	<p><b>Demand Responsive Transport (Option 34)</b> – Monitor the success of ViaVan and trial its expansion in Milton Keynes to provide for orbital movements, industrial park access (shift working) and rural connectivity.</p> <p><b>Bus Stop Infrastructure (Option 44)</b> – undertake an audit of the existing bus stops, identify a programme of access improvements and implement the programme over the next 3 years.</p> <p><b>Existing Bus Services</b> – engage with bus operators to investigate the potential for upgrading the bus fleet (electric buses and high-quality vehicles with WIFI, leather seats, branded routes).</p>	<p><b>Bus Priority Corridors (Option 39, 40 &amp; 72)</b> - Working with stakeholders to identify bus priority corridors to serve existing and planned developments. Develop initial corridor schemes and engage in public consultation and develop funding bids.</p> <p><b>Mass Rapid Transit and Park and Ride (Option 35, 36, 37 &amp; 32)</b> Continued engagement with MK Futures 2050 to develop the case for Mass Rapid Transit. During this period a series bus priority corridor will be identified (Options 39, 40 and 72) providing bus priority in the short term and enabling MRT in the medium to long term. During this stage work will also be undertaken to identify potential Park and Ride sites.</p>	<p>Improved information and access the Demand Responsive Transport to serve existing employment areas and rural communities.</p> <p>Premium and low emission/electric buses introduced where possible with support from operators.</p> <p>Improved walk and cycle access to existing bus stops</p> <p>Identified set of bus priority corridors and outline designed bus priority improvement schemes.</p> <p>Explored potential of Mass Rapid Transit, Park and Ride and CMK bus interchange.</p>

Transport Theme	Policy Enabler	3 Year Scheme Implementation Plan	3 Year Scheme Development Plan	Outcomes
			<p><b>CMK Bus Interchange (Option 46)</b> – Feasibility and option study to be undertaken once the Mass Rapid Transit work is completed.</p> <p><b>Rail Station Interchanges (Option 55)</b> – Undertake access studies at Milton Keynes stations to identify and design sustainable access and parking improvements in consultation with stakeholders. Engage with East West Rail over improving station access and impacts of increased crossing barrier down time.</p>	Identified schemes to improve sustainable access to Milton Keynes rail stations.
Road	Produce and adopt Road Safety, Traffic Management and ITS Strategies	<p><b>Speed Reduction (Option 83)</b> – Undertake stakeholder engagement and if supported implement speed limit reductions on the grid road network.</p> <p><b>Expansion UTC (Option 84)</b> – Review current signal control technology and implement/expand UTC to improve public transport reliability.</p>	Explore opportunities to use emerging technologies to monitor travel movements (road and Redways), by reviewing technology options and trialing the use of smart sensors (Option 89).	<p>Safer grid road use due to speed reduction measures.</p> <p>Improved network and junction management to reduce bus delays.</p> <p>Trial use of smart sensors to gather movement data to inform the development of transport schemes.</p>
Technology	All of the above	<p>Work with fleet operators to encourage the implementation of low emission and electric vehicles. Including Milton Keynes Council, bus freight and taxi operators.</p> <p>Explore the potential for <b>integrated smart ticketing</b> with MK Future 2050.</p> <p>Explore the opportunity for <b>Mobility as a Service</b> (Option 92) to improve the seamless door-to-door journeys.</p>	Explore the potential for <b>Shared AV Vehicles</b> (Option 96) to operate in central Milton Keynes.	<p>Increased number of low emission and electric fleet vehicles operating in Milton Keynes.</p> <p>Trial use of shared AV in central Milton Keynes within 3 years.</p> <p>Engage with Mobility as a Service technology companies to explore and identify the opportunities and requirements for Milton Keynes including the implementation of a trial scheme.</p>
Freight	Produce and adopt a Freight Strategy	<b>Minimise negative impact of freight</b> - in new developments ensure effective Construction Management Plans and delivery Management plans are implemented through the planning system and appropriate servicing facilities are provided.	<b>Urban Logistics Network (Option 85, 101, 102)</b> – Explore the opportunity for Freight Consolidation and micro-consolidation and last mile logistics in Milton Keynes.	<p>Construction and delivery vehicle movement safely and efficiently managed in new developments.</p> <p>Engaged with delivery services to explore opportunities for freight consolidation, sustainable last mile and collection hubs.</p>

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