



HARLOW & GILSTON GARDEN TOWN

PART 2: SUSTAINABLE TRANSPORT CORRIDORS STRATEGY - SUMMARY REPORT

21 JANUARY 2019

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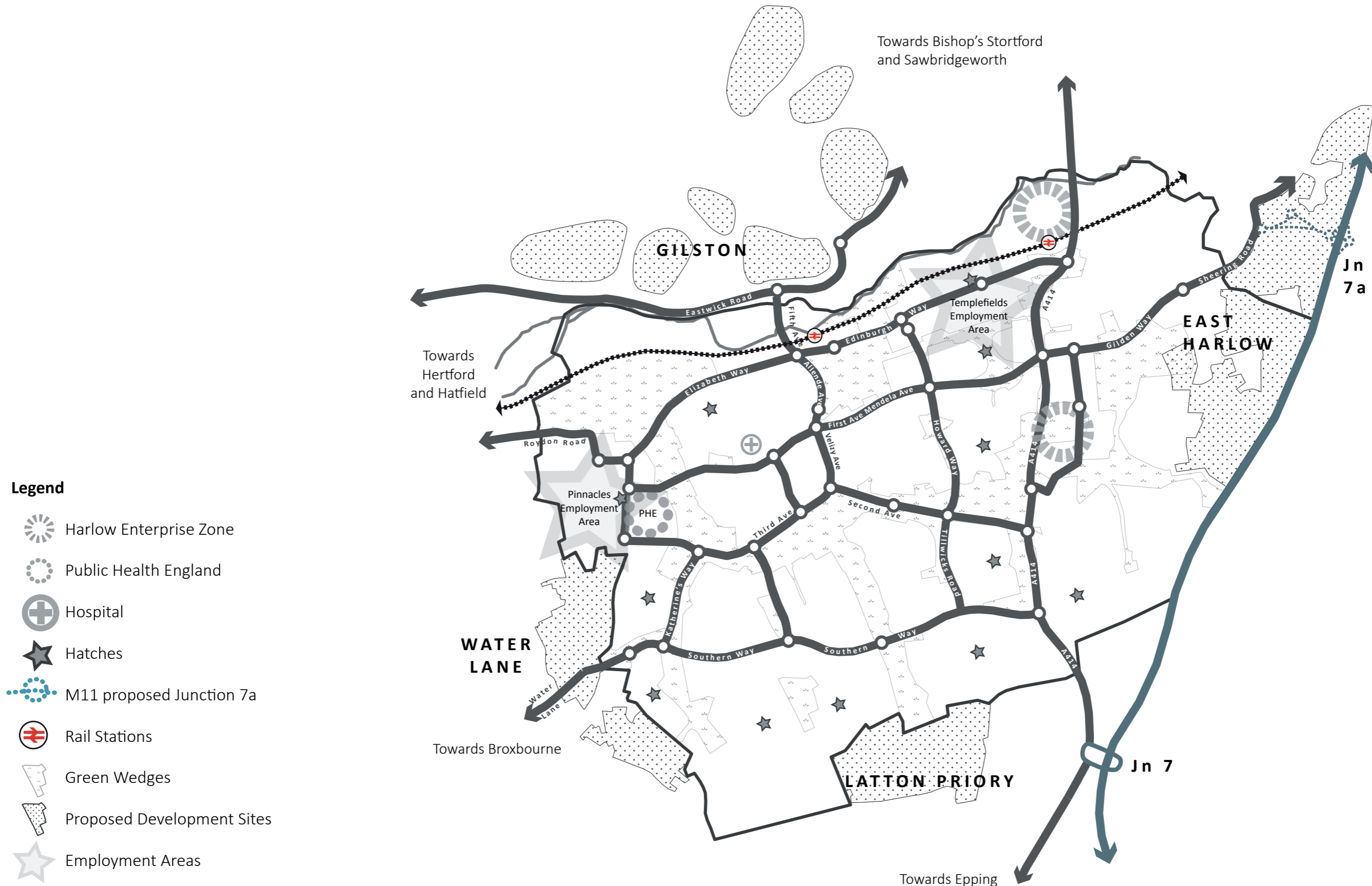
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Summary Report

GLOSSARY

AV	Autonomous Vehicle: a vehicle that is capable of sensing its environment and navigating partially or wholly without human input.	Microhub	High quality interchange facilities providing seamless and attractive interchange between all modes, includes bike share facilities. These may provide additional facilities such as delivery lockers (for online orders), and should be co-located with local centres to increase their visibility, and community cohesion.	UTC	Urban Traffic Control: the method of coordinating traffic signals in a network by the use of timing plans loaded on a centralised computer.
BRT	Bus Rapid Transit: a bus-based public transport system designed to improve capacity and reliability relative to a conventional bus system. BRT systems usually include dedicated bus roadways, and offer priority to buses at junctions where buses may interact with other traffic. They also include design features to reduce delays caused by passengers boarding or alighting buses, or purchasing fares. BRT aims to combine the capacity and speed of a metro with the flexibility, lower cost and simplicity of a bus system.	Pocket Place	A Pocket Place is a small urban or suburban park that is accessible to the general public, and provides opportunities to sit, dwell and socialise. Pocket Places can act as gateways, for example to larger green spaces or can be standalone spaces. While typically too small for much physical activity to take place within them, they may contain play facilities. They support walking and cycling across all age ranges and levels of physical ability, by providing small delightful and interesting spaces along routes where there are opportunities to rest. Larger Pocket Places can also act as a focus for wider community activity, and could contain public art, and provide important opportunities for social interaction, thereby helping to tackle isolation in local populations.	V2V	Vehicle to Vehicle: see CAV
CAV	Connected and Autonomous Vehicles: As for AV above, with the addition that connected vehicles use various communication technologies to communicate with the driver, other vehicles (vehicle-to-vehicle [V2V]), roadside infrastructure (vehicle-to-infrastructure [V2I]), and the “Cloud” [V2C]. This technology can be used to not only improve vehicle safety, but also to improve vehicle efficiency and commute times.	PT	Public Transport: buses, trains, and other forms of transport that are available to the public, charge set fares, and run on fixed routes.	VMS	Variable Message System: an electronic traffic sign that gives travellers information about special events, traffic congestion, accidents, incidents, roadworks, or speed limits on a specific highway segment. VMS can also provide parking information to guide drivers to available car parking spaces. They may also ask vehicles to take alternative routes.
E-bikes	Electric bikes: a bicycle, also known as a powerbike or booster bike, with an integrated electric motor that can be used for propulsion.	RTI	Real Time Information: up-to-the-minute provision of information relating to public transport, enabling customers to plan their journeys with more reliability.	H&G Garden Town	Harlow and Gilston Garden Town.
EV	Electric Vehicle: a vehicle that uses one or more electric motors for propulsion.	SPONS	A comprehensive and up-to-date handbook providing range of indices measuring construction costs and prices.		
MaaS	Mobility as a Service: describes a shift away from personally-owned modes of transportation towards mobility solutions that are consumed as a service. This is enabled by combining transportation services from public and private transportation providers through a unified gateway that creates and manages the trip, which users can pay for with a single account.	Supergreenway	Attractive walk and cycle routes utilising and expanding Harlow’s green network.		
		TCPA	Town and Country Planning Association		
		TfL	Transport for London		

BASE MAP



INTRODUCTION

In 2017 East Herts Council, Harlow Council and Epping Forest Council were collectively awarded government grants totalling £675,000 to support proposals to develop a Garden Town at Harlow and Gilston. The project will see 16,000 new homes built in and around Harlow by 2033:

- Approximately 9,000 within Harlow
- Approximately 2,600 East of Harlow
- Approximately 4,000 new homes at Water Lane, Latton Priory and East Harlow
- Approximately 3,000 new homes in Gilston

The development and growth of Harlow and Gilston Garden Town is driven by three local authorities and two county councils: Harlow Council, Epping Forest District Council, East Herts District Council, Hertfordshire County Council and Essex County Council. To accommodate this growth, a Memorandum of Understanding (MoU) of Highways & Transportation Infrastructure for the West Essex / East Hertfordshire Housing Market Area has been produced that identifies a number of required schemes including:

- Upgrade M11 Junction 7 and construct new Junction 7a
- A414 corridor through Harlow (sections not currently either being upgraded or programmed for upgrading)
- A414 - the provision of a second River Stort crossing to relieve the Harlow network and also help provide capacity for the provision of a north/south Sustainable Transport Corridor
- Potential relocation of Princess Alexandra Hospital (site to be confirmed) or redevelopment of existing site
- Multi-modal sustainable corridors, north-south and east-west through Harlow town

This Sustainable Transport Corridors Strategy links to the MoU and has been developed to support delivery of the Garden Town. Its aim is to ensure residents, workers and visitors can get around the Garden Town by a choice of transport modes easily, efficiently and safely, as well as reducing the need to travel. It articulates the need for transformational change to not only make sustainable modes a first choice for travel wherever possible, but also to ensure movement corridors work as hard as possible to bring communities together. Transformational change also aims to provide leisure opportunities and enhanced liveability throughout the Garden Town.

The Sustainable Transport Corridors Strategy also considers the future mobility of the town and the technological innovations that will emerge as the Garden Town is delivered. The solutions developed within this Strategy aim to ensure that the town is resilient to new and emerging technologies by answering questions such as:

- How will we travel in the future?
- How will technology influence our travel behaviour?
- What infrastructure is needed to enable Harlow and Gilston to embrace technological developments as they emerge?

The Hertfordshire LEP Concept Framework highlights the proposed development sites in the Gilston area that could ultimately provide 10,000 of these new homes, with approximately 3,050 of these delivered during the current plan period.



DRIVERS FOR CHANGE

To support delivery of the Garden Town ambitions, there are several interconnecting factors that need to be addressed. These are the *Drivers for Change*, and include the need to:

- Improve the attractiveness of Harlow and Gilston as a place to live, work or visit
- Improve health
- Support sustainable growth and regeneration
- Connect existing and new communities
- Ensure resilience and an ability to accommodate new and innovative technologies



STRATEGY OBJECTIVES

Six objectives to deliver the Garden Town ambitions have been identified:

OBJECTIVE 1: An average of 50% of all journeys are made by sustainable modes across the town with 60% in the new settlements

OBJECTIVE 2: High quality, reliable, rapid and high frequency public transport is available and the option of choice

OBJECTIVE 3: Harlow and Gilston has a strong walking and cycling culture and most people can identify somewhere they love to walk or cycle to

OBJECTIVE 4: Easy to access, convenient and inclusive sustainable mobility is available to all

OBJECTIVE 5: The walk and cycle supergreenways and their associated public spaces are used by all and they bring communities together

OBJECTIVE 6: The transport network is resilient and as far as possible can accommodate and respond to changing technologies and associated opportunities



Cycle parking needs to be well overlooked to be well used, and should be considered as an integral part of wider street furniture provision.

STRATEGY SCOPE

This sustainable transport strategy consists of three tiers:

- 1. Sustainable Transport Corridors - Bus Rapid Transit / Walk-Cycle super-greenway:**
- 2. Door to door walking, cycling and shared transport:**
- 3. Changing hearts and minds:**

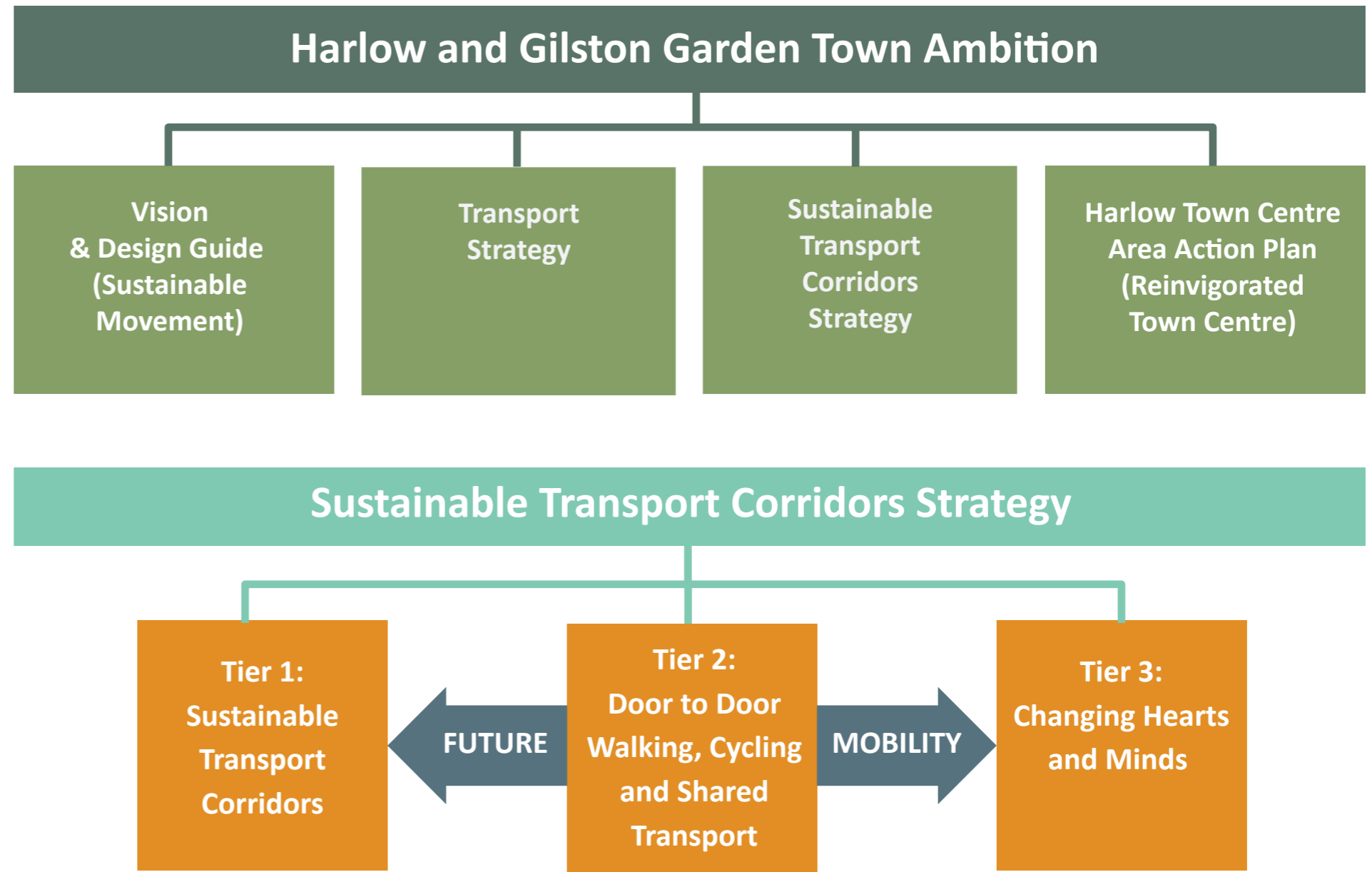
Underlying the three tiers is the consideration of 'Future Mobility'. Solutions throughout the strategy have taken account of known and expected future changes in technology that will impact how people travel. The strategy therefore enables the Garden Town to embrace new technologies as they emerge and take advantage of opportunities that will encourage existing and new residents and employees to choose to travel sustainably.

This document is one of the key strategies which are interdependent yet complimentary. The other strategies are;

- H&G Garden Town Vision and Design Guide
- Harlow Town Centre Area Action Plan
- H&G Garden Town Transport Strategy

The structure of this strategy and its relationship to the Spatial Vision and overarching ambition is illustrated here. The three tiers of the Sustainable Transport Corridors Strategy are shown in orange.

The Corridors themselves are described on the following pages.



SUSTAINABLE TRANSPORT CORRIDOR OPTIONS

The key considerations that have determined which indicative corridors should become Sustainable Transport Corridors are their ability to meet the strategy objectives. In addition further factors have also been considered, such as:

DIRECTNESS

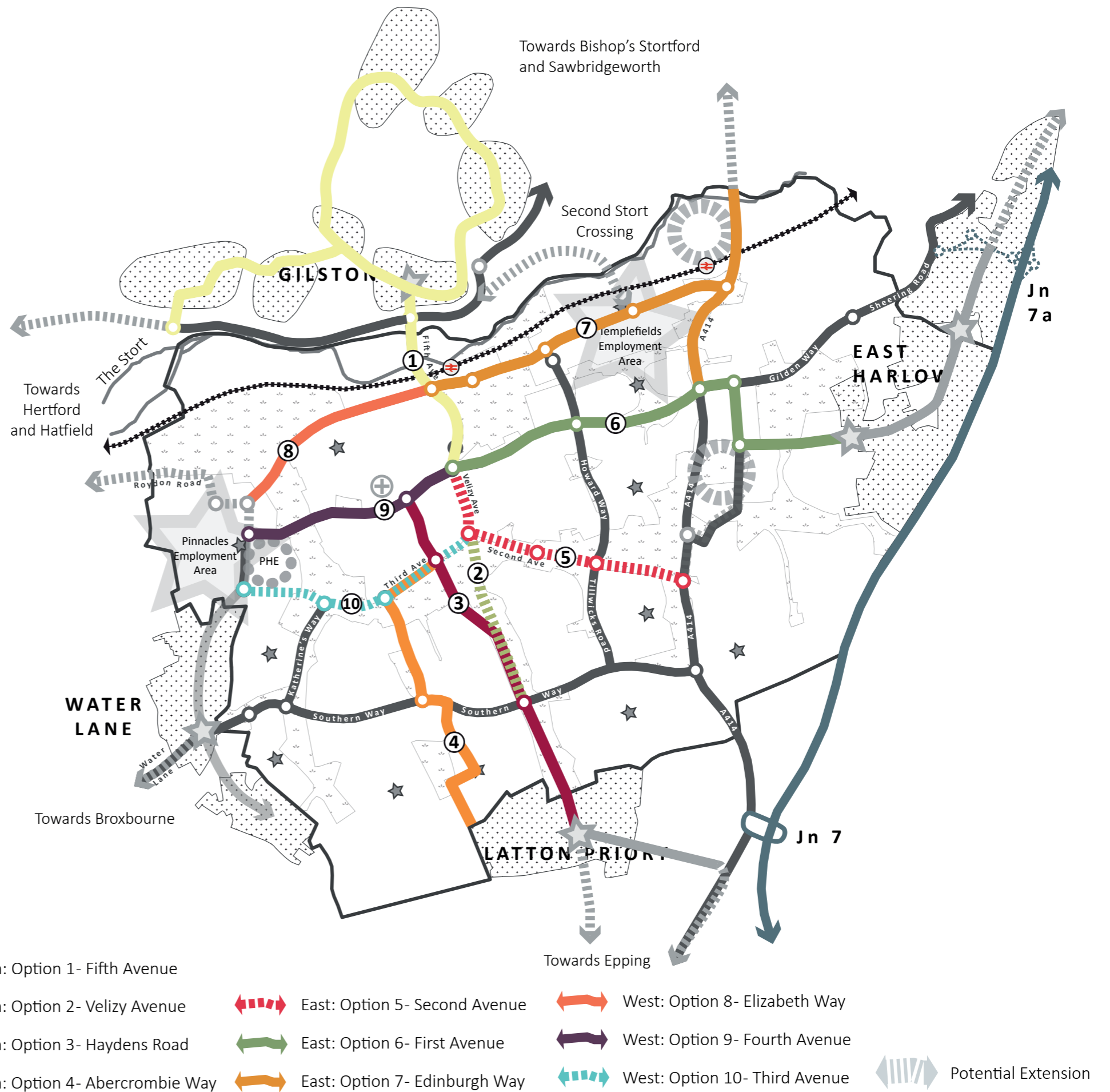
CONNECT NEW HOUSING AND KEY ASSETS

POTENTIAL FOR BUS / BUS RAPID TRANSIT (BRT)

POTENTIAL FOR VERY HIGH QUALITY WALK AND CYCLE LINKS

WILL SUPPORT SUSTAINABLE TRAVEL CHOICES FOR NEW AND EXISTING COMMUNITIES

CAN TRANSFORM BRT AND CYCLING / WALKING ON THE SAME CORRIDOR



LONG TERM REVENUE SUPPORT REQUIREMENT

Wherever possible, the locations of the BRT routes need to be such that the risk of a requirement for long term revenue support is reduced/ removed. Providing these routes along corridors where existing bus services run successfully and where there is the highest catchment of riders both from existing and future residents will increase the potential viability of the corridors.

The table below assesses each of the potential corridors against these criteria using a red amber green weighting.

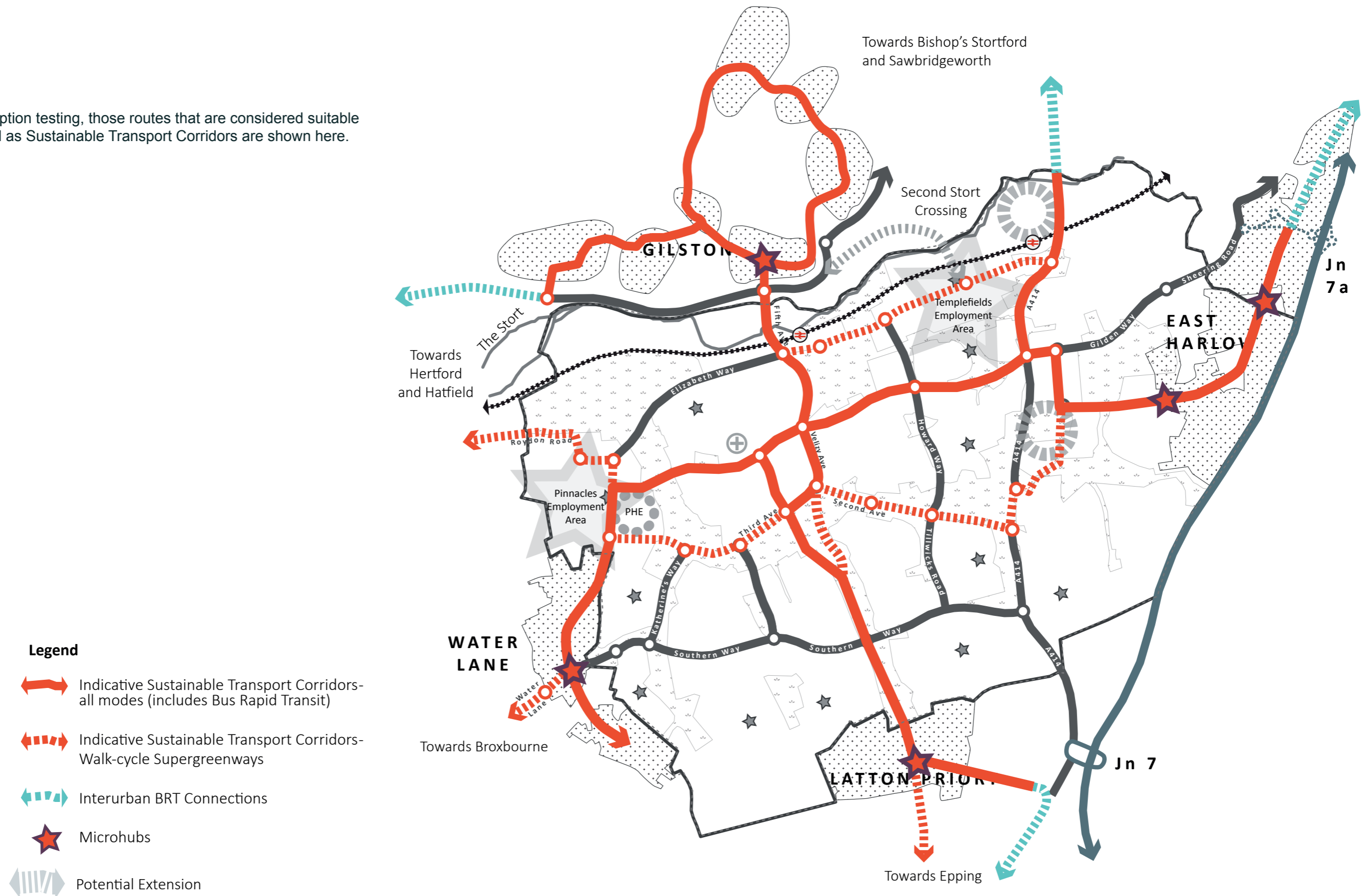
- Red** = high risk/poor fit
- Amber** = medium risk/medium fit
- Green** = low risk/good fit

	Direct	Connects new housing developments and key assets	Potential for Bus / BRT	Potential for very high quality walk / cycle links	Will support sustainable travel choices for existing communities	Bus BRT and cycling walking can be transformed on the same corridor	Risk of long term revenue support	Proposed Sustainable Transport Corridor
North: Option 1 - Fifth Avenue								Bus Rapid Transit Cycle/walk Supergreenway
South: Option 2 - Velizy Avenue								Cycle/walk Supergreenway
South: Option 3 - Haydens Road								Bus Rapid Transit Cycle/walk Supergreenway
South: Option 4 - Abercrombie Way								
East: Option 5 - Second Avenue								Cycle/walk Supergreenway
East: Option 6 - First Avenue								Bus Rapid Transit Cycle/walk Supergreenway
East: Option 7 - Edinburgh Way								Cycle/walk Supergreenway
West: Option 8 - Elizabeth Way								
West: Option 9 - Fourth Avenue								Bus Rapid Transit Cycle/walk Supergreenway
West: Option 10 - Third Avenue								Cycle/walk Supergreenway

By upgrading existing cycle walk link south through greenspace

INDICATIVE SUSTAINABLE TRANSPORT CORRIDORS

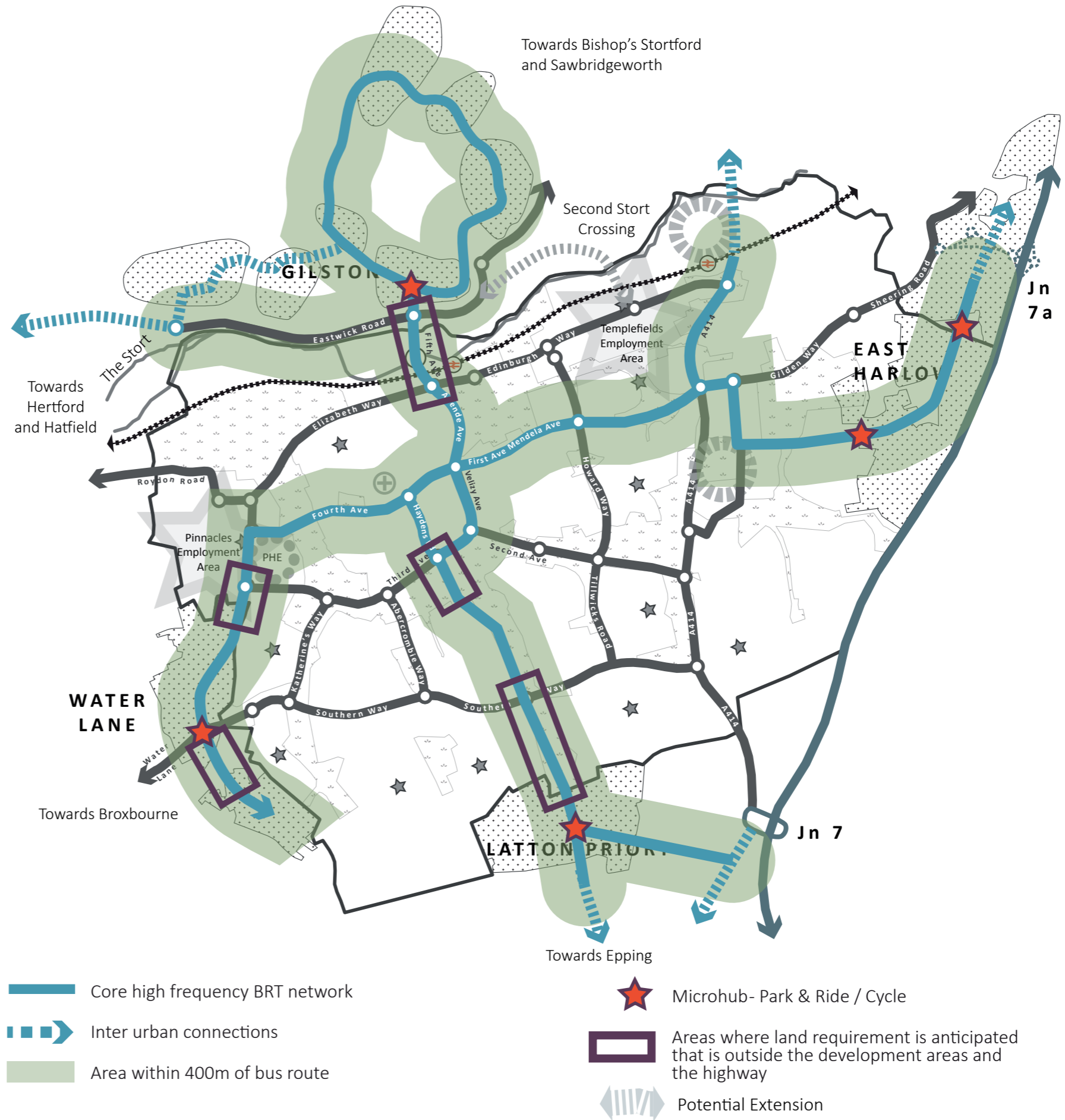
Following the Option testing, those routes that are considered suitable to be developed as Sustainable Transport Corridors are shown here.



BUS RAPID TRANSIT

Bus Rapid Transit (BRT) will be at the top of the public / shared transport hierarchy and will be focused on providing a branded limited stop, high frequency service to connect new housing developments with employment including the town centre and wider transport interchange including to rail and the underground. Typical features would include:

- Provision of bus priority, where required, to ensure reliable quick journey times and provide advantage for public / shared transport over single occupier car use.
- High quality bus stops with real time information
- Working in partnership with operators to drive up vehicle and service quality
- Working to deliver electric buses, in particular on BRT routes
- Working to ensure the transport data is available as open data, to support innovation and the development of Smart Mobility platforms such as MaaS
- Smart ticketing



WALK-CYCLE SUPERGREENWAYS

There is an opportunity to deliver a road network of very high quality walk-cycle supergreenways. These would be enjoyable to use, in places delightful, and accessible for users of all ages and abilities.

These supergreenways would ensure safety for the vulnerable road users as pedestrians and cyclists would be segregated from traffic at all times and along busy sections cyclists and pedestrians would be segregated from each other.

A series of measures would be undertaken to encourage residents to use these walk-cycle supergreenways including the provision of regular seating, distinctive wayfinding and lighting and improving crossing facilities.'



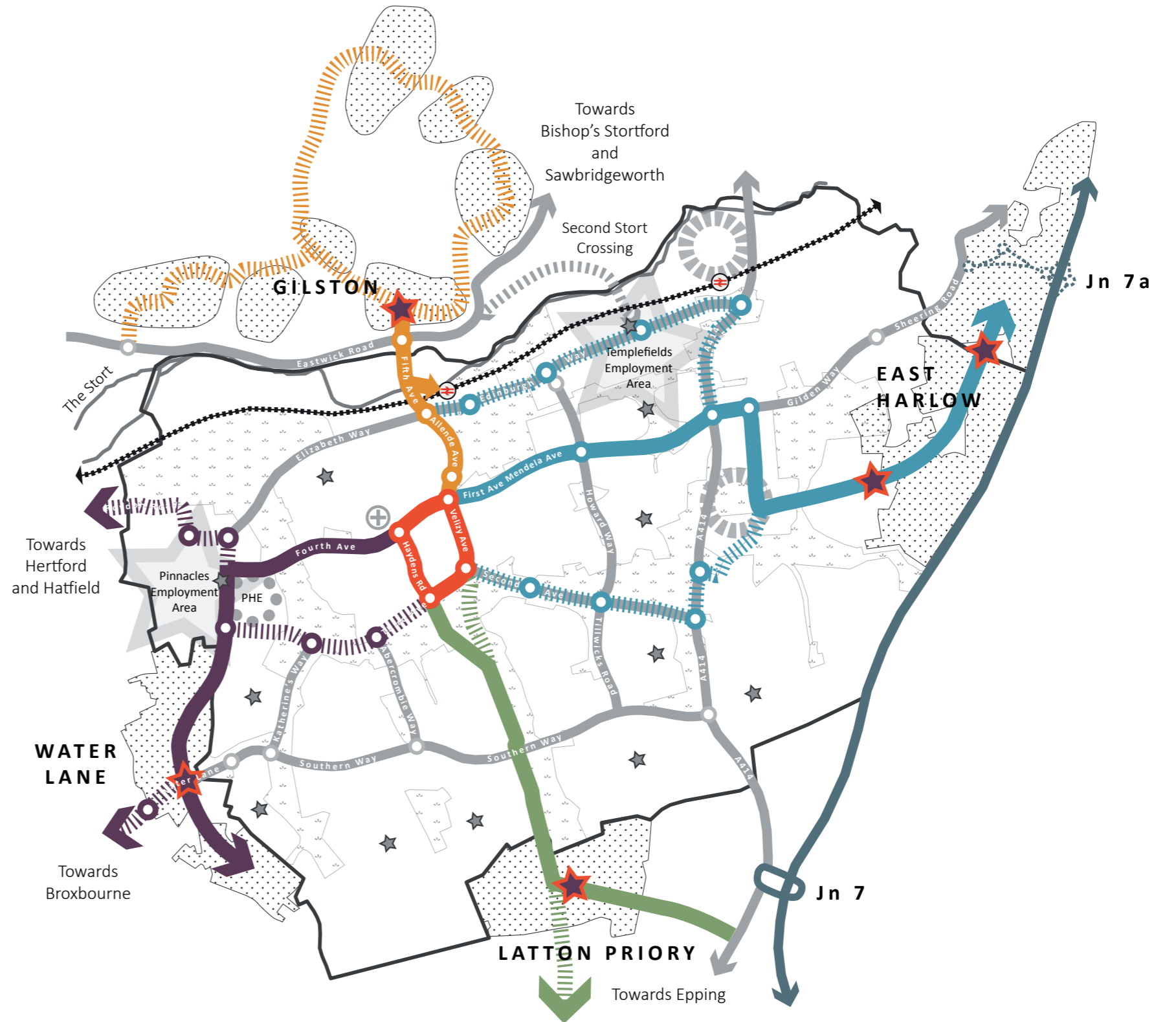
THE CORRIDORS

Based on the Issues and Options Study, four Sustainable Transport Corridors and a Town Centre Interchange have been identified, as shown here.

The Corridors extend from the Town Centre Interchange to the strategic housing sites around Harlow, whilst the Interchange itself will deliver active travel improvements to this important hub.

Microhubs are locations within the strategic housing sites where additional high quality, seamless interchange facilities, should be delivered to encourage people to travel sustainably.

The Corridors and Interchange are described in detail in the full Strategy.



Sustainable Transport Corridors

-  Corridor 1- North: Town Centre to Gilston
-  Corridor 2- South: Town Centre to Latton Priory
-  Corridor 3- East: Town Centre to East Harlow
-  Corridor 4- West: Town Centre to Water Lane
-  Town Centre Interchange
-  Microhubs
-  Potential Extension

DOOR TO DOOR

The second facet of the Sustainable Transport Corridors Strategy addresses door to door journeys. These should primarily be made by walking, cycling and/or public transport. This aspect addresses the wider street, walking and cycling and local bus service networks within the Garden Town. The key components of this approach are to connect to the Sustainable Transport Corridors and:

- Ensure the existing street network is attractive for walking and cycling
- Revitalise the town's existing walking and cycling network
- Filling in key missing links in the town's existing walking and cycling network
- Provide connections to the walk-cycle super-greenways
- Reduce severance
- Deliver streets in the new development that are attractive for and support walking and cycling
- Provide cross town bus services with coordinated timetables

To address these components there are three key strands as set out on the following pages.

1. Streets and connections
2. Local bus network
3. Demand responsive transport

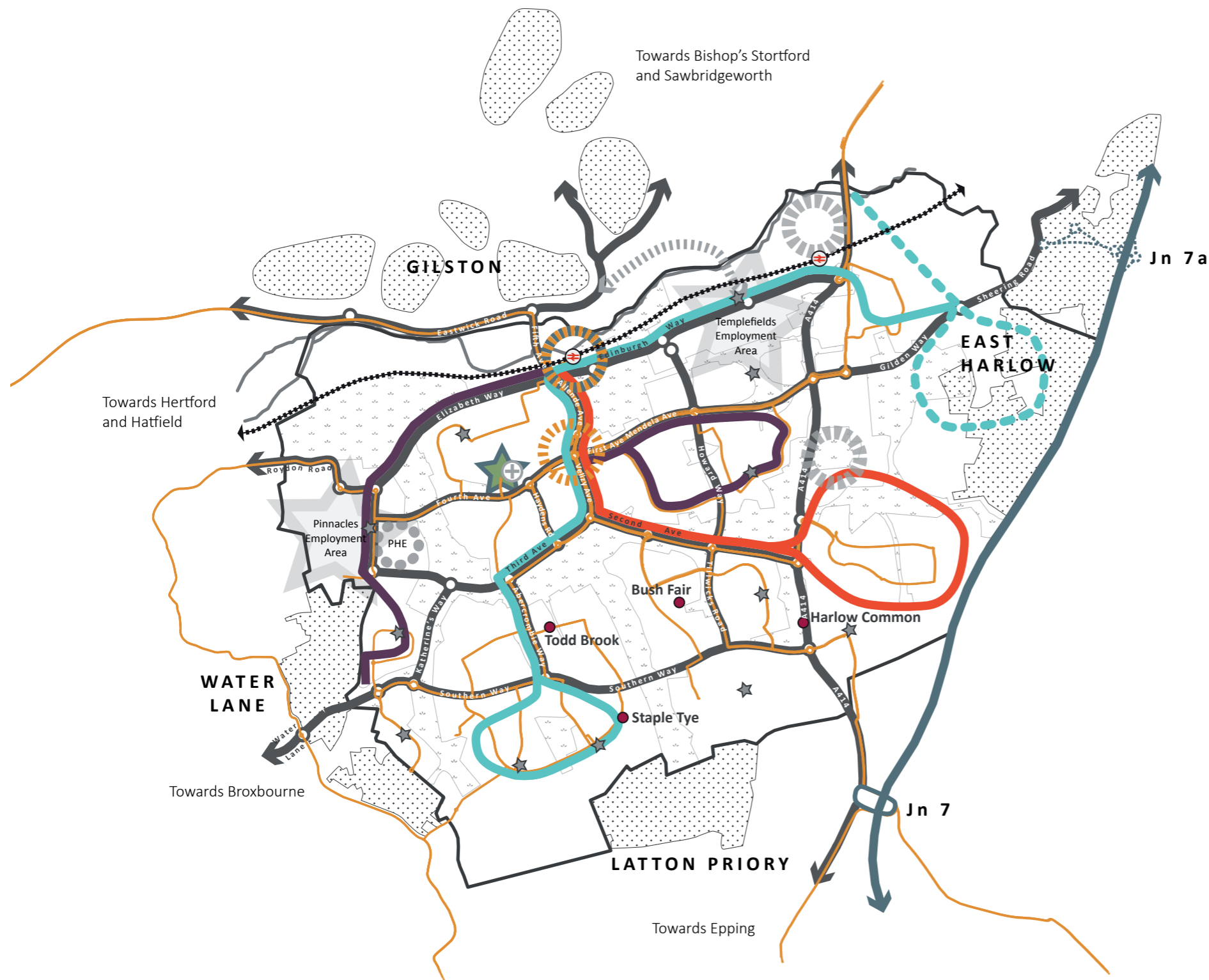
In each case, a set of measures is proposed and from these, *Quick Wins* are identified. Quick Wins are measures that should be implemented as a matter of priority to benefit the existing community and ensure measures are in place when new developments become occupied.

1. STREETS AND CONNECTIONS



MEASURE	QUICK WIN?
Speed management / limit programme including 20mph zones for existing residential areas. Additionally, low speeds means less emissions	Yes
Programme of gateway/entry treatments into existing residential areas	Yes
Programme to identify and address key gaps in the walking and cycling networks	Yes
Programme to improve crossing facilities in particular on 'key streets' at junctions	Yes
Programme to provide cycle parking and e-bike charging at destinations	Yes
Through masterplanning the new communities at Water Lane should adopt the overall 'Door to Door' approach. Specifically, the new communities should integrate with existing neighbourhoods at Katherines, Sumners and Kingsmoor. Broadley Road and Phelps Road could provide a good local links.	No
Through masterplanning the new Gilston Villages should adopt the overall 'Door to Door' approach. Specifically, the new Gilston villages should be integrated into the wider, organic network of lanes, to avoid these becoming isolated and to ensure a village character informed by a classic village structure.	No
Through masterplanning the new communities at East Harlow should adopt the overall 'Door to Door' approach. Safe and attractive cycle links should be provided through the neighbourhoods to the nearby Enterprise Zone.	No
Through masterplanning the new communities at Latton Priory should adopt the overall 'Door to Door' approach. Specifically, the new communities should be well connected for cyclists, pedestrians and cars with Rye Hill Road and London Road. The community should integrate with existing neighbourhoods at Staple Tye and Latton Bush. Extending Fern Hill Lane and Riddings Lane would provide good links.	No

2. LOCAL BUS NETWORK











The local bus network provides a critical service but at the moment there are limited cross town services, complex routing and quality is variable. Facilities such as real time information and smart ticketing are limited.

Some parts of the network are relatively high frequency (serving the areas of Bush Fair, Staple Tye, Todd Brook and Harlow Common) and these areas have higher bus mode share to work.

It is proposed that the local bus networks are reviewed in the light of the proposals for BRT. This will also enable specific consideration to be given to the implications of moving or improving the hospital, the major investment being made by Public Health England and the Enterprise Zone on the local bus network.

MEASURE	QUICK WIN?
Commence partnership working with the bus operators	Yes
Agree long terms goals in terms of public /shared transport quality and mode share	Yes
Agree a coordinated programme of investment planned through a mechanism such as a bus quality partnership	Yes

Legend

-  Future 3-4 buses per hour urban
-  Future 3-4 buses per hour urban
-  Future 3-4 buses per hour urban
-  Additional future 3-4 buses per hour urban
-  Existing services: 2-4 Buses per hour
-  High quality bus/train interchange
-  High quality and timed bus-to-bus interchange
-  Potential Extension

3. DEMAND RESPONSIVE TRANSPORT

Currently, existing shared demand-responsive services like Dial-a-Ride often provide a subsidised service for rural areas or for people who can't use buses easily. These services often require booking in advance and in some cases also only provide journeys during the day. However, the development of technology which allows easy booking, tracking of vehicles and optimisation of routes is anticipated to lead to the expansion of commercial on demand shared transport including that which requires limited forward planning.

In Harlow the provision of on demand shared services would provide an important service that could infill the gaps in timetabled bus services in terms of both the times and geography of operation. These services as they emerge will need to be recognised as a valuable part of the public transport offer and enabled to use the bus priority and other facilities for public transport.

Arriva who are the main bus operator in Harlow are trialling a service called Arriva Click in Kent. ArrivaClick is an Uber-style bus service enabling people to order a minibus via a mobile phone app. Bus passenger who use the on-demand ArrivaClick service determine the route by entering their pick-up point and destination and the technology matches people travelling in the same direction. The app allows people to track their chosen vehicle, tell them the name of the driver, reserve a seat and pay for the journey. Journeys are priced by the mile. The starting price being £1 per mile; making it up to 75% cheaper than taxi fares but also, for shorter journeys, cheaper than a single bus fare.

Based on their experience at Sittingbourne, Arriva consider that the presence of a major hospital and more leisure services would be an ideal location for ArrivaClick. Given the characteristics of Harlow and the ambitions of the Harlow and Gilston Garden Town, the delivery of a similar trial should be explored in Harlow in parallel to the delivery of revised routes for crosstown bus services and BRT.

MEASURE	QUICK WIN?
Investigate delivery of a trial demand responsive transport service such as 'Arriva Click'	Yes

CHANGING HEARTS AND MINDS

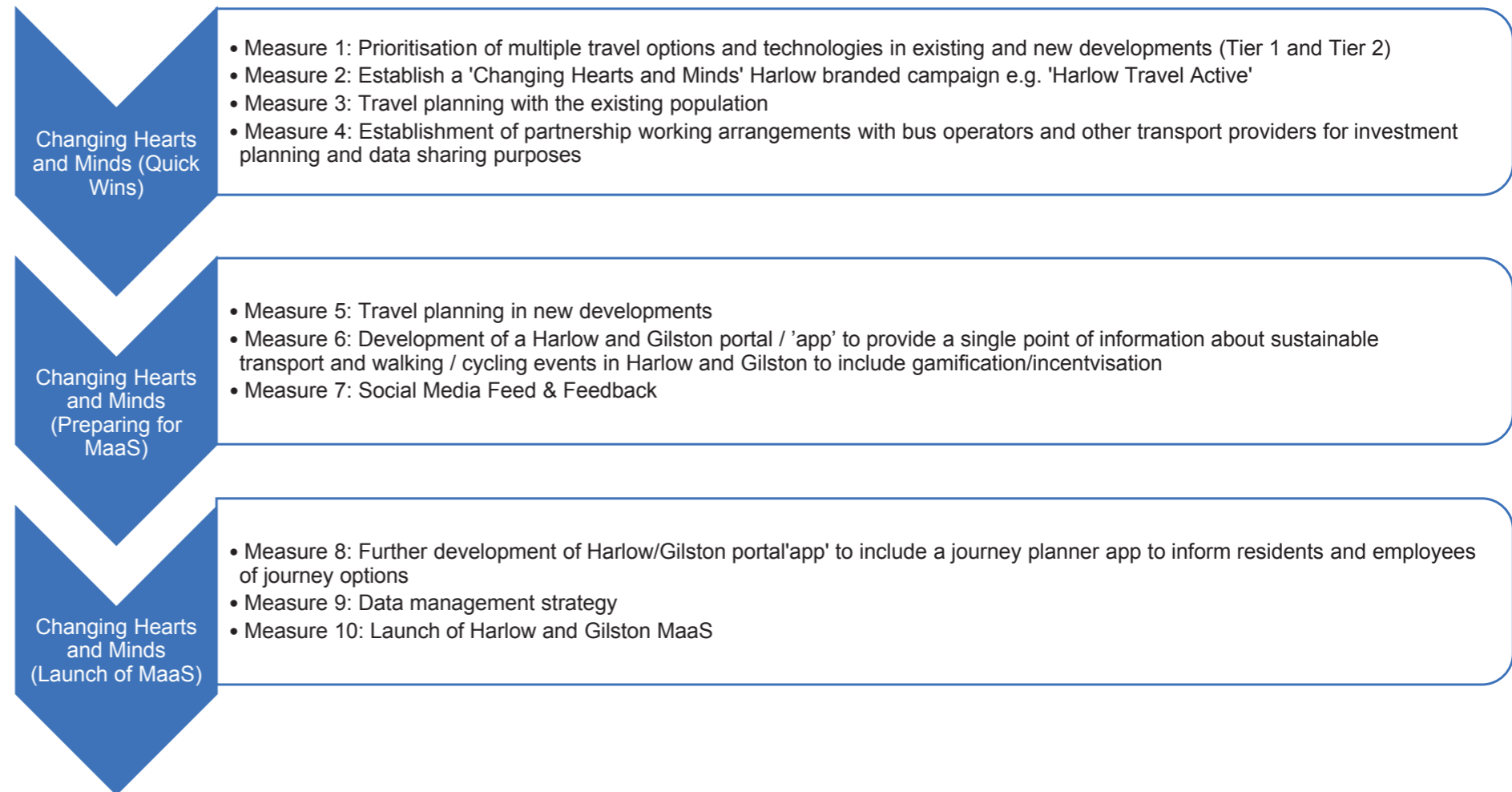
Sections 4 and 5 of this report outline the infrastructure improvements needed to achieve the objectives of the Sustainable Transport Corridors Strategy. Ahead of and alongside these infrastructure improvements, a behaviour change tier focused on changing hearts and minds is key to achieving the transformational change envisioned.

Behaviour change campaigns have traditionally focused on the setting up of workplace travel plans, personalised travel planning, developing school travel plans, marketing public transport to local people, broader travel awareness campaigns and smaller projects such as local car clubs.

However, the field of travel behaviour change is evolving rapidly with the introduction of technology, data sharing, apps and online communication. The long term trajectory is towards 'Mobility as a Service' or 'MaaS'. A basic example is when an individual searches for the best way to travel from point A to point B then they are also offered the opportunity to buy their bus or rail ticket for the journey or pay for their parking. In the longer term, MaaS will be influencing residents and employees in the Garden Town and therefore should be a key consideration for the new development sites.

Delivering this 'Changing Hearts and Minds' Tier in Harlow and Gilston with a view to build towards MaaS could become part of a wider longer term vision and pilot for building towards the concept of MaaS across Essex and Hertfordshire.

The ultimate goal of MaaS is that residents/employees subscribe to a town-wide service that allows easy access to information on public transport, car sharing and bike sharing through a universal payment system accessed through an app on smartphones.



STRATEGY STRUCTURE

The Strategy is set out in the following way:

1. Introduction to the Strategy and the Planning Policy Context
2. Key Challenges and Opportunities, including a review of current travel behaviour and movement issues
3. The Sustainable Transport Corridors Strategy, which provides an introduction to the Corridors themselves, door-to-door walking and cycling, and changing hearts and minds
4. A detailed review of the five proposed Corridor areas, the issues affecting them, opportunities for intervention and associated costs
5. A detailed review of the door-to-door strategy
6. A detailed review of how to change hearts and minds
7. A review of indicative costs for the three tiers
8. A delivery and phasing plan
9. Intended outcomes and how to monitor them

HARLOW CIVIC SOCIETY 2008

To honour the work of
Sir Frederick Gibberd
1908 - 1984

Architect, Landscape Designer
Master Planner of Harlow
1947 - 1984

IF YOU SEEK MY MONUMENT - LOOK AROUND YOU