

Appendix A

KLTS Implementation Plan

1. SHORT TERM (OPTIONS EXPECTED TO BE DELIVERED BY 2022)

The location of the short-term options is included in the figure below, detailed in tables 1 to 5.

Figure 1 - Transport Strategy Short Term Options

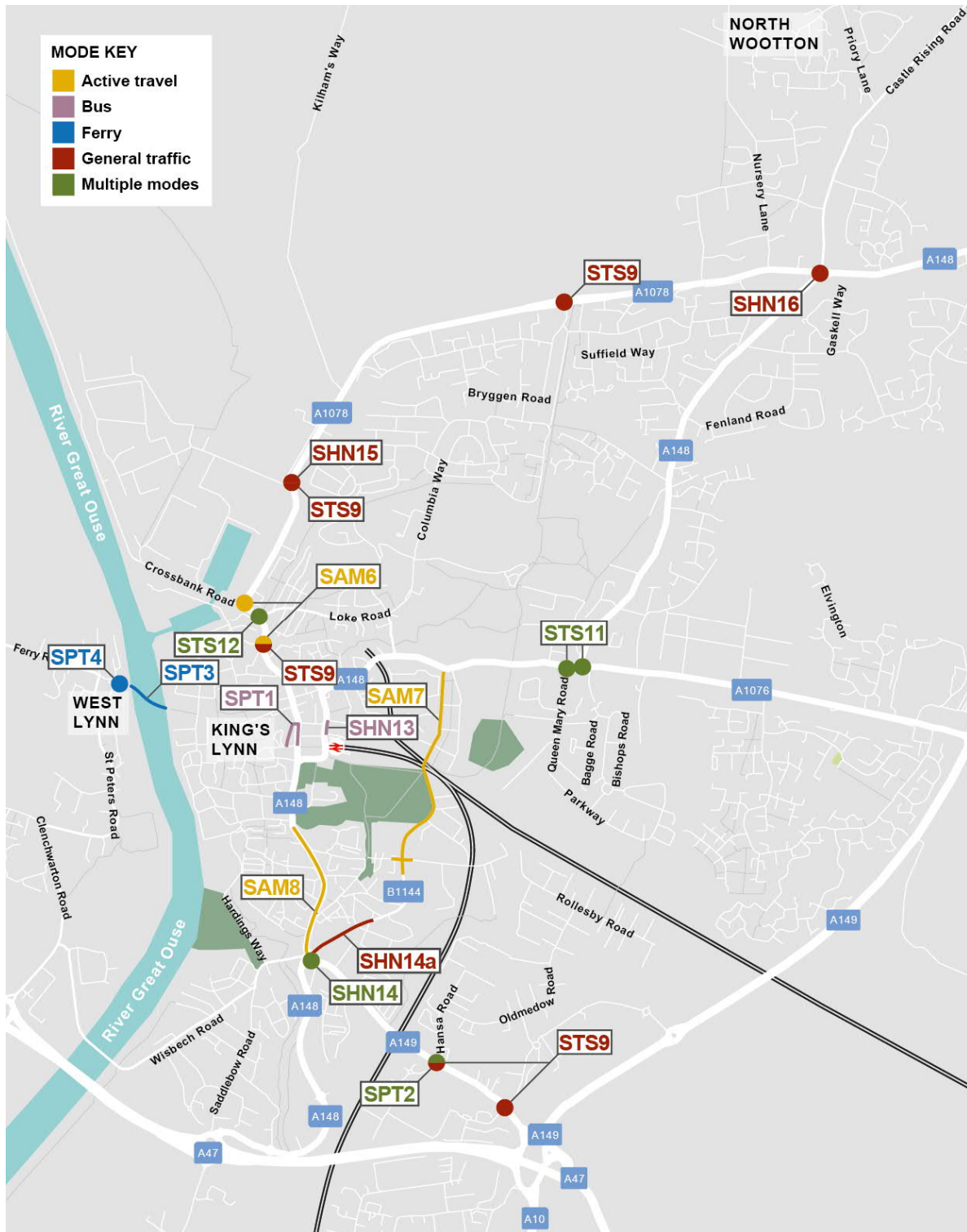


Table 1 – Options to encourage journeys by public transport (Short-term Public Transport – SPT)

Ref	Option	Description	Benefits	Dis-Benefits	Initial Actions	Stakeholders
SPT1 (1.10)	Access for buses to bus station via Albion Street; Improved Albion Road exit for buses	Bus lane on Railway Road and bus station access via Albion Street to reduce delay and journey times for buses. Improve the road layout design to provide an improved left turn onto Railway Road from Albion Street which is a tight turn. Current traffic light timings only allow 2 buses through (usually cars + buses to exit). More green time needed / change quicker when there are a number of vehicles waiting to exit	Benefits for bus access, egress and routing to the bus station, providing more reliable journeys and reducing journey time on some routes. Potential for switch from car to improved bus services. Local air quality benefits.	Provision of a bus lane may reduce capacity for other vehicular traffic	Prepare highway design options and test in tracking and the micro-simulation model. Adjust/optmise signal timings for exit from Albion Road	Norfolk County Council Bus Operators
SPT2 (1.19)	Reduction in outbound delays at Hansa Road, Hardwick Road junction outbound for public transport; Hansa Road yellow box improvements for traffic exiting retail park	Address traffic signal delays at the junction in the outbound direction which cause queues back to Southgate and beyond and impact on bus journey times as well as Southgates roundabout and London Road; Review yellow box usage and improvements at B&Q / Next to allow people to exit the retail park more easily	Benefits for all main road traffic in terms of journey times and queues.	Potential for additional delays for exiting retail park traffic and/or pedestrian movements	Prepare alternative highway design layouts to address the problem. Adjust/optmise the traffic signal timings for the main road outbound traffic flow / rationalisation of the pedestrian movements	Norfolk County Council
SPT3 (2.1)	Enhanced signage and publicity for King's Lynn ferry	Provide improved information and signage for the Ferry around the town and through information technology to further promote and encourage its use	Benefits for travel in King's Lynn and for the retention of this facility within the community	None	Design and provide locations for additional signing and information through web and social media	BCKL&WN and current Ferry Operator
SPT4 (2.2)	Additional car parking at West Lynn for the Ferry and secure storage for cycles	Provide improved and additional car parking at West Lynn alongside provision for secure cycle storage	Benefits for travel in King's Lynn and for the retention of this facility within the community	None	Develop a scheme for the improved parking provision and identify location for the cycle storage	BCKL&WN and NCC

Table 2 – Options to encourage journeys by active modes (Short-term Active Modes – SAM)

Ref	Option	Description	Benefits	Dis-Benefits	Initial Actions	Stakeholders
SAM5 (4.2)	Cycle lane continuity through the town (including improved provision for cyclists including new routes / infrastructure / signage)	A number of areas where cycle provision and infrastructure could be improved have already been identified and it is proposed that these could be taken forward through further development of schemes to further optimise and promote their use. Areas where it would be beneficial to expand the cycle network around King's Lynn will also be included Historic Quayside route, town centre access and alternatives, major road crossing and safety provision	Improved uptake of cycling for all to provide greater social inclusion and a level of infrastructure provision that matches the already high level of people who use cycling as their main mode of travel for their work journey.	Disbenefits of improved cycle provision on other modes would be managed to ensure minimal impact	Develop designs for the identified locations where improvements are required and consult with local cycling group on specific schemes and measures for implementation.	BCKL&WN Norfolk County Council Cycle Action Group
SAM6 (4.10)	Port of King's Lynn highway design access improvements including pedestrians and cyclists at North Street and Cross Bank Road	In the vicinity of the Port of King's Lynn (North Street and Cross Bank Road) improve operations to reduce risks to vulnerable road users through better provision for industrial vehicles, incorporating appropriate pedestrian crossings and cycle lanes.	Improved safety and permeability for pedestrians and cyclists. Safer vehicular access arrangements.	Additional delay to main road traffic where signalised intervention is provided.	Prepare highway design options.	Norfolk County Council Port of King's Lynn
SAM7 (4.13)	Tennyson Avenue Pedestrian & Cycle improvements: King George V Avenue pedestrian improvements; Tennyson Road, The Walks, Tennyson Avenue pedestrian improvements; Tennyson Avenue, Gaywood Road pedestrian improvements; Review of pedestrian crossing facilities on Extons Road and Tennyson Avenue	King George V Ave: cluster of pedestrian/cycle accidents, provide improved crossing facilities to accommodate pedestrian movements. At access point to The Walks pedestrians and cyclists are not provided with crossings over B1144 except dropped kerbs and footway marking-provide improved crossing provision. Gaywood Road: cluster of pedestrian/cycle accidents, provide improved crossing facilities to accommodate pedestrian movements. Identify locations for more pedestrian crossings including signalised ones on Extons Road and Tennyson Avenue to improve road safety for pedestrians in this area.	Improved safety for pedestrians and cyclists and continuity of routes provision for these modes in this area of King's Lynn.	Additional delay to main road traffic where signalised intervention is provided.	Prepare highway design options at the specified locations in this area and consult with user groups. Undertake feasibility study through Capital Improvement Budget for the improvements at Tennyson Avenue/Gaywood Road junctions (already underway)	Norfolk County Council Network Rail Office of Road and Rail (ORR) Cycle Action Group

<p>SAM8 (4.14 4.18)</p>	<p>Review pedestrian crossing provision on London Road.</p> <p>South Lynn to Hardwick pedestrian crossing review.</p>	<p>Cluster of pedestrian/cycle accidents identified a lack of provision for access from residential areas to the west across London Road. Review crossing locations and facilities on London Road</p>	<p>Safety improvement for pedestrians, cyclists and other vulnerable road users. Improve vehicular traffic flow if these can be rationalised. Improvements in local air quality if traffic flow is improved</p>	<p>Potential for improved traffic flow</p>	<p>Undertake optioneering and initial design feasibility including desire line assessment in conjunction with the wider feasibility study for highway capacity improvements at Southgates roundabout junction</p>	<p>Norfolk County Council BCKL&WN</p>
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Table 3 – Options to reduce delay and congestion on the local highway network (Short-term Traffic Signals – STS)

Ref	Option	Description	Benefits	Dis-Benefits	Initial Actions	Stakeholders
STS9 (5.1 5.5)	Review traffic signal timings at various locations to optimise traffic movements, including reviewing junctions where priority for buses is feasible	Review signal timings (too much signal green time) for North Street approach / retail park traffic at Hardwick / at Estuary Road approach / at Hamburg Way. Right turn into Millfleet. A 6-month trial that fitted the buses in King's Lynn with detector equipment for the traffic signals to address reliability and journey time issues leading ultimately to reductions in costs and improvements to the attractiveness and reliability of bus services in King's Lynn	Improve traffic flow and local air quality benefits. Reduced journey times for all main road vehicular traffic. Improve reliability of bus services and relieve congestion on primary routes through King's Lynn. Potential for switch from car to improved bus services. Local air quality benefits	May lead to increased delay from side roads. May encourage more vehicular travel	Undertake a detailed review of traffic signal timings at the identified locations. Feasibility study into improvements and /or upgrade to traffic signal operations Initiate discussions to re-instate the bus detection at the signals and undertake a trial including collection of traffic data to understand the benefits/disbenefits to enable informed decision-making	Norfolk County Council
STS10 (5.2)	Linked and co-ordinated traffic signals	Co-ordinated traffic signals would help with bus scheduling and reliability as currently the traffic signals are out of sync with each other so there is a perception that it is very stop/start and slow journeys particularly for buses	Improve traffic flow and local air quality benefits. Reduced journey times for all main road vehicular traffic. Improved bus service reliability	May lead to increased delay from side roads. May encourage more vehicular travel.	Undertake a detailed review of traffic signal timings from Hardwick to Gayton Road. Feasibility study into improvements and /or upgrade to traffic signal operations	Norfolk County Council
STS11 (5.4)	Gaywood Clock / Queen Mary Road traffic light improvements and junction redesign	Consider improvements to the traffic light phasing at Gaywood Clock/Queen Mary Road and junction re-design	Improved traffic flow and reduced delays. Should also aim to improve cycle/pedestrian accessibility. Initial modelling results show some benefit to journey times and delay in this area if junction is re-designed	Scheme should not dis-benefit cyclist/pedestrian movements	Initial scheme design without signals has been prepared and tested in the traffic modelling (with the location below) to provide initial understanding of traffic impacts. Further feasibility required including impacts on other road users. Study the potential for traffic signal improvement	Norfolk County Council

Ref	Option	Description	Benefits	Dis-Benefits	Initial Actions	Stakeholders
STS12 (5.4)	Loke Road John Kennedy Road traffic signal optimisation or junction redesign	Phasing issue between lights needs to be addressed to link the phasing together / check phasing to let traffic out for a shorter period. Options also to be developed to provide an alternative junction arrangement to assist with traffic flow at this location	Improved traffic flow and reduced delays. Should also aim to improve cycle/pedestrian accessibility. Initial modelling results show some benefit to journey times and delay in this area if junction is re-designed	Scheme should not dis-benefit cyclist/pedestrian movements	Initial scheme design without signals has been prepared and tested in the traffic modelling (with the locations above) to provide initial understanding of traffic impacts. Further feasibility required including impacts on other road users. Study the potential for traffic signal improvement	Norfolk County Council

Table 4 – Options to reduce delay and congestion on the local highway network (Short-term Highway Network – SHN)

Ref	Option	Description	Benefits	Dis-Benefits	Initial Actions	Stakeholders
SHN13 (6.1)	Railway station bus layby re-design	Consider re-design for the layby outside the rail station to prevent cars stopping in the layby and also address issues with getting the bus on the loop in the road to activate the traffic lights to change to let them out	Improvement to bus journey times and access to the rail station bus stops	None	Develop alternative layby design for preventing car use and to ensure bus the bus can effectively egress from the bus stop	Norfolk County Council Network Rail Govia Thameslink Railway (GTR) Bus Operators
SHN14 (6.5)	Southgates roundabout highway capacity improvement scheme - small-medium scale	Undertake a review of lane marking and usage at Southgates roundabout to provide improvements in traffic flow, including 2-lanes southbound. Also undertake a review of the traffic signal operation to optimise the traffic flow at this key junction that provides access to King's Lynn. Enhance crossing provision for cyclists and pedestrians at the South Gate alongside highway improvement measures to improve traffic flow also considering access for buses from Hardwick Road to Hardings Way	Initial traffic modelling shows benefits in PM peak to have 2-lanes continuous southbound	May lead to increased severance with additional traffic lanes. Potential removal of car parking on London Road	Initial design sketch for 2-lanes southbound considered within traffic modelling. Further feasibility review of signal operation, lane usage and potential for upgrade within existing highway boundary including access to Hardings Way for buses. Funding already in place to undertake further design and feasibility work at this location during next 12 months	Norfolk County Council BCKL&WN Bus Operators
SHN14a (6.7)	Vancouver Avenue - improved lane management	Vancouver Avenue - investigate improved lane management - left lane = straight and left / right lane = right - to ease traffic congestion, also provide a longer left filter lane / increase length of the left turn lane to ease traffic congestion on this approach. Also consider provision of a left filter lane with give-way onto Hardwick Road to ease the traffic using the roundabout and provide potential for improvement to traffic signal operation.	to be considered in conjunction with the above. Improve traffic flow.	See above	See above	See above

Ref	Option	Description	Benefits	Dis-Benefits	Initial Actions	Stakeholders
SHN15 (6.14)	Estuary Road / Edward Benefer Way junction improvements	New junction arrangements submitted to planning - phasing of traffic lights with alternative priorities / take out private access and make two-lanes over the traffic lights / remove left turn from traffic lights	Improved journey times for all traffic. Maintain cycle and pedestrian crossing arrangements	Adverse impacts on journey times from side roads	NCC review of junction arrangement proposals, being progressed through development planning	Norfolk County Council
SHN16 (6.17)	Low Road Castle Rising Rd Wootton Rd Grimston Rd junction improvements	New junction arrangements have been submitted to planning - phasing of traffic lights with alternative priorities / take out private access and make two-lanes over the traffic lights / remove left turn from traffic lights	Improved journey times for all traffic. Maintain cycle and pedestrian crossing arrangements	Adverse impacts on journey times from side roads	NCC review of junction arrangement proposals, being progressed through development planning	Norfolk County Council

Table 5 – Options to manage travel behaviour (Short-term Travel Management – STM)

Ref	Option	Description	Benefits	Dis-Benefits	Initial Actions	Stakeholders
STM17 (7.2)	Provide a comprehensive Car Parking Strategy for King's Lynn	Develop a Car Parking Strategy for King's Lynn including an assessment of opportunities for Park & Ride	Town-wide approach to car parking management in conjunction with delivering Transport Strategy improvements	Potential changes may not be well-received if alternatives aren't in place. Perception of impacts on town centre business	BCKL&WN to commission development of Strategy for car parking during next 6 months	BCKL&WN
STM18 (4.7)	Work with schools and education in King's Lynn to provide safe alternatives to private car for school children	Develop a campaign for King's Lynn to encourage parents not to drive children to school. Work with the schools to develop safer routes to school, walking buses, safe cycle routes, provision for secure cycle storage at the schools and provide the schools with the tools they need to improve localised parking issues around schools and the impacts on the town. Address air quality impacts on Wisbech Road at the schools.	Health, safety and wellbeing benefits for children. Opportunities to influence mode choice of future generations	n/a	NCC to work with schools to develop and deliver improved access for children through safety measures and information campaigns. Led by NCC, with potential funding through LTP4?	Norfolk County Council

Table 6 – Options to encourage the use of public transport (Medium-term Public Transport – MPT)

Ref	Option	Description	Benefits	Dis-Benefits	Initial Actions	Stakeholders
MPT1* (see also MHN5) (1.3)	Increased use of Harding's Way for buses - address issues at Millfleet and Wisbech Road to Hardwick Road to make more advantageous for buses	Harding's Way as a bus only route to accommodate an increase in buses and bus usage with buses also continuing to serve London Road. A combination of routes is required. Retain Hardings Way as traffic-free except buses. Encourage more buses to make use of the route and the potential reliability/journey time benefits. Retain high level of provision for pedestrians / cyclists and especially vulnerable road users and mobility scooters.	Enhanced bus reliability and journey time experience in peak hours. Retains benefits of this route for active modes of travel.	Impact on vehicular traffic on London Road at Millfleet and Wisbech Road between Southgate and Hardings Way.	Develop initial scheme designs for Wisbech Road and Millfleet junctions. Short-term amendments to the traffic signal timings to be investigated. Considered alongside Southgate roundabout improvements.	Norfolk County Council Bus Operators
MPT2 (1.12)	Town centre gyratory re-design. Various Options - Bus Lanes - Railway Rd, London Rd, Blackfriars Rd	Redesign of traffic movements around gyratory to assist with AQMA, congestion, connectivity and road safety objectives. Various schemes developed through workshop and tested in the transport model. Investigate potential for providing bus-only lanes through Railway Road, London Road, Blackfriars Road to take out areas that generate air pollution and improve air quality with modal shift.	Potential for improved air quality and road safety. Potential for improvements to buses for access to bus station.	Initial modelling suggests that there may be additional congestion at some locations around the gyratory and benefits to vehicular traffic are limited.	Air quality benefits need further assessment. Bus lane / access/ egress alternative schemes need initial design and assessment.	Norfolk County Council BCKL&WN
MPT3 (2.3)	Provide enhanced access to the Ferry throughout the day / year to provide a more usable service for all.	Look further at the previously developed options for the ferry service to enable access for a wider range of people and provide improvements / alternatives to access during low tides.	Benefits for travel in King's Lynn and for the retention of this facility within the community. Promote social inclusion.	May have an impact on Ferry journey times if alternative preferred location.	Re-appraise the alternative locations and/or means of providing safe access to the ferry service for all.	BCKL&WN Ferry Operator

*following further modelling and design assessment work the most appropriate use of Hardings Way, either for buses or additional traffic will be determined. Both cannot be pursued together but are included for further evaluation purposes.

Table 7 – Options to encourage journeys by active modes (Medium-term Active Modes – MAM)

Ref	Option	Description	Benefits	Dis-Benefits	Initial Actions	Stakeholders
MAM4 (4.11 6.12)	Queen Mary Road, Fairstead, Hardwick improvements in linkages for pedestrians and cyclists	Investigate how best to provide access across the railway line and around the town for modes other than private car to relieve some of the congestion pressure in Gaywood area. Enhancements to pedestrian link from Parkway to Rollesby Road to provide year-round use.	Enhanced high quality pedestrian route to access employment	Possible impacts on open parkland	Develop a scheme to improve the route including lighting, surfacing and signing to facilitate improved accessibility	Norfolk County Council BCKL&WN Network Rail User Groups

Table 8 – Options to reduce delay and congestion on the local highway network (Medium-term Highway Network – MHN)

Ref	Option	Description	Benefits	Dis-Benefits	Initial Actions	Stakeholders
MHN5 (see also MPT1*) (6.2)	Hardings Way opened for additional traffic	Investigate options to allow additional traffic to use Hardings Way to alleviate the congestion on London Road and assist with air quality management. This could include specific additional vehicle types being permitted to use the route; open only at specified times of the day; as an emergency measure to assist with incident management; directional to provide alternative routes for inbound traffic in the AM peak and outbound traffic in the PM peak; or to provide access to specific parts of the town centre only. Mitigation measures would be needed to ensure there are no impacts on the historic core.	Improved journey times/reduced congestion/improved air quality on London Road	Increased traffic in historic core	Initial modelling shows some congestion relief on London Road, introduction of restriction to access for historic core provides lower benefit for London Road traffic. Further design work to understand outcomes and combine with enhancements for higher bus use	Norfolk County Council BCKL&WN
MHN6 (6.6)	South Gate highway capacity enhancements - providing two lanes in both directions / large scale redesign	Make South Gate traffic-free by providing two lanes northbound and two lanes southbound using the park to provide the extra lanes (based on previous proposal for CIF). Opportunity to also provide improved access for buses to/from Hardings Way	Improve traffic flow in King's Lynn. Opportunity to also provide improved access for buses to Hardings Way. Improved public realm/heritage	Taking land from the park / development viability. Potential severance impacts by providing 4-lane carriageway for pedestrians and cyclists	Further feasibility design and viability checks. Option testing in modelling work alongside bus priority/access improvement options	Norfolk County Council BCKL&WN Developers
MHN7 (6.12)	Queen Mary Road link to Fairstead	Link to development land at Parkway with potential link to Fairstead - traffic to go through Fairstead / route coming out of Fairstead and along Sand line / bridge over Sand line / road alongside railway line / park and ride	Vehicular link between the two estates could provide relief for Gayton Road and Gaywood with benefits to journey times and air quality	May lead to rat-running (highway design layout could address this)	Undertake initial highway design layout for link road scheme. Potential funding source is via developers	Norfolk County Council Network Rail Developers
MHN8 (6.13)	Winston Churchill Drive QEH access widening	Investigate a scheme to provide widening of the access to allow improved movement onto roundabout / improved traffic flow. Also look at widening of Winston Churchill Drive closest to Corbyn Shaw Road where on-street parking is prevalent	Improved journey times	n/a	Consider design improvements at Winston Churchill Drive junction with A1046	Norfolk County Council BCKL&WN QEH

Ref	Option	Description	Benefits	Dis-Benefits	Initial Actions	Stakeholders
MHN9 (6.20)	QEH roundabout capacity improvements	The slip road onto A149 northbound needs improvement and the roundabout needs to be able to accommodate forecast traffic levels	Management of through traffic in King's Lynn town centre / improved journey times / air quality management	Environmental	Develop and test feasibility design options with HE	Norfolk County Council BCKL&WN
MHN10 (6.21)	A149 Dualling up to Knights Hill; Knights Hill junction capacity improvements	Dualling of the A149 / crawler lane up to Knights Hill / two lanes up to Knights Hill / mark lanes from bottom of hill / increase width / lanes at roundabout which are too narrow at the junctions onto / off the roundabout (QE to King's Lynn) - suitable for emergency services; Consider a redesign of this junction to improve traffic capacity and traffic flow to accommodate forecast traffic levels associated with development	Management of through traffic in King's Lynn town centre / improved journey times / air quality management	Environmental	Develop and test feasibility design options with HE	Norfolk County Council BCKL&WN Highways England
MHN11 (6.19)	A149 Jubilee Roundabout capacity improvements	Jubilee Roundabout capacity improvements to improve traffic flow and accommodate planned growth	Management of traffic through town centre / reduced journey times / air quality management	Environmental	Develop and test feasibility design options with HE	Norfolk County Council BCKL&WN Highways England
MHN12 (6.22)	West Winch Housing Access Road	Highway improvement access road to enable the housing growth at West Winch and to provide some relief to the A10	Management of through traffic in King's Lynn town centre / improved journey times / air quality management	Environmental	Develop and test feasibility design options with HE	Norfolk County Council BCKL&WN Highways England Developer

3. LONG TERM (OPTIONS TO BE DELIVERED AFTER 2030)

The locations of the Long-term options are shown in the figure below, detailed in tables 9 to 10.

Figure 3 - Transport Strategy Long Term Options



Table 9 - Options to reduce delay and congestion on the local highway network (Long-term Highway Network - LHN)

Ref	Option	Description	Benefits	Dis-Benefits	Initial Actions	Stakeholders
LHN1 (6.4)	Hospital to A149 direct access link	Provide an additional exit onto A149 for exiting traffic from the hospital to ease local congestion issues around the hospital	Local congestion relief and air quality management	Environmental	Provide initial feasibility design with HE. Model to test the level of benefits that could be achievable	Norfolk County Council BCKL&WN QEH
LHN2 (6.8)	Wisbech Road to Nar Ouse Way link Road	Investigate the potential for providing a highway link between Wisbech Road and Nar Ouse Way to assist in alleviating Southgates roundabout	Local congestion relief at Southgates	Land and environmental	Investigate alongside options for Southgates roundabout	Norfolk County Council BCKL&WN Developer

Table 10 - Options to encourage the use of public transport (Long-term Public Transport - LPT)

Ref	Option	Description	Benefits	Dis-Benefits	Initial Actions	Stakeholders
LPT3 (3.1)	Train frequency improvements	Implementation of Ely Area Enhancement Scheme to deliver doubling of train frequency to half-hourly (2025-2030). Improve rail links to Cambridge and London. Improve connecting services - connections to Norwich from Ely. King's Lynn 8 Car Project will increase train capacity from 4 Car trains between King's Lynn, Cambridge and London by December 2020.	Improved service level for passengers and reduction in car mode share for outbound and inbound trips to/from King's Lynn	Potential increase in vehicular traffic to the rail station. Additional traffic delay at level crossing	Ely Area - Funding in place for current phase of work (GRIP 2). Further development stages to be funded separately under the new RNEP processes.	Network Rail Govia Thameslink Railway (GTR) NCC BCKL&WN