

APPENDIX 1

Hertfordshire Inter-Urban Route Strategy

Stage 2 Technical Document -

Executive Summary

September 2012

Executive Summary

Background

Hertfordshire County Council in its role as local transport authority is responsible for producing periodic transport strategies; Local Transport Plans; that set out the Council's understanding of current and future transport issues and demand and the framework for delivering interventions to meet them.

Through the preparation of Urban Transport Plans there is already a good understanding of transport issues and development pressures within the County's urban areas and the necessary investment required to overcome these. However, these are constrained to the geographical boundaries of particular settlements, or groups of settlements and do not consider cross boundary impacts or the cumulative pressures on the strategic transport network that run between Hertfordshire's towns and areas of major population. As a daughter document to the Local Transport Plan, the Inter-Urban Route Strategy will seek to address that deficit and will provide a strategy for a series of key corridors linking the urban centres within the County and across the borders to neighbouring authorities. The key objectives of the Strategy will be:

- to determine the function of each route, its characteristics, capacity, delays and adequacy / potential to accommodate growth;
- to consider and prioritise time-frames for interventions within routes;
- to provide a strategy for each route and a county-wide strategy (responding to planned development in the next five years);
- to provide material consideration at a point in time, setting out the transport issues with known developments;
- to identify potential contenders for Major Projects; and
- to set out options for consultation to gain public endorsement of the schemes that would be required to accommodate growth.

It is the County Council's intention for the Inter-Urban Route Strategy (IURS) to form the basis of infrastructure investment within the County's strategic corridors up to 2031 and beyond. However, in light of recent changes to the planning system and ongoing challenges associated with the funding of transport projects, it is the County Council's intention to produce the strategy that covers the period up to 2017 providing a snapshot of the level of growth expected to come forward and the potential transport infrastructure that will be required to support this level of development. This approach will enable the County to proactively engage with current infrastructure planning processes and capitalise upon both existing and emerging funding processes. The IURS will be a 'live' document and the County Council is committed to reviewing the strategy once there is more certainty around the future of growth in Hertfordshire, which will enable the IURS to function effectively as a daughter document to the Local Transport Plan up to 2031.

The IURS is being developed in three key stages:

Stage 1: Issues Mapping. Data gathering on current and predicted transport issues.

Stage 2: Technical Document, Consideration of these issues and the five year housing and economic developments and associated transport impacts on the network to develop long lists of potential options.

Stage 3: Consideration of the public consultation feedback and the prioritisation of schemes into the Inter-Urban Route Strategy.

This Technical Study contains the outputs of the Stage 1 and Stage 2 work that has been undertaken to date and will be used to engage wider stakeholders, local Members and Hertfordshire residents on the types of schemes that are likely to be required to address existing transport issues and help unlock growth within the County. This Technical Study along with the outputs from consultation and prioritisation of schemes will form the basis of developing the Inter Urban Route Strategy to 2017.

Inter Urban Corridors

In developing the Strategy, a set of inter-urban corridors have been defined to capture the main inter-urban transport network connecting the urban centres in Hertfordshire and across its borders. Corridors (as shown in Appendix 1) were selected to capture:

- All main routes between the main towns (those with Urban Transport Plans) and other centres of major population. This will be A and B roads with parallel Motorways, railways and other sustainable transport networks (such as cycle routes) where relevant within the corridor.
- Parallel routes e.g. Hatfield - St Albans A414 and A1057, A1184 and West Anglia railway
- Where known rat-runs provide alternatives to the main routes e.g. B1004 and A120/A10

The Inter Urban Route Strategy will only cover 'local town hot spots' if it is deemed that a strategic solution is required to encourage inter urban connectivity or resolve traffic in a town.

Definition of Issues and Scheme Development

Through engagement with local district, borough and county officers; the police, Network Rail, Highways Agency and neighbouring authorities, a set of corridor by corridor issues and potential mitigation measures have been collated and were validated via Hertfordshire County Council's existing datasets of transport indicators. A further workshop was held which presented these issues alongside the expected five year growth, which enabled a range of mitigation interventions to be identified. Further, strategic interventions, were sourced through review of Hertfordshire County Councils existing strategies contained in the Local Transport Plan, the Urban Transport Plans (for strategic solutions), the Hertfordshire County Council Rail Strategy, Hertfordshire Infrastructure Investment Strategy and local Infrastructure Delivery Plans.

An appraisal framework, based on the Department for Transport's Early Assessment and Sifting Tool was **then** developed to assess all possible schemes against the County's existing objectives. A series of corridor by corridor options were then identified for the short-term (within 10 years) and longer term (10 years plus) that responded to the existing issues on the transport network, local housing trajectories and planned commercial development.

Given the scale of issues identified, the range of transport networks affected and the level of investment required to address them, the County Council will not be able to deliver all necessary interventions. In many instances, there will be a need to work with other stakeholders to secure the most effective solution wherever possible. To highlight the scale of investment needed within the County's strategic transport corridors, and to assist in identifying the areas where the County Council will need to engage with wider stakeholders, all schemes have been included within the Corridor Options.

Corridor Options

Each corridor contains a range of potential interventions to address the identified issues. Many schemes are issue specific, while many issues have no directly applicable intervention, but rely on broader, countywide demand management policies and the promotion of sustainable transport options, to address them. A set of potential solutions has been drawn up at county and corridor level.

County-wide options include:

- Extending Travel Planning, including Station, School and Personalised Travel Planning;
- Public Transport Orientated Development. Channelling development to key passenger transport corridors;
- Coordinated county-wide parking strategy (working with the districts and boroughs);
- County-wide promotion of flexible and tele-working;
- Extend SMART ticketing across the County;
- Continue the deployment ITS roll-out. Targeted Urban Traffic Management and Real Time Passenger Information at key bus stops on busy routes and interchange locations;
- Extension of bus operating hours through working with bus operators to review market needs;
- Roll-out of Quality Network Partnerships;
- Support for a County-wide roll-out of super-fast broadband via existing 'supafastforherts' scheme;
- Support for a County-wide network of express bus services;
- Support for a County-wide network of park and ride;
- Support for a County-wide network of Public Transport 'Hubs';
- Support for County-wide targeted improvements to access to key rail stations.

The individual corridor options include more specific interventions that relate to particular roads, junctions or other transport networks. A summary of issues and potential solutions for each corridor is presented in the following table.

Table 0.1 Summary of Issues and Potential Interventions

Corridor	Issue	Potential Solution ID	Description	
1 North London to Tring	Euston-Wolverton limited further rail capacity	-	Beyond HCC control	
	Watford Junction platform length limited to 8 car trains	-	Beyond HCC control	
	Watford Junction - St.Albans single track limited capacity for growth	PT06	Addressed longer term with Abbey Line conversion	
	Rail crowding from Watford Junction into London	PT49	Croxley Rail Link - extension of the London Underground Metropolitan line from Croxley to Watford Junction via Watford High Street	
	Congestion on A414 Two Waters Road approach to A41		DM01/DM03/DM06	County-wide demand management strategies.
			DM04	Delivery of ITS Strategy in Hemel Hempstead.
	Congestion A4251 through Berkhamsted		DM01/DM03/DM06	County-wide demand management strategies.
			DM10/PT13/PT15/PT19/PT54	County-wide sustainable transport options
			NM01	Improve cycling links between Berkhamsted and Hemel Hempstead - possibly along Grand Union Canal

Corridor	Issue	Potential Solution ID	Description
1 North London to Tring	AM Peak eastbound delays A41 Kings Langley to M25 J20	DM01/DM03/DM06	County-wide demand management strategies.
		DM10/PT13/PT15/PT19/PT54	County-wide sustainable transport options
	AM peak eastbound delays A41 Watford Road to M25 Junction 19.	DM01/DM03/DM06	County-wide demand management strategies.
		DM10/PT13/PT15/PT19/PT54	County-wide sustainable transport options
		DM04	On-going delivery of ITS Strategy in Watford.
		PT26	Strategic Park & Ride at junction of M25 Junction 21 and A405.
	AM peak eastbound delays on A41 North Western Avenue from junction with A405 Kingsway North Orbital Road to The Dome roundabout (junction with A412 St Albans Road).	DM01/DM03/DM06	County-wide demand management strategies.
		DM10/PT13/PT15/PT19/PT54	County-wide sustainable transport options
		DM04	On-going delivery of ITS Strategy in Watford.
	A411 Hempstead Road eastbound between M25 junction 19 and A412.	DM01/DM03/DM06	County-wide demand management strategies.

Corridor	Issue	Potential Solution ID	Description
1 North London to Tring	Rickmansworth Road approaching capacity	DM10/PT13/PT15/PT19/PT54	County-wide sustainable transport options
		PT03	Improve bus links between Abbots Langley / Leavesden Studios and Watford - new services or better utilise shuttle for employees.
	AM peak northbound congestion junction A41 and B642 Watford	DM01/DM03/DM06	County-wide demand management strategies.
		DM10/PT13/PT15/PT19/PT54	County-wide sustainable transport options
		PT49	Croxley Rail Link - extension of the London Underground Metropolitan line from Croxley to Watford Junction via Watford High Street
	Northbound congestion on A411 at junction with Langley Way	DM01/DM03/DM06	County-wide demand management strategies.
		DM10/PT13/PT15/PT19/PT54	County-wide sustainable transport options
		PT03	Improve bus links between Abbots Langley / Leavesden Studios and Watford - new services or better utilise shuttle for employees

Corridor	Issue	Potential Solution ID	Description
1 North London to Tring	Congestion at Bushey Arches - junction A411 and A4125	HW47	Capacity improvements to Bushey Arches junction through review of feeder junctions
	A4251 congestion through Kings Langley	DM01/DM03/DM06	County-wide demand management strategies.
		DM10/PT13/PT15/PT19/PT54	County-wide sustainable transport options
	Congestion through Nash Mills A4251	DM01/DM03/DM06	County-wide demand management strategies.
		DM10/PT13/PT15/PT19/PT54	County-wide sustainable transport options
2 A405/A1081, Watford to St. Albans	Rail capacity into Euston	PT06	Addressed longer term with Abbey Line conversion
	Watford Junction to St. Albans Abbey Line capacity constraint	PT06	Addressed longer term with Abbey Line conversion
	Lack of parking at Elstree and Borehamwood and Harpenden rail stations	PT23	Support county-wide access improvements to key rail stations
	Abbey Line - low frequency	PT06	Addressed longer term with Abbey Line conversion
	Inappropriate use of B652 by strategic traffic through Harpenden	HW55	Harpenden Town Strategic Traffic Signing Strategy

Corridor	Issue	Potential Solution ID	Description
2 A405/A1081, Watford to St. Albans		DM01/DM03/DM06	County-wide demand management strategies.
		DM10/PT13/PT15/PT19/PT54	County-wide sustainable transport options
	Lack of official ring road for St. Albans	DM01/DM03/DM06	County-wide demand management strategies.
		DM10/PT13/PT15/PT19/PT54	County-wide sustainable transport options
		HW05	Signalise and rephrase existing signals on informal St Albans ring road to improve traffic flow.
	Congestion on A1081 from London Road to Hatfield Road	DM01/DM03/DM06	County-wide demand management strategies.
		DM10/PT13/PT15/PT19/PT54	County-wide sustainable transport options
	Congestion junction of A5183 and B4630	DM01/DM03/DM06	County-wide demand management strategies.
		DM10/PT13/PT15/PT19/PT54	County-wide sustainable transport options
	Peak congestion junction of A414 and A1081	DM01/DM03/DM06	County-wide demand management strategies.

Corridor	Issue	Potential Solution ID	Description
2 A405/A1081, Watford to St. Albans		DM10/PT13/PT15/PT19/PT54	County-wide sustainable transport options
		HW05	Signalise and rephrase existing signals on informal St Albans ring road to improve traffic flow.
	Peak congestion A1081 M25 Junction 22	DM01/DM03/DM06	County-wide demand management strategies.
		DM10/PT13/PT15/PT19/PT54	County-wide sustainable transport options
		HW05	Signalise and rephrase existing signals on informal St Albans ring road to improve traffic flow.
	Peak congestion junction of A405 and M25 Junction 21a	DM01/DM03/DM06	County-wide demand management strategies.
		DM10/PT13/PT15/PT19/PT54	County-wide sustainable transport options
	A1081 London Road approach to M1 Junction 10a. AM peak northbound delays	DM01/DM03/DM06	County-wide demand management strategies
		DM10/PT13/PT15/PT19/PT54	County-wide sustainable transport options
		PT27	Strategic Park & Ride at junction of M1 Junction 10a / A1081.

Corridor	Issue	Potential Solution ID	Description
2 A405/A1081, Watford to St. Albans	A1081 Luton Road, Harpenden, from The Common to Cooters End Lane. AM peak southbound delays	DM01/DM03/DM06	County-wide demand management strategies
		DM10/PT13/PT15/PT19/PT54	County-wide sustainable transport options
		PT27	Strategic Park & Ride at junction of M1 Junction 10a / A1081.
	A1081 Harpenden Road, St Albans, from St Albans urban perimeter to Beech Road. AM peak southbound delays	DM01/DM03/DM06	County-wide demand management strategies
		DM10/PT13/PT15/PT19/PT54	County-wide sustainable transport options
	3 A1(M),Potters Bar to Letchworth Garden City	Rail line capacity between Welwyn and Woolmer Green	PT32
PT43			East Coast Mainline Rail Great Eastern Mainline Upgrade
Demand for parking at Hatfield and Potters Bar close to capacity		PT23	Support county-wide access improvements to key rail stations

Corridor	Issue	Potential Solution ID	Description
3 A1(M),Potters Bar to Letchworth Garden City	Conflicts between fast and stopping rail services sharing fast lines between Finsbury Park and Potters Bar	-	Not directly addressed - Network Rail responsibility
	Peak congestion on A6129 Welwyn Garden City	DM01/DM03/DM06	County-wide demand management strategies
		DM10/PT13/PT15/PT19/PT54	County-wide sustainable transport options
	A1000 Great North Road/Hatfield Road (Potters Bar) from junction with Hawkshead Road to junction with The Causeway. AM peak southbound congestion	DM01/DM03/DM06	County-wide demand management strategies
		DM10/PT13/PT15/PT19/PT54	County-wide sustainable transport options
	A1(M) Junction 8 to Junction 7. Approaching capacity	HW56	Continue lobbying for A1(M) Widening 2 lane section to Junction 7
		HW09	A1 (M) Variable Speed Limits
	A1(M) Junction 7 to Junction 6. Exceeding capacity	HW56	Continue lobbying for A1(M) Widening 2 lane section to Junction 7
		HW09	A1 (M) Variable Speed Limits

Corridor	Issue	Potential Solution ID	Description
3 A1(M), Potters Bar to Letchworth Garden City	A1(M) Junction 3 and M25 junction 23. Approaching capacity	HW09	A1 (M) Variable Speed Limits
	A1000 Bessemer Road between A1(M) Junction 6 and Mundells roundabout (Welwyn Garden City). Exceeding capacity - AM peak southbound and PM peak northbound	HW09	A1 (M) Variable Speed Limits
		DM01/DM03/DM06	County-wide demand management strategies
		DM10/PT13/PT15/PT19/PT54	County-wide sustainable transport options
	A1000 Great North Road between A1001 South Way (Hatfield) and Kentish Lane (Bookman's Park). Approaching capacity	HW09	A1 (M) Variable Speed Limits
4 A10, Waltham Cross to Royston	A10 College Road junction, Broxbourne. Congestion	HW57	A10 / A121 / B198 Roundabout. Full signalisation, with three circulatory lanes, three southbound approach lanes and a dedicated eastbound to westbound left turn lane
	A10/A121 junction, Broxbourne. Congestion	PT08	A10 Bus priority
		PT34	Improve bus services linking the Lea valley towns

Corridor	Issue	Potential Solution ID	Description
4 A10, Waltham Cross to Royston		HW57	A10 / A121 / B198 Roundabout. Full signalisation, with three circulatory lanes, three southbound approach lanes and a dedicated eastbound to westbound left turn lane
	Congestion at Amwell Roundabout A414	HW10	Signalise roundabout
5 A602, A119, A507, Letchworth Garden City to Ware	A414 North Orbital Road between A5183 Watling Street and A1081 London Colney bypass. Eastbound delays	DM01/DM03/DM06	County-wide demand management strategy
		DM10/PT13/PT15/PT19/PT54	County-wide sustainable transport options
		PT09	Central Herts Passenger Transport System - revisit options - rubber-tyred guided vehicles a guided bus-way between Hatfield and Watford via St. Albans
		NM12	Parallel cycle routes along A414
	A414 through Hertford. Eastbound delays	DM01/DM03/DM06	County-wide demand management strategy
		DM10/PT13/PT15/PT19/PT54	County-wide sustainable transport options

Corridor	Issue	Potential Solution ID	Description
5 A602, A119, A507, Letchworth Garden City to Ware	A414 Eastwick Road on approach to A414 Allende Avenue (Harlow). Eastbound delays	DM01/DM03/DM06	County-wide demand management strategy
		DM10/PT13/PT15/PT19/PT54	County-wide sustainable transport options
	A414 London Road between A10 and A414 Gascoyne Way (Hertford). Westbound delays	HW17	A414 Hertford SCOOT. Signalise and link roundabouts
	A414 Hertford Road between A1000 Hertford Road and A1(M) Junction 4. Westbound delays	DM01/DM03/DM06	County-wide demand management strategies
		DM10/PT13/PT15/PT19/PT54	County-wide sustainable transport options
	Hemel Hempstead Magic Roundabout peak congestion	DM01/DM03/DM06	County-wide demand management strategies
		DM10/PT13/PT15/PT19/PT54	County-wide sustainable transport options
	A414 peak congestion Hemel Hempstead approach to M1	DM01/DM03/DM06	County-wide demand management strategies
		DM10/PT13/PT15/PT19/PT54	County-wide sustainable transport options
	A414 / A405 junction congestion	DM01/DM03/DM06	County-wide demand management strategies

Corridor	Issue	Potential Solution ID	Description
6 A505, Luton to Royston	Peak congestion A505 Moormead Hill approach to Hitchin	DM01/DM03/DM06	County-wide demand management strategies
		DM10/PT13/PT15/PT19/PT54	County-wide sustainable transport options
	Peak congestion A505 junction with St. Michaels Road Hitchin	DM01/DM03/DM06	County-wide demand management strategies
		DM10/PT13/PT15/PT19/PT54	County-wide sustainable transport options
	Congestion on A505 approach to Luton	DM01/DM03/DM06	County-wide demand management strategies
		DM10/PT13/PT15/PT19/PT54	County-wide sustainable transport options
	A505 Hatch Lane and A6141 Great North Road (Baldock). Delay	DM01/DM03/DM06	County-wide demand management strategies
		DM10/PT13/PT15/PT19/PT54	County-wide sustainable transport options
	A505 Letchworth Gate between A505 Baldock Road and A1(M) Junction 9. Approaching capacity	HW22	A505 Dualling
7 A602, A119, A507 Letchworth Garden City to Ware	A602 Monkswood Way to junction with High Street (Watton at Stone).	DM01/DM03/DM06	County-wide demand management strategies

Corridor	Issue	Potential Solution ID	Description
7 A602, A119, A507 Letchworth Garden City to Ware	Exceeding capacity	DM10/PT13/PT15/PT19/PT54	County-wide sustainable transport options
	A602 B158 Anchor Lane to A10 Westmill Road (Ware). Eastbound. Exceeding capacity	DM01/DM03/DM06	County-wide demand management strategies
		DM10/PT13/PT15/PT19/PT54	County-wide sustainable transport options
	Congestion around Stevenage Old Town	DM01/DM03/DM06	County-wide demand management strategies
		DM10/PT13/PT15/PT19/PT54	County-wide sustainable transport options
		HW25	Re-sign through traffic (from or to Hertford) to bypass Stevenage town centre.
		PT14	Stevenage North Park and Ride. On B197, off A1(M) J8.
	Peak congestion A119 approach to Hertford	DM01/DM03/DM06	County-wide demand management strategies
		DM10/PT13/PT15/PT19/PT54	County-wide sustainable transport options
		HW17	A414 Hertford SCOOT. Signalise and link roundabouts

Corridor	Issue	Potential Solution ID	Description
7 A602, A119, A507 Letchworth Garden City to Ware		PT17	Hertford / Ware Park and Ride
8 A120, Standon to Bishop's Stortford	A120 approach to Little Hadham from Standon. Eastbound peak delays	PT35	A120 Coach Link Long term aspiration to consider Little Hadham bypass
	A120 approach to Little Hadham from Bishops Stortford. Westbound peak delays		

More detailed documentation of these issues and potential interventions is provided in Chapter 2 of the main IURS Stage 2 Technical Document. Each corridor contains a broad range of potential interventions at various stages, from very early outline ideas, to more developed existing and funded plans. As the IURS will only consider developments until 2017, the options in this technical document currently focus on the next five years. Whilst longer term interventions have not been discounted they are appended to the technical document for further consideration and to inform longer term iterations of the IURS when necessary once there is more certainty over future development plans.

For each corridor a table of potential interventions has been presented showing issues addressed, broadly indicative scheme costs, expected value for money (benefits versus costs) and timescale to implementation. The timescales are indicative only, and suggest time to deliver the scheme once the scheme has been approved and funding has been secured. For the larger scale schemes, further analysis, testing and consultation will need to take place and funding secured. These timescales and costs estimates should be viewed as a guide only, and do not necessarily mean that a scheme will be delivered in that timeframe and for that exact costs.

Prioritisation and Funding

While a long-list of options has been drawn up, these will be need to be prioritised when developing the strategy. Their prioritisation will depend on a number of factors which will be determined at a later stage and views are being sought as part of this consultation. Furthermore, the inclusion of interventions within the IURS will not guarantee that the scheme will be implemented. Instead, the IURS will contain a series of prioritised interventions that the County Council wish to see taken forward to address inter urban issues and will form the basis of investment in the County's strategic transport networks over the next 5 years. However, successful delivery of these schemes will be dependent on whether or not sufficient funding can be secured and where necessary delivery partners identified.

Due to the role of many schemes in unlocking development potential, Hertfordshire County Council will continue to work in close partnership with the district and borough councils, Local Enterprise Partnership, Highways Agency , DfT and the Local Transport Board, through the Community Infrastructure Levy and wider infrastructure planning processes to help identify funding and bring forward the prioritised schemes. The schemes and measures included in the Inter-Urban Route Strategy are likely to be funded via a range of mechanisms depending on the type and scale of the proposal, with some schemes attracting funding from more than one source.

The funding sources are summarised as follows:

- External Funding
 - Local Sustainable Transport Funds
 - Highways Agency Pinch-Point Programme
 - Growing Places Fund

- Major Schemes Business Case Bids (normally for schemes costing more than £5m.)
- Grants (e.g. Sustrans, Lottery Funding)
- Internal Funding
 - Local Transport Plan - funds from The Integrated Transport Block
 - HCC/district/borough funding via the Council's Budgets
 - Revenue/Capital Receipts
- Third Party Funding
 - Developer Contributions - funding from Section 106 agreements
 - Community Infrastructure Levy
 - Employers - Workplace Travel Plans

Where necessary Hertfordshire County Council will need to continue to engage with its neighbours to bring forward the schemes necessary to support growth inside and outside the County.

Next Steps

This Technical Document will be subject to a 10 week public consultation to seek the public's views on the key issues facing Hertfordshire's inter urban route network and possible interventions to address these. Views will also be sought on how the County Council could prioritise investment to help determine a future strategy for the County's inter-urban routes to 2017.

Appendix 1: Corridors and Route Descriptions

- 1 - M1, A411, A41, A425.
- 2 - M1, A1081, A5183, A405, B653, B651, B5378
- 3 - A1(M), A1000, B197, B656,
- 4 - A10, A1170, B1368, B1039
- 5 - A414, A4147, A1057, B487, B653, B1000
- 6 - A505, A1(M), A602, B655, A6
- 7 - A602, A119, A507
- 8 - A120, B1004

All rail corridors were also considered



