

# AN INTEGRATED TRANSPORT NETWORK

Spring 2018

## Hertfordshire Infrastructure Charrette



"The strength, the solvency, the influence of Britain, which some still think depends upon nostalgic illusions or upon nuclear posturings – these things are going to depend in the remainder of this century to a unique extent on the speed with which we come to terms with the world of change... It is, of course, a cliché that we are living at a time of such rapid scientific change that our children are accepting as part of their everyday life things which would have been dismissed as science fiction a few years ago."

Harold Wilson  
White Heat of Technology, 1963

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### FOREWORD FROM NEVILLE REYNER

Chair of the Hertfordshire Chamber of Commerce

A great many thanks once again to all who attended the last charrette. It was, once more, a lively event stimulating some robust discussion around the present state and future aspirations for our infrastructure across Hertfordshire. We hope that you found it useful, and that you will join us again at the next event, where we will discuss interconnectivity of a different kind.

*Neville Reyner*

**Neville Reyner CBE DL**  
Chairman Hertfordshire Chamber of Commerce

## CATERING FOR THE DEMANDS OF THE TWENTY-FIRST CENTURY

The key to a flourishing Hertfordshire lies in healthy cooperation and engagement. The aim of these Charrette sessions is to assist in facilitating this kind of engagement between different organisations, and both public and private sectors. It aims to dovetail with the good work which is already underway, including, for example, the County Council's recent consultation on the Local Transport Plan. Whatever interventions we opt for, it will be important to be very clear about the problems we seek to solve. Simply saying: "It's smart and it works in London!", or adopting a business-as-usual attitude, will not be sufficient to meet demands of growth in the county coherently. Any interventions must observe successes and failures elsewhere before being intelligently designed for a Hertfordshire context, to meet specific challenges.

Other places are heavily focused on meeting the challenges of growth. From the Northern Powerhouse, Transport for the North, the Oxford-Cambridge Arc and the London Stansted Cambridge Consortium, to England's Economic Heartland and London's myriad infrastructure projects. Hertfordshire does not have an equivalent.

*"Hertfordshire's growing traffic congestion, the expansion of the University and the potential economic redevelopment of British Aerospace and other sites require an innovative transport system that can cater for the demands of the 21st Century and enhance the quality of life in the County.*

*A quality system is required to link residential, business and development areas, **improving east-west links** and joining the radial north-south rail links. This would help to **relieve traffic congestion** on the M25 and A414 across Hertfordshire, thus **reducing pollution** of the environment and **enhancing the quality of life.**"*

These words come from a pre-feasibility study document published in 1996. Their thrust remains the same today. Vision, collaboration and forethought is required to meet the technological and demographic challenges the future will bring. Whilst admirable, little has been achieved during the intervening period. The advent of further growth in Hertfordshire, including 100,000 new homes, underscores the importance of this vision.

**An Integrated Transport Network** was the first topic-specific session of the Infrastructure Charrette series designed to fulfil and explore the priorities we identified during 2017. Feedback from preliminary events suggested that collectively we see transport as one of the most pressing challenges for the county as it responds to growth proposed for the years ahead. The March 8th event thus focused on issues surrounding the provision of integrated transport across Hertfordshire, from the County Council's Local Transport Plan and the University's Smart Mobility Research Unit to myriad suggestions for improved east-west options.

In charting out a bold vision for how our County might look in the future, we ought also to be mindful of the words spoken by Adam Marshall, Director General of the British Chambers of Commerce (BCC), to the BCC on 8th March:

*"The government must focus on fixing the basics, including improving local roads, railways and airports, boosting housing supply. . .*

*Business knows that success so often depends upon getting the basics right first. The same holds true for the UK economy."*

None of this is to decry any of the work which is already underway, including HCC's recent LTP4 consultation, but an acute understanding of the funding and manpower limitations placed upon our public authorities ought to lead us all to take an engaged approach to local initiatives and infrastructure delivery. Indeed, the 1996 study emerged through a partnership of the University of Hertfordshire, Welwyn Hatfield District Council, St Albans City & District Council, Watford Borough Council and the Hertfordshire County Council. At the same time, rapid technological change means that the focus and consideration of possible challenges shouldn't be restricted to purely traditional employment solutions.

Whilst broadening the conversation to include more parties can initially risk feeling as if progress is slower, it brings more stakeholders together on the journey such that all are on board when decision time comes. Similar breadth of cooperation will be required to successfully meet the demands of Hertfordshire's growth. Whilst we may be attracted to driving our own car for the freedom and autonomy it offers, it undermines the collective efforts of our society and, without changes, will become an increasingly slow and unpalatable alternative to other modes. Public transport, on the other hand, ultimately serves to better meet the needs of Hertfordshire's communities.

Due to the challenges involved and the failure to bring about meaningful change, we can see from the earlier quote that the issues which prevailed in 1996 remain exactly the same two decades on.

**Improving east-west links**  
*to*  
**Reduce traffic congestion**  
**Reduce pollution**  
**Enhance the quality of our lives**

It is apt to conclude with words from the 1996 study: *"The County Structure Plan and TravelWise objectives, led by Hertfordshire, emphasise sustainable transport and the Environment. They call for new ways of tackling the transport problems of Central Hertfordshire with less reliance on the car. Sustainable solutions require long term perspectives so planning needs to start now."*

# INTEGRATED TRANSPORT AN OVERVIEW – DIFFERENT VOICES ON HERTFORDSHIRE

## The View from the County Council: LTP4 Status Update

Cllr. Derrick Ashley, Portfolio Holder for Planning, Transport & Environment  
Hertfordshire County Council

Councillor Ashley opened proceedings by outlining the current status of the Local Transport Plan (LTP4). LTP4 is a process through which the County will design levels of strategy. LTP4 provides the overarching vision and structure, underneath which, in due course, daughter documents on specific or local aspects will sit.

“There will be no big bang, this is a process of continual advancement.”

This forms part of the County's new approach to infrastructure. As Leader of the Council, David Williams, noted when he took the post last November: “A key priority is the need to deliver infrastructure to support the growth that’s planned for the county.

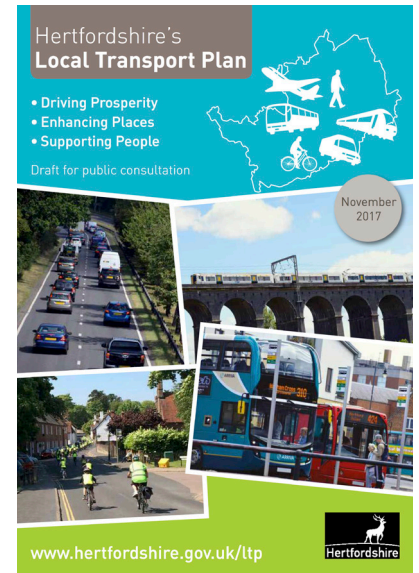
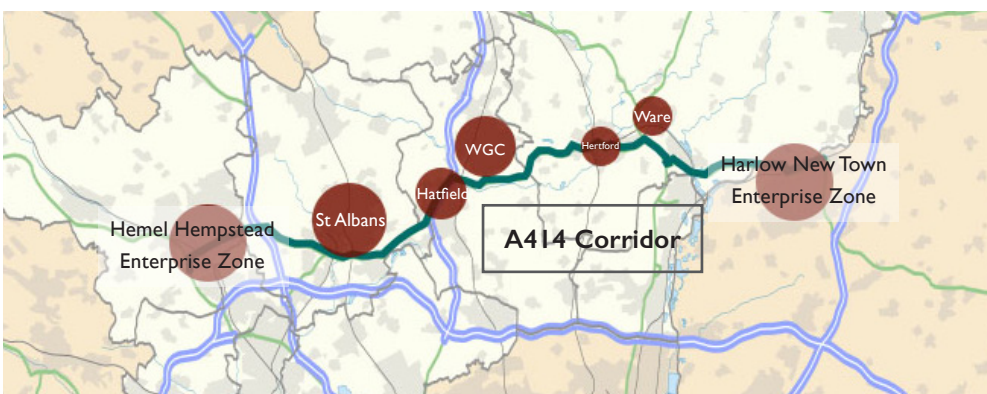
None of this can be achieved alone and we need to work even more closely with our local and national partners to advocate on behalf of those who live and work in Hertfordshire.”

## A414: the Route to Innovation, linking Hemel to Harlow

John McGill, Director of the London Stansted Cambridge Consortium

John McGill has valuable experience in collaborative cross-sector partnerships promoting a vision for the ‘UK’s Innovation Corridor’ running north from Liverpool Street and Kings Cross all the way to Cambridge. Important understanding gained through the LSCC process has been that the east-west connections within the corridor are vital to the functioning and prosperity of the north-south enterprise.

Recognising that 60% of the housing growth to come in Hertfordshire over the next fifteen years will emerge along the A414 corridor John advocated thought be given towards an east-west route running from Enterprise Zone in Hemel Hempstead to another Enterprise Zone in Harlow.



# 1

**Growth + Infrastructure**

Hertfordshire County Council's #1 Priority.

# 60%

of housing growth in Hertfordshire over the next 15 years will come along the A414 corridor.

## **SMART MOBILITY RESEARCH UNIT**

We were privileged the University of Hertfordshire publicly launched its Smart Mobility Research Unit (SMRU) at the Riding School as part of this event. An exciting new Unit, this has the potential to bring different places and players in Hertfordshire's transport ecosystem together and, it is hoped, return our County to the forefront of innovation.

**Dr Richard Southern, Dean of the School of Life & Medical Sciences** introduced the SMRU, which sits with the School. Richard is excited about what the SMRU offers, combining diverse strands of expertise, from human geography to engineering, and opportunity to contribute to changes and debates and the future direction of Hertfordshire and ability to involve students, both under- and post graduates, in the process of delivering innovative solutions to how we move around in ways which can preserve the sense of this place.

**Dr Scott Copsey**, who is heading up the Smart Mobility Research Unit (SMRU), outlined its collaborative, multidisciplinary and cross-departmental approach. He described the focus of Smart Mobility as: an exploration and development of integrated and shared transport choices, end to end journeys, multi-modal ticketing, low/ no carbon (electric/ hybrid), and the necessity of harnessing data for developing new approaches to the delivery of mobility going forward, amongst other aspects.

Scott highlighted the fact that 20% of our population live in rural areas and that bus services have seen severe cuts over recent years. The SMRU exists to consider alternative business models to current public and private transport delivery models across Hertfordshire (and beyond), backed up by research in order to deliver proposals in collaboration and partnership with other Hertfordshire organisations and stakeholders, in order to develop a more sustainable transport system. The SMRU is developing international links and collaborations in order to share best practice and work with experts across the globe. The aim is to use the University and Hertfordshire and the County more widely as a 'living laboratory', in order to 'plan and deliver smart and integrated transport that connects communities'.

**Dr Sooda Ramalingam** outlined her role from an Engineering background, and the role of the engineering department in the SMRU. With her specialism in data analytics, along with biometrics and other technological expertise, such skills will play an important role in developing system transport systems in the coming years.

**Nick Reed** is a Personal Construct Psychologist working within the SMRU. Nick presented a section on understanding behaviour with particular reference to behaviour change and "resistance to change". Nick explained that from a Personal Construct Psychology point of view, to understand why a person (or a group of people) is behaving in the way that they are (e.g., using their car instead of public transport) we need to know how they construe the situation in question. Once we know how a person is construing something, we will know why they are behaving as they are rather than, for instance, behaving in the way that we would like them to. This leads us to looking at a "refusal" to change not as resistance to change but as persisting with an existing behaviour that makes sense to the person (or group or population) concerned. Using this concrete information platform, we can then proceed to devise a strategy for change.

For more information on the Unit, please contact the team at: [smartmobility@herts.ac.uk](mailto:smartmobility@herts.ac.uk)

## TANGIBLE ASPECTS OF AN INTEGRATED TRANSPORT NETWORK

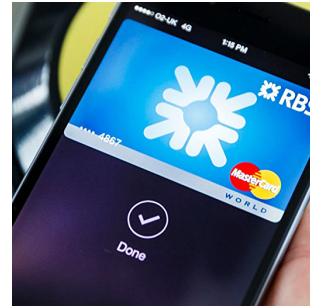
Participants first explored their experience of journeys around Hertfordshire, and then were given 12 cards. Each card outlined a particular aspect of an integrated transport system (tangibles, not intangibles such as collaboration or partnerships or political will):



**Designated light rail or guided bus routes**



**Open data**



**Integrated ticketing system**



**Coherent network of cycle paths**



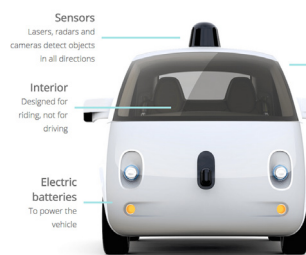
**Attractive pedestrian routes**



**Coherent brand**



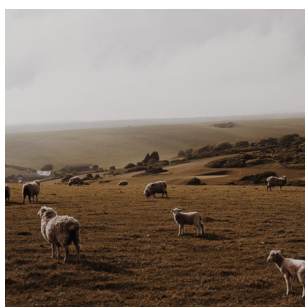
**High quality roads**



**Connected autonomous vehicles**



**E-Car Club**



**Access to the natural environment**



**Access to flexible bicycle hire**



**Bypasses**



They were asked to consider:

- which of these aspects were present during their journey, and made it pleasant
- and which were absent but, if they had been present, would have made the journey better

This provoked a fruitful discussion, on **the importance of roads**, both in and around towns, **alternative transport modes**, and the **roles of open access to data** and a properly **integrated ticketing system** might play in encouraging us to get out of our cars, as well as the place in a **coherent network of attractive pedestrian routes, safe cycle paths, connected autonomous vehicles** and **designated public transport routes**, amongst others.

### A Desire for More Options

It is telling that the **top three concerns** of participants focus around how we might encourage and **enable greater uptake of passenger transport**, and that the top five brought together a hierarchy of alternatives to the private car. Modal shift can only be achieved if a meaningful hierarchy of these alternatives exist. Designated light rail or guided bus routes were almost universally prioritised as one of the top priorities, whilst attractive pedestrian routes and cycle paths were also seen as hugely important. This demonstrates a strong understanding that business as usual will not be an option to cater for the growth to come moving forward into the 21st century - that walking, cycling and more attractive public transport options represent the most favourable options to pursue to ensure in the years ahead.

Open data, a shortcut phrase to explain local authorities or transport franchises opening up their databases of passenger usage statistics to the public, enables developers to create applications such as Citymapper. For example, Transport for London publish passenger figures in acute detail on their website, and more detailed information remains available on request. This has in the past enabled computer developers to harness vast amounts of information and to develop applications, such as Citymapper - or even underlie 'Directions' tool in Google Maps - and thereby present potential car drivers with myriad options from walking, cycling to public transport.

This kind of app, in turn, provides real-time data to us as passengers and puts us in control of our public transport journey. An integrated ticketing system removes substantial pain points for passengers, at which they reach a barrier stopping or slowing them from using the service. Quite simply it is frustrating to have to get individual tickets for train and bus and tube and tram. Understandably, integrated systems can prove difficult to establish and require a number of different stakeholders to buy into a shared vision and aspiration. By way of example, both Stagecoach and Whippet Coaches run buses on the Cambridge Guided Busway. Whilst passengers can purchase a pay-as-you-go smart card which works across both providers, almost like an Oyster in London, individual tickets bought by one provider cannot be used by the other. It is this kind of lack of coherence which puts off potential passengers.

London, perhaps inevitably given its greater regulatory control, still leads the way on this. Whilst it will not be appropriate simply to transpose certain solutions into Hertfordshire's context, the capital's approach can, and should be, learnt from. Although the behaviour of the passenger is similar, the capacity to use contactless bank cards almost anywhere on the transport network represents a huge step forward from the Oyster card. Not only is the seamless use of contactless technology across bus, train and tube a boon for daily commuters and London citizens, but it also opens up London's public transport network to visitors from anywhere in the world which issues contactless bank cards. To illustrate how potent this is, there are only 100 countries in which contactless cards are issued: TfL sees contactless cards from 100 countries across the world access its network. As Matthew Hudson, Head of Strategy, Technology and Data at TfL, noted: "It's like having an Oyster Card production line in all of these countries, ready for them to come here and use it on our transport system."

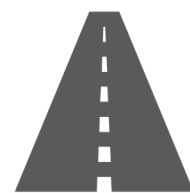


The next most important aspects of an integrated network were seen as **a coherent network of cycle paths** and **attractive pedestrian routes**, all underlined by **a coherent brand**. To illustrate the importance of branding, compare the perception of Transport for London and Arriva or Southern. Whilst bus or train companies operating elsewhere are seen as just that, bus or train companies, TfL are seen as a benign, competent and positive force in London - indeed, many Londoners and commuters look to TfL with a sense of hope that they will step in and improve services.



We commend the recent work undertaken by Hertfordshire County Council to bring together the boroughs and districts of Hertfordshire around a coherent bicycle share scheme. This is a vital first step in a hierarchy of alternatives to private car usage.

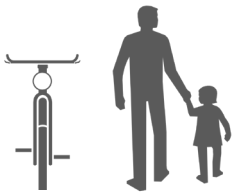
The subject of high quality roads divided opinion. Whilst it was noted that roads are at present our predominant mode of transport and we need them to be up to standard, most groups stressed that they are no longer seen as a solution for the future. Whilst they may provide palliative relief to issues we face immediately, they offer limited hope of solving the coming growth of our county in ways which any of us would find attractive, compelling or satisfactory.



More than this, they are an expensive shibboleth which, if focussed upon, sap funding away from alternative transport modes. Future bypasses, for example, rather than being seen as aspirational solutions for the twenty-first century, are increasingly seen as giant physical structures which engulf vast amounts of land, disrupt and isolate existing communities and ecological networks, and cost the government hundreds of millions of pounds - in their initial installation as well as a result of the longer term effects of noise and poor air quality they bring. Are they a fitting solution for the twenty first century and might the large sums of money be better deployed?



Particularly fascinating output from this workshop was a clear **generational divide**. Whereas some people thought they should place high quality roads as the highest priority in order to sort out what issues we have now before turning their attention to other aspects of an integrated network, younger people unanimously dismissed the primacy of high quality roads. The cost of road schemes were often felt to draw funding away from the creation of viable alternatives.



This is not to underestimate the importance of roads to our economy and our way of life: they have in fact created and enabled it – and we must not forget that quality of life in Hertfordshire remains high. On the contrary, it is simply to note that roads are the 20th century's solution, and – because of shifts in our demography and lifestyle – will not continue to provide us with the kind of life we want in the 21st. This is a natural progression, a new chapter of our technological progression - from narrow roads once frequented by horse and cart, to canals, to railways before the car properly emerged in the early twentieth century. We have learnt that building towns to prioritise car travel diminishes the experience of living, playing or simply passing through the place for pedestrians - us, humans. Noise, air quality, spatial harmony: all suffer.

Indeed, instead of roads, younger people in the room cited the costs of car ownership as unattractive, and universally considered aspects such as open data and integrated ticketing system to be the primary issues to which we ought to divert attention and resources in order to develop an coherent transport network.



## INTEGRATION - PARTNERSHIPS & COLLABORATION

The Government's Industrial Strategy outlines four **Grand Challenges** which face us - both as humans, and as British citizens, in the years ahead. These are understanding the constraints and the opportunities of **Artificial Intelligence and the Data Economy**, harnessing our technological advances to deliver **Clean Growth**, confidently meeting the **Future of Mobility** and better understanding how to meet the demands of our **Ageing Society**.

To meet these challenges in any way will require collaboration, partnership and trust. It is absolutely vital that we will find innovative ways of working together, understanding each other's aspirations, forging a common purpose and striving to make it a reality.

Mindful that clearly understanding the possibilities and limitations of each other's capacities is a vital first step, the next session asked participants to focus on partnerships and collaboration with others in their group. The aim of this session was for participants to explore how one's success would benefit the other.

Participants were asked:

*How would an expansion of another company's service help your organisation?*

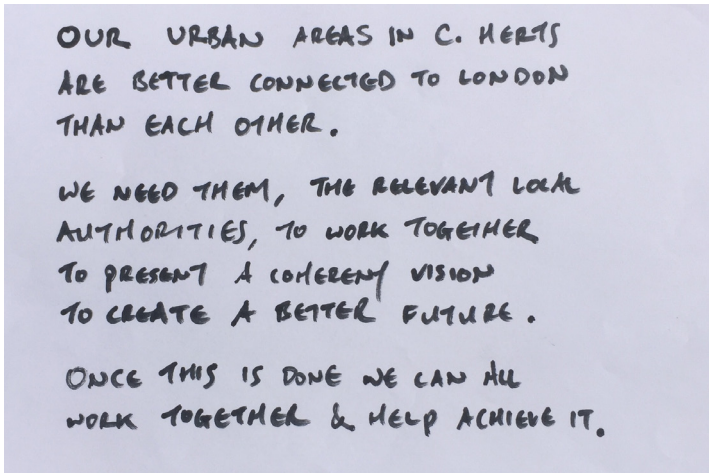
*How can the success of a company or local authority initiative represented by someone on your table help you?*

*How would a service that is being provided on your table help you do business, or serve your constituents?*

*What stakeholders and partners will you need to engage with from an early stage?*

Some apt ideas emerged, demonstrating once again how we live and work in an interconnected network, relying on each other's input and continual success for our own. For example, an IT company in the audience realised it could provide data analysis of open data resources released by local authorities. This in turn would enable potential passengers to understand more clearly when their bus is coming, to know when they should leave their house and thereby take control of their public transport journey. The University of Hertfordshire, too, recognised the role it could play in the same process.

One of the participants, a representative of a local Hatfield business, noted the role Transport for London should play in facilitating positive growth in Hertfordshire. They picked up on the fact that Hertfordshire has always in part been defined and shaped by its relationship to London. There is little escaping this. If Hertfordshire, however, wants to retain its own sense of identity and its own sense of place, it needs to better understand and connect itself. Indeed, there is strong potential for a series of networked clusters of market towns and villages across the county. For example within Central Hertfordshire, an economic cluster reaching from Hertford through Welwyn Garden City and Hatfield to St Albans. Although individually each town might struggle to reach a critical mass, as a cluster it has a population size and economic clout similar to a city such as Oxford or Cambridge.



OUR URBAN AREAS IN C. HERTS  
ARE BETTER CONNECTED TO LONDON  
THAN EACH OTHER.

WE NEED THEM, THE RELEVANT LOCAL  
AUTHORITIES, TO WORK TOGETHER  
TO PRESENT A COHERENT VISION  
TO CREATE A BETTER FUTURE.

ONCE THIS IS DONE WE CAN ALL  
WORK TOGETHER & HELP ACHIEVE IT.

**Infrastructure Charrette Participant**

## WHAT CONTRIBUTION COULD YOU MAKE TO CREATING AN INTEGRATED TRANSPORT SYSTEM IN HERTFORDSHIRE?

The final ten minutes opened the floor to several questions, in particular for Dr Scott Copsey surrounding the capacity and aspirations of the Smart Mobility Research Unit.

This operated with a guide question of: ***What contribution could you make to creating an integrated transport plan for Hertfordshire?***

A discussion between John McGill, LSCC, and Scott Copsey, SMRU highlighted that the SMRU is open for the denizens of Hertfordshire to approach if they believe there is a great project which the SMRU is best placed to undertake. It is hoped that this offer is seized with confidence.

Scott Crudgington, Chief Executive of Stevenage Borough Council, mentioned that Stevenage had launched the town centre regeneration project in early March. He was mindful of the fact that whilst a lot of the themes within the County Council's Local Transport Plan and initiatives considered at the event are large, strategic projects which must be undertaken, it is also very important to achieve, as Councillor Ashley mentioned, the smaller details which affect thousands of people's everyday lives. For example, how do we connect Stevenage station to the nearby road? It is small, it will be hugely expensive, but it will change the face of Stevenage. To this end, Scott Crudgington suggested part of the Smart Mobility Research Unit's role should be to look at the funding models for this kind of work.

Perhaps even to different business models for delivering public works in Hertfordshire.

Jeff Stack, Chief Executive of Broxbourne Borough Council, highlighted that whilst we spoke a lot about the effects of congestion these focused on the psychological and economic effects - but didn't focus on its detrimental effect on air quality. Mr Stack suggested part of the SMRU's role could be mapping across the county where hotspots of poor air quality reside, whether this could link to the transport agenda to both shift individuals' behaviour and enable and persuade central government to offer more money. It would likewise link into the wider aspects of public health touched upon by Jim McManus at one of the preliminary workshops. Dr Richard Southern, Dean of the School of Life and Medical Sciences at the University of Hertfordshire, stated this is a worthwhile idea, and the University already have some of this data.

Funding will increasingly require a compelling vision serving both the business case and providing demonstrable positive benefits to society.

### **Did you attend this workshop?** Did you find it helpful?

Would you be interested in attending future events, or forming a group which continues the debate around Transport in Hertfordshire?

Contact **Cosmo Murray** on:  
01707 287000  
c.murray@gascoyneholdings.co.uk

University of Hertfordshire **UH**

