

Kingston Town Centre Movement Strategy

Final Report - Executive Summary

November 2014

Executive Summary

Background

Steer Davies Gleave has undertaken a movement study of Kingston Town Centre (KTC) on behalf of the Royal Borough of Kingston upon Thames (RBK). The main aim of the study is to produce a Strategy document which provides an overarching vision for movement in KTC, balancing future movement demands whilst creating significant place-making opportunities to enhance the quality of the KTC environment and thereby support growth. RBK is taking a proactive approach to growth and development in KTC, and it is envisaged a number of significant development sites will be realised by the year 2031; the study has taken into account the demand generated by this development and proposes transport measures to respond to this.

The study considers provisions for all relevant modes of transport within the town centre, including off-street car parking provisions, in order to explore strategic options for change and provide a technical evidence base to support decision-making and investment. In this regard, the study supports Core Strategy objectives, and will also directly inform a planned revision of the K+20 Kingston Town Centre Area Action Plan (AAP), adopted 2008.

This report presents the strategy as developed in Stage 2 of the study. It follows on from Stage 1 which comprised baseline analysis to identify issues and opportunities related to movement and parking in KTC.

Development context

There are a significant number of development sites across KTC at various stages in the planning pipeline, and a number of other sites that are identified in the extant AAP for potential development. The development context is rapidly evolving and during the preparation of this strategy the scale and nature of development on specific sites has changed. To help shape opportunities RBK is preparing development briefs for two key areas: North Kingston, and Eden Quarter. Preparation of this strategy has taken account of current thinking for both of these areas, and also informed work on the development briefs.

North Kingston

A first stage development brief was prepared and adopted by RBK in November 2013. A second stage brief is currently being prepared which will refine development requirements. Key changes related to movement within this brief include:

- > Closure of Kingsgate Road to traffic, and creation of a new cycling and walking link along this alignment.
- > New left-hand turn from Sopwith Way to Richmond Road.
- > New left-hand turn from Sury Basin to Seven Kings Way for access to the gas-holder development site (access only).

Eden Quarter

GVA and Allies & Morrison Urban Practitioners have been commissioned to prepare a development brief for the Eden Quarter area. Among other sites this includes the Eden Walk Shopping Centre, the Cattle Market Car Park, and the Ashdown Road car park. Work on this is ongoing.

Vision for movement

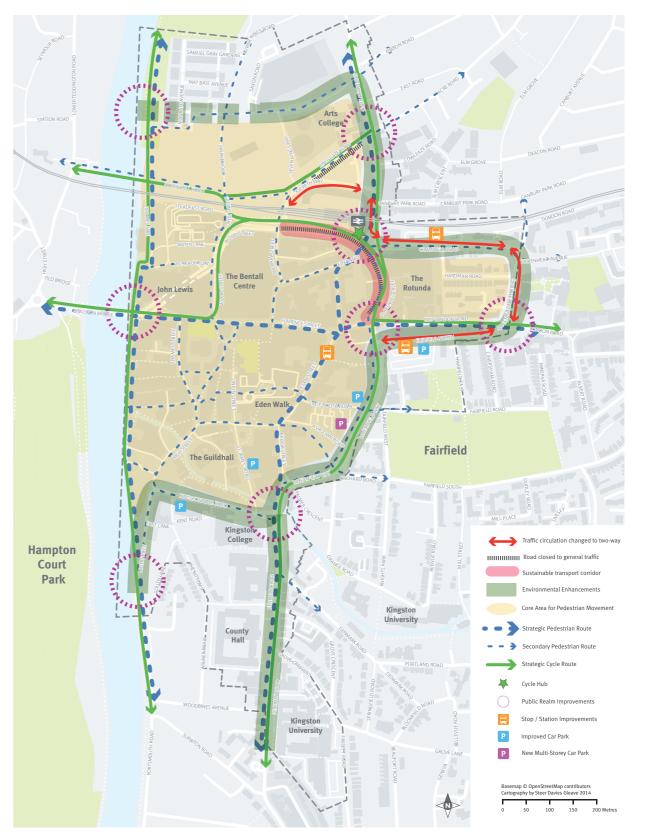
The strategy is based around a high level vision for movement.

This sets overarching design principles that shape the detail of transport measures and highways options presented. The vision is:

A balanced transport network that supports the Kingston experience by maintaining the town centre as a high-quality and attractive place, facilitating town centre development opportunities, and supporting a local economy that is diverse, vital and competitive. It delivers improved opportunities for walking, cycling and public transport to encourage movement by these modes whilst also facilitating access by private vehicles.

This is illustrated in the diagram to the right. The core components of the vision are:

- > Removal of traffic from Wood Street and Clarence Street to create sustainable transport corridor for walking and cycling, along with substantial new areas of public realm and development opportunities in association with Crossrail 2
- > Enhanced walkability across an expanded area of KTC
- > High quality pedestrian corridors on key routes



Vision for Movement



- > Walkable grid of pedestrian connections; improved crossings on relief road; and linkages to surrounds
- > Green boulevard design treatment for relief road
- > Mini-Holland cycling proposals
- > Gateway public realm enhancements
- > Improved facilities for bus operations and improved public transport passenger experience

This vision diagram shows one possible future highway layout (Scenario 6), which is one out of eight highways scenarios that were considered (as described further below). It is the highways scenario that consists of the most comprehensive changes to the current road network, and it has been included in the diagram as it offers the potential to make the most significant positive contribution to KTC in terms of place-making out of all the scenarios. The key feature of this scenario is closing the Wood Street / Clarence Street section of the gyratory to general traffic, transforming it into a sustainable transport corridor. The remaining parts of the gyratory would be converted to two-way working (Sopwith Way / Richmond Road south / Cromwell Road / Queen Elizabeth Way / Fairfield North).

However, the significant change presented by this highways scenario inherently means that there are several challenges that will need to be addressed, in particular the need to enhance accessibility to KTC by public transport, walking and cycling. It therefore represents a long-term vision, and is likely to be dependent on the implementation of Crossrail 2. Significant feasibility, design and consultation work would need to be undertaken in the intervening years if this scenario was to be pursued. In addition, it should be noted however that whilst Scenario 6 aligns most closely with the overall vision, the vision is not dependant on any particular highways scenario.

In addition, the vision is supported by a hierarchy of street types with associated design principles. The hierarchy sets key design parameters for an improved future network of streets and links in the study area. It applies a coordinated and coherent approach in support of wider place-making objectives. This is intended as a starting point for further elaboration in later studies, ultimately leading to a design guide for street improvement and public space projects within KTC.

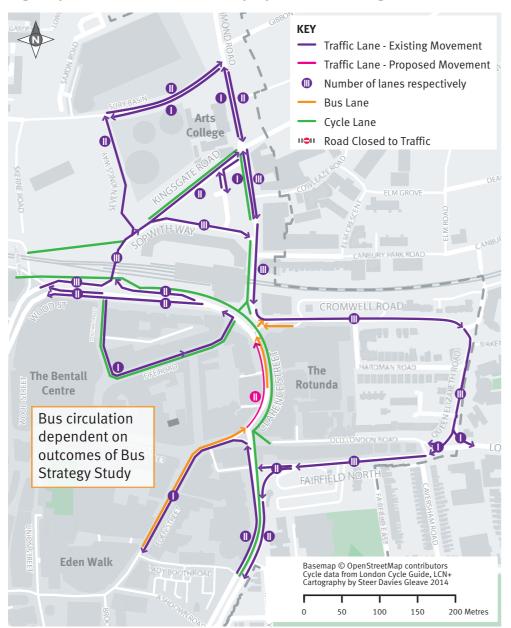
Highways scenario development

A wide range of possible highways scenarios was considered, ranging from relatively minor interventions through to options involving comprehensive changes. A longlist of eight scenarios was initially developed and subject to a technical highways review and a high-level multi-criteria evaluation. These were then sifted to a shortlist of three scenarios (nos. 1, 3 and 8) which were examined further. Consideration was given to the key benefits arising from each scenario, as well as the challenges associated with each scenario and how these could potentially be overcome. Traffic models were also used to identify how the scenarios would affect traffic capacity, and the implications that this could have. At a later stage a fourth scenario (no. 6) was then considered. Due to the late addition of Scenario 6 to the shortlist it has not been tested in the traffic models. The traffic impacts for this scenario have been estimated relative to the modelled impacts of Scenario 8.

The intention of the shortlist was to explore varying degrees of change, including comprehensive changes to highways working such as closing parts of the gyratory, or introducing two-way working. This process is described further in Chapter 6. The diagrams on the right illustrate the four shortlisted scenarios 1, 3, 8 and 6. They are deliberately presented in this order to reflect the increasing level of intervention proposed, from least to most extensive change.

Following on from the diagrams is a summary table summarising impacts of each scenario, the main benefits, challenges, and measures required to mitigate challenges. The scenarios with more comprehensive changes (nos. 6 and 8) present more significant challenges, however they also present the most significant benefits for KTC overall.

Highways Scenario 1: Mini-Holland proposals and strategic enhancements

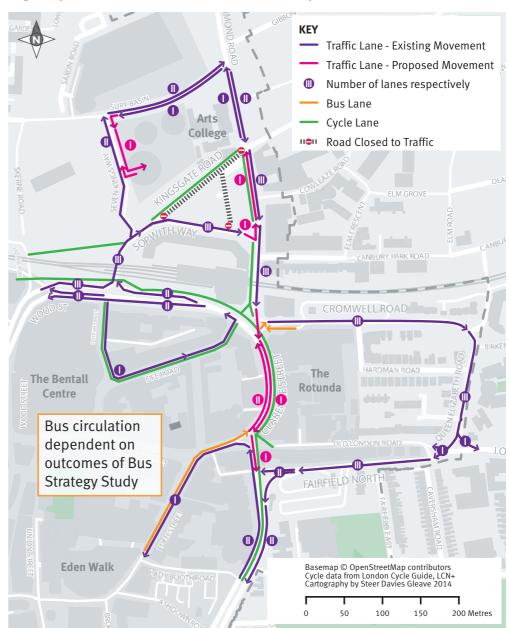


This scenario involves relatively few changes to the town centre road network. Its key features are:

- > Retain the overall configuration of the existing gyratory system
- > Implement Wheatfield Way/ Station Plaza mini-Holland schemes
- > Number of lanes on Clarence Street reduced from three to two
- > No changes to the North Kingston road network

This scenario has few challenges and would be relatively straightforward to implement. A key benefit that would arise from this scenario is significantly improved connectivity and safety for cyclists through the provision of dedicated facilities as part of the mini-Holland schemes. This scenario also offer the opportunity to enhance the urban realm, particularly in front of the railway station, which is a key gateway to KTC.

Highways Scenario 3: Clarence Street two-way



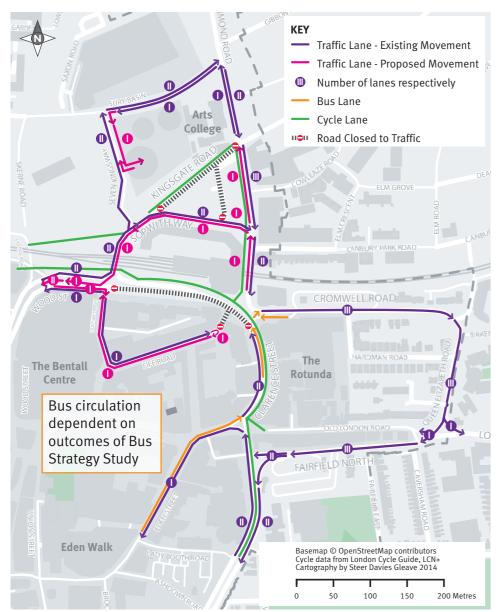
This scenario involves a moderate level of changes to the town centre highway network, consisting of the following key features:

- > Clarence Street opened to southbound traffic from Richmond Rd
- > Implement Wheatfield Way/ Station Plaza mini-Holland schemes
- > Implement the package of North Kingston road network changes (closure of Kingsgate Road; main route towards north formed by an upgraded Seven Kings Way and Sury Basin; new left turn from Sopwith Way into Richmond Road)

Converting Clarence Street to two-way working has the potential to change the nature of this road segment from a high-speed gyratory to a low-speed urban street, thereby reducing severance. Providing a more direct route for southbound vehicles also has the potential to reduce vehicle-kilometres travelled, although there will also be increased junction complexity (which could restrict traffic capacity).

Highways Scenario 8: Wood Street sustainable transport corridor

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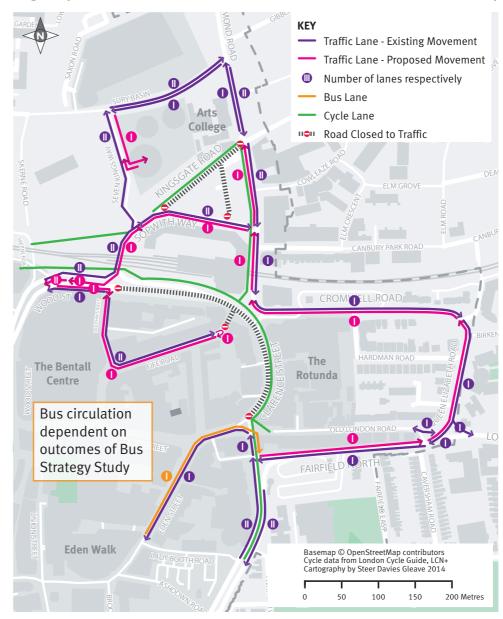


This scenario entails significant changes to the highway network, which include the following:

- > Prohibit general traffic from the Wood Street section of the gyratory, turning this section into a sustainable transport corridor for pedestrians and cycles (potentially also buses)
- > Convert the Sopwith Way section of the existing one-way gyratory system to two-way operation
- > Implement Wheatfield Way/ Station Plaza mini-Holland schemes
- > Implement the package of North Kingston road network changes (closure of Kingsgate Road; main route towards north formed by an upgraded Seven Kings Way and Sury Basin; new left turn from Sopwith Way into Richmond Road)

This scenario has the potential to facilitate very significant benefits for KTC. It does this by greatly reducing the severance caused by Wood Street, helping integrate the railway station area to the core of the town centre. This provides and opportunity to significantly improve the public realm at this key gateway, make KTC a more attractive environment, and providing development opportunities. There are a number of challenges, primarily related to reduced traffic capacity and implementation issues (such as the potential need for highway widening along Sopwith Way and altering railway structures). As such, the success of this scenario relies on significantly enhancing accessibility to KTC by non-car modes, and particularly the realisation of Crossrail 2.

Highways Scenario 6: Clarence Street and Wood Street sustainable transport corridor



This scenario offers significant changes to the KTC highways network, including the following:

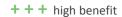
- > Prohibit general traffic from the Wood Street / Clarence Street section of the gyratory, turning this section into a sustainable transport corridor for cycles and pedestrians (potentially also buses)
- > Convert the remaining sections of the existing one-way gyratory system to two-way operation
- > Implement Wheatfield Way/ Station Plaza mini-Holland schemes
- > Implement the package of North Kingston road network changes (closure of Kingsgate Road; main route towards north formed by an upgraded Seven Kings Way and Sury Basin; new left turn from Sopwith Way into Richmond Road)

This scenario presents the most comprehensive change considered. It has the potential to make a very significant positive contribution to improving the KTC environment and facilitate further economic development, it is however the most challenging and complex scenario to implement, and is dependent on the implementation of Crossrail 2. Further work would be required to assess its technical feasibility (including impacts on traffic), and how implementation could be undertaken in tandem with Crossrail 2 in Kingston. Crossrail 2 has the potential to help address some of the key challenges, for instance widening of the underpasses under the railway bridges may be able to be achieved as part of other Crossrail 2 rail infrastructure upgrade works.

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Summary of overall impacts of four highways scenarios

,	verall impacts of four	Tigriways scenarios						
Impact category	Specific area	Highways Scenario 1 Mini-Holland & strategic KTC enhancements	Highways Scenario 3 Clarence Street two-way	Highways Scenario 8 Wood Street sustainable transport corridor	Highways Scenario 6 Clarence Street and Wood Street sustainable transport corridor			
Movement and transport	Walking	+	+	++	+++			
	Cycling	++	++	++	+++			
	Buses	0	0	_				
	Traffic capacity and vehicular access	0	_					
Feasibility, risk, and cost	Technically feasible deliverable	++	+					
	Level of risk	Low	Moderate	High	High			
	Cost	£	ff	ffff	fffff			
Environment and climate change	Emissions and air pollution	+	0	_				
Social and community	Public realm	+	+	++	+++			
	Connectivity	+	+	++	+++			
Economic development	Release of land for development	0	0	++	+++			
	Access supports economic viability	+	++	+	+			
Safety and security	Road safety	+	+	++	+++			
	Personal security	+	+	++	+++			
Key benefits		 Mini-Holland scheme improves cycling Pedestrian environment in KTC enhanced, particularly in front of the railway station 	 Reduction in traffic in KTC of about 5% of through trips (200 vehicles) Two-way low speed operation of Clarence Street reduces perception of severance 	 Greatly reduces severance, improves access to rail station, and expands core KTC area to the north Major opportunities for improved public realm and meeting place-making objectives Improves walking / cycling connectivity and permeability Development opportunities created around railway station by release of highways land 	 Greatly reduces severance, improves access to rail station, and expands core KTC area to the north and east Major opportunities for improved public realm and meeting place-making objectives Improves walking / cycling connectivity and permeability Development opportunities created around railway station by release of highways land 			
Key challenges		 Displacement of through trips elsewhere in borough because reduced capacity and delays on Clarence Street / Wood Street attract drivers to alternative routes Reduced resilience to major incidents in highway network 	 Displacement of through trips elsewhere in borough because delays on KTC road network lead to alternative routes becoming more attractive to drivers Increased complexity at junctions affected by the new two-way section of Clarence Street 	 Displacement of through trips elsewhere in borough because severe delays on KTC road network make alternative routes attractive to drivers. Vehicle trips to/from KTC also affected by delays. Displaced traffic may increase pressure on routes in wider area Bus delays may occur increasing passenger travel times. Access by non-car modes will need to be improved to ensure visitors can access KTC easily Engineering requirements will need to examined; e.g. the two road underpasses beneath the railway line may need widening 	 Displacement of through trips elsewhere in borough because severe delays on KTC road network make alternative routes attractive to drivers. Vehicle trips to/ from KTC also affected by delays. Displaced traffic may increase pressure on alternative routes in wider area Bus delays may occur increasing passenger travel times. Access by non-car modes will need to be improved to ensure visitors can access KTC easily 			
Key mitigating measures to address challenges		 Mode shift required of roughly 500-1000 of 8000 peak hour vehicle trips (total of both through trips and town centre trips) to maintain a highway network that operates within practical capacity through: Mini-Holland schemes to encourage more cycling Continued improvement of bus services including capacity enhancements Supporting measures such as travel planning and promotion 	 To achieve a highway network that operates within practical capacity, roughly 500 out of 8000 peak hour vehicle trips (total of both through trips and town centre trips) will need to use alternative routes or shift to other modes. Mode shift through: Mini-Holland schemes to encourage more cycling Continued improvement of bus services including capacity enhancements Supporting measures such as travel planning and promotion Optimise junction operation for road users 	 To achieve a highway network that operates within practical capacity, roughly 1000–1500 out of 8000 peak hour vehicle trips (total of both through trips and town centre trips) will need to use alternative routes or shift to other modes. High level of mode shift through: Implementation of Crossrail 2 Enhanced bus capacity (priority measures; improved access to bus stations; stands/ stops increased) Mini-Holland and complementary Quietways Comprehensive walking network improvements 	 To achieve a highway network that operates within practical capacity, roughly 2000 out of 8000 peak hour vehicle trips (total of both through trips and town centre trips) will need to use alternative routes or shift to other modes. Very high level of mode shift through: Implementation of Crossrail 2 Enhanced bus capacity (priority measures; improved access to bus stations; stands/ stops increased) Mini-Holland and complementary Quietways Comprehensive walking network improvements 			







Next steps - highways scenarios

The KTC Movement Strategy provides an overall vision for movement for KTC, which seeks to balance future movement demands with aspirations to improve KTC as a place, enhancing the town centre environment, enabling growth and attracting new development. The various highways scenarios presented are just one component of the strategy but some of these present significant change and require further detailed investigation.

Scenario 1 is already being further developed through the mini-Holland work and as such the particular technical challenges this option presents will be tested in coming months. The levels of change in scenarios 3, 6 and 8 present more significant challenges to be overcome, however scenarios 6 and 8 in particular also present significant opportunities. Further work should be done to explore how these scenarios could be implemented to realise these opportunities.

Ultimately, scenario 6 or a variant thereof offers the greatest benefits to the long-term improvement of KTC, subject to securing the necessary investment and support. Major initiatives such as this inevitably require significant interventions and change. Scenario 6 is the most ambitious highways option, however the existing highways boundaries provide limited scope to implement such a scheme and a more thorough investigation of the potential land acquisition implications is required.

It is recommended that further studies are undertaken to investigate both scenario 6 and 8 in more detail and determine if such significant changes to the highways environment are achievable, and how the challenges identified in this study can be resolved. Studies should cover the following:

- > Develop scenarios 6 and 8 to outline design;
- > Review timescales for implementation to understand how these might fit with other KTC development and Crossrail 2;
- Undertake detailed engineering assessment to review deliverability and feasibility, including technical surveys to investigate particular constraints such as the railway underpasses;
- > Assess land requirements including need for potential land acquisition and identify how this might be achieved;

- > Liaise with key stakeholders such as Network Rail, TfL, major landowners etc. to understand their views and identify how options might relate to any other works being considered (e.g. Crossrail 2);
- > Prepare an outline implementation plan;
- > Prepare cost estimates for capital works;
- > Identify potential funding opportunities;
- > Undertake detailed highways modelling to review impacts at a local level.

Further work must relate to other work being undertaken in the KTC area to take advantage of complementaries and ensure an integrated design solution. In particular this should include:

- > The development briefs for the Eden Quarter and North Kingston areas;
- > The emerging framework for public realm improvements in Kingston:
- > The planning framework for the Kingston station area to be developed in association with the GLA.

Wider strategy measures

A key part of the KTC Movement Strategy is a comprehensive suite of measures that are intended to promote KTC as a high quality place, easily accessible by a variety of means. Measures include both physical infrastructure improvements and non-physical supporting measures aimed at the different users of the town centre (e.g. residents, workers, visitors, business owners/operators), including travel demand management.

The measures have been developed with reference to the various planned and potential development opportunities including the North Kingston and Eden Quarter opportunity areas, and are intended to support the realisation of these sites. They are also designed to take advantage of development to provide specific pieces of new infrastructure such as, for example, new pedestrian routes, public realm, or cycling connections.

Measures are categorised into those that can be implemented in the relative short term, and those which till require further investigation and will take longer to implement. The table on the following pages sets out the short term physical measures proposed in the strategy.



Proposed measure	Description	Objectives	Cost (£/ ££ /£££ /££££)	Delivery timeframe (short/ medium/ long)
PEDESTRIAN				
Extension of wayfinding signage across KTC and other key arrival points	The Legible London wayfinding system has recently been introduced to KTC but essentially only covers the current retail core. This should be extended to include North Kingston, southern areas of KTC along Penrhyn Road, and around Surbiton Station. Audits of existing signage and removal of redundant signage at the same time would support the roll-out.	 To aid legibility and navigation in the wider KTC area and reduce the psychological barriers to walking. To increase walking mode share for short trips. To encourage visitors and residents to explore further afield within KTC. 	£	Short
Interpretative signage and augmented reality	A suite of high quality interpretative signing supplemented with augmented reality (e.g. through a bespoke app or website) marking places of interest (e.g. sites of historical importance, landmarks, views), and providing information about them. For example this could be used to promote general areas like the Thames riverside, or inform about specific features such as the Coronation Stone.	 To encourage visitors to explore the town centre more widely To inform and explain To promote / reinforce a Kingston town centre identity 	£	Short
Design guidance for streets and spaces	Prepare comprehensive design guidance for different streets and spaces in KTC to guide and coordinate development and regeneration initiatives. This should be based on street types as presented earlier in this report.	To guide provision of a coherent, high quality public realm.	£	Short
Pedestrian crossing improvements on relief road	Upgrade / provide new pedestrian crossings as illustrated in the pedestrian network map to generally reduce the barrier effect of the road by better aligning with desire lines and providing more direct crossing movements.	To reduce physical barriers to walking.To increase walking mode share for short trips.	££	Short
CYCLING				
Expand provision of cycle parking	Existing cycle parking in KTC is very well used, and at certain locations reaches capacity. Additional cycle parking should be provided to address this issue, and also in anticipation of increased demand due to future developments.	Provide adequate cycle parking in convenient locations	££	Short
Provide cycle hire facilities	Investigate options for providing cycle hire outlet in KTC. This should tie in with existing cycle hire outlets in surrounding areas, to provide a higher level of flexibility. In the longer term, advocate for extension of Barclays Cycle Hire scheme to Kingston.	Encourage cycling by those coming to KTC without a bike	ff	Short to medium
Implement mini- Holland schemes	Kingston's successful mini-Holland bid has secured £30m in funding for a number of schemes to provide a step-change in provision for cycling in the borough. A number of these schemes will directly affect KTC, and these include: • Kingston station cycle hub + Kingston station plaza • Wheatfield Way Greenway • Riverside Boardway	Step change for cycling throughout RB Kingston, including in KTC	ffff	Short to medium
PUBLIC TRANSPORT	Various 'network schemes' providing linkages from KTC to other parts of the borough			
General				
Provide integrated public transport information	Provide enhanced information on public transport services in KTC, using signs that include a combination of static and real-time displays that integrate information for all modes. This should help to highlight the good availability of services into the evening. An pertinent example is the recently installed 'Smart Column' at Ealing Broadway, which is included as a case study (see chapter 6)	Enhance user-friendliness and awareness of public transport services in KTC	£	Short
Rail				
Access to Kingston station from the north	During most of the day, there is only one access to Kingston station, which is from the south. As development occurs in North Kingston, examine options for providing a permanent second access to the north. This may involve allowing full-time access from the existing door at the northern end of the corridor underneath the platforms. (In the longer term, there may be the opportunity to significantly enhance access to and from the station as part of Crossrail 2.)	Facilitate more direct access to the station from North Kingston	ff	Short to medium
Provide a Park and Rail	Investigate stations with a direct service to Kingston that may be suitable for a Park and Rail service. Such a site would focus on intercepting trips from Surrey. Ideally, a station would have:	Reduce level of car traffic in KTC	££	Short to medium
site	 Good access to the road network from Surrey Existing parking that is underutilised 	Reduce pressure on car parking in KTC		
Bus	O Parriago maria antica antica			
Continue to provide bus countdown displays	Bus countdown displays provide real-time information for all bus users (including those without access to a smartphone), and provide confidence that a bus is on its way. As such, advocate for the provision of bus countdown displays at all stops in KTC.	Improve information provision for bus users	ff	Short



Proposed measure	Description	Objectives	Cost (£/ ££ /£££ /££££)	Delivery timeframe (short/ medium/ long)
Provide improved bus links to Surrey	Trips to and from Surrey are more likely to be made by car, in part due to relatively poor public transport links. Improving bus services to Surrey (in terms of frequency and span of service) and promoting them will help to encourage increased bus use.	Provide an attractive alternative for trips to and from Surrey	Advocacy: £ Implementation: ££	Advocacy: short Implementation: short to medium
Provide improved orbital bus links	As there are no direct rail links from Kingston to many parts of London, it is important that a high quality bus service be provided to encourage travel by bus. This may be achieved through actions such as improving bus frequency and ensuring that routes provide direct links. In particular, route X26 provides a relatively quick link to Heathrow and Croydon, and could be enhanced	Provide good bus links to other parts of London	££	Short to medium
Enhance legibility of bus link to Surbiton	Due to its position on a main line, Surbiton is served by faster train services compared to Kingston station. This corridor is served by different routes that stop at different bus stops; as such, trying to locate the next bus can be confusing. There are a number of actions that could be taken to improve the legibility and user-friendliness of this link: Buses between Surbiton and Kingston to stop at common stops Enhanced signage Publicity and marketing to improve awareness of this link	Increase awareness of option to access KTC via Surbiton station	ff	Short
Provide a Park and Ride service	A seasonal park and ride service currently operates from Chessington, however usage has apparently dropped. Examine the continued viability of this site, and investigate possible alternative sites (including for a permanent site). This should take into account the trip origins for both shoppers, employees and other visitors.	 Reduce level of car traffic in KTC Reduce pressure on car parking in KTC 	fff	Short to medium
HIGHWAYS				
Implement 20mph speed limit throughout KTC	Some roads within KTC are already covered by a 20mph limit. Investigate how this can be extended to the remainder of the town centre, in conjunction with other measures (such as redesign – see next measure) to reduce the perceived 'racetrack' environment on the relief road.	Moderate vehicle speeds to a level appropriate for a town centre environment	£	Short to medium
Audit and rationalise directional signage for drivers	Review directional signage, taking into account the needs of both through traffic and town centre traffic. This review should specifically consider freight and car park signage systems to ensure that information provision is provided at the right places in order for drivers to make timely decisions and reduce unnecessary traffic circulation around the town.	 Reduce sign clutter Improve legibility for drivers Reduce unnecessary vehicle circulation 	££	Short to medium
PARKING				
Enhance existing signage	Existing static signage directing drivers to car parks should be reviewed and enhanced where warranted. Existing VMS signs that are not functioning correctly could also be repaired, but given the limited efficacy of the system it is unlikely that significant investment in the system is justified.	 Enhance awareness of the car parking options around the town centre. Balance usage of car parks around the town centre. 	£	Short
Enhance environment of existing car parks	A number of car parks currently have poor environmental quality, which may discourage people from using them. For example, this applies to the St James Road and Fairfield car parks. Relevant measures will depend on the specific car park, but may involve upgrading equipment, lighting, finishes, access control, etc.	 Enhance perceptions of safety. Improve experience for visitors to KTC. Encourage more even usage of car parks. 	fff (f3k-f6k per space depending on scope of works)	Short to medium
FREIGHT				
Promote click and collect	The provision of click and collect services in the town centre at retail outlets in the town centre provides customers with the convenience of shopping online, whilst still drawing them into the town centre to collect their purchases. The availability of click and collect should be promoted to customers. Some supporting measures may be required, such as the provision of loading bays, to allow customers to collect large items with their own vehicles.	Encourage the use of click and collect services, thereby driving increased footfall	£	Short to medium
Implement a Freight Consolidation Centre	Investigate the viability of a Freight Consolidation Centre for KTC, and implement a pilot. An example that may be useful as a case study is the Regent Street Retail Consolidation Centre, which was launched in July 2009 to service shops in Regent Street. It is now used by one-third of shops on Regent Street, and now uses an electric freight vehicle. It has resulted in reductions in traffic levels and mileage, and improved air quality. The use of clearly branded vehicles has been important in increasing awareness of the scheme.	 Reduce the number of freight vehicle movements Improve air quality 	ff (some seed funding may be required, although aim is to be self- funding)	Short to medium

* Broadly, costs ranges as below:

£ Up to £100K ££ £100K - £500K £££ £500K - £1 million ffff f1 million - f5 million fffff Over £5 million