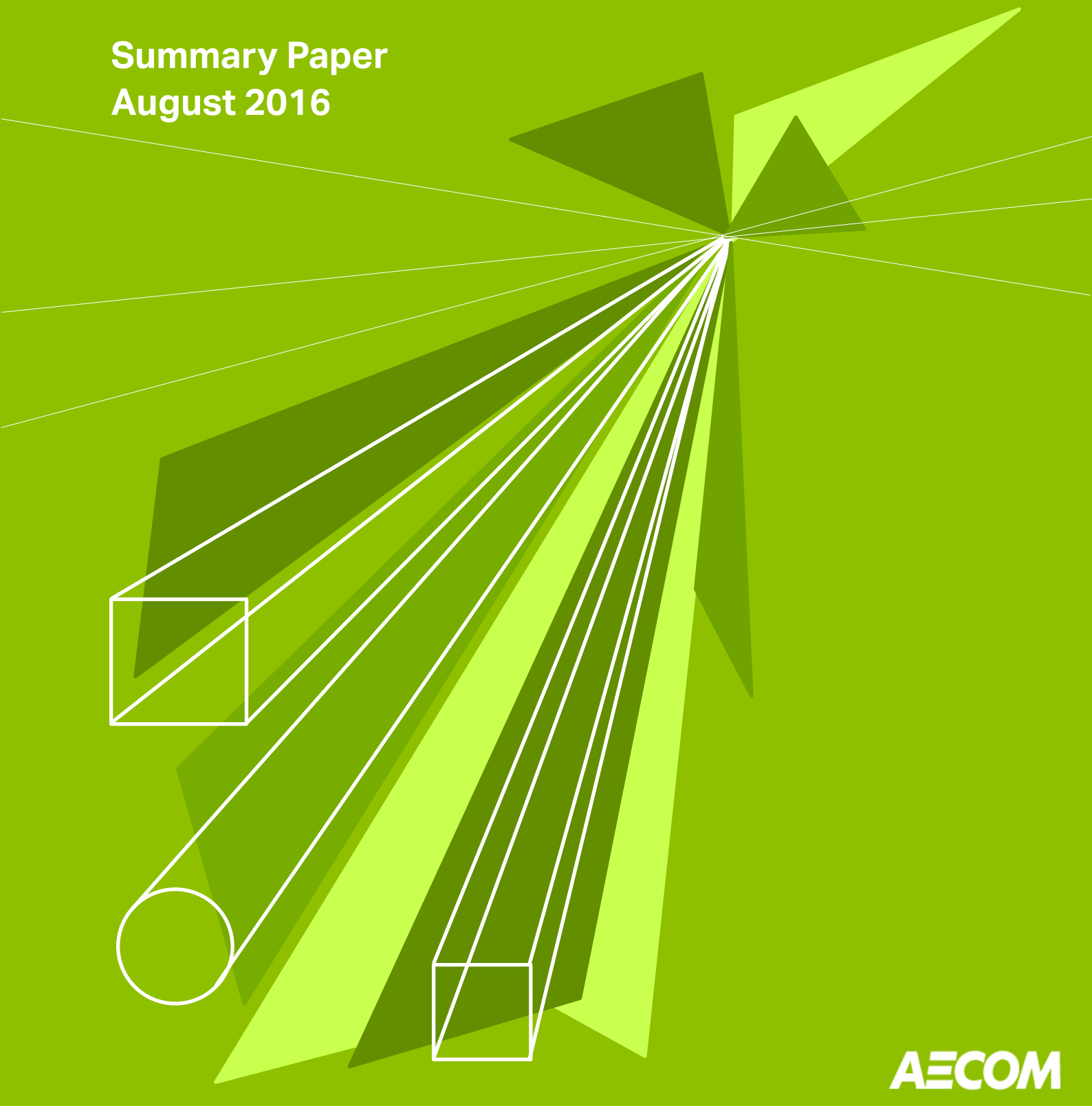
South West Hertfordshire Growth and Transport Plan

Evidence Analysis

Summary Paper
August 2016



AECOM

Prepared for:

Hertfordshire County Council

Prepared by: Chris Denton, Giacomo Vecia

Verfiied by: Barry Wickenden

Approved by: Simon Willison

Date: August 2016

AECOM Limited
AECOM House
63-77 Victoria Street
St Albans
Hertfordshire
AL1 3ER
UK

T: +44(0)1727 535000
aecom.com

1. Introduction

This paper presents the evidence analysis methodology used at Stage 1 of the South West Hertfordshire Growth and Transport Plan.

The following sections summarise the challenge identification process and the method followed to produce the Evidence Analysis Pro-forma.

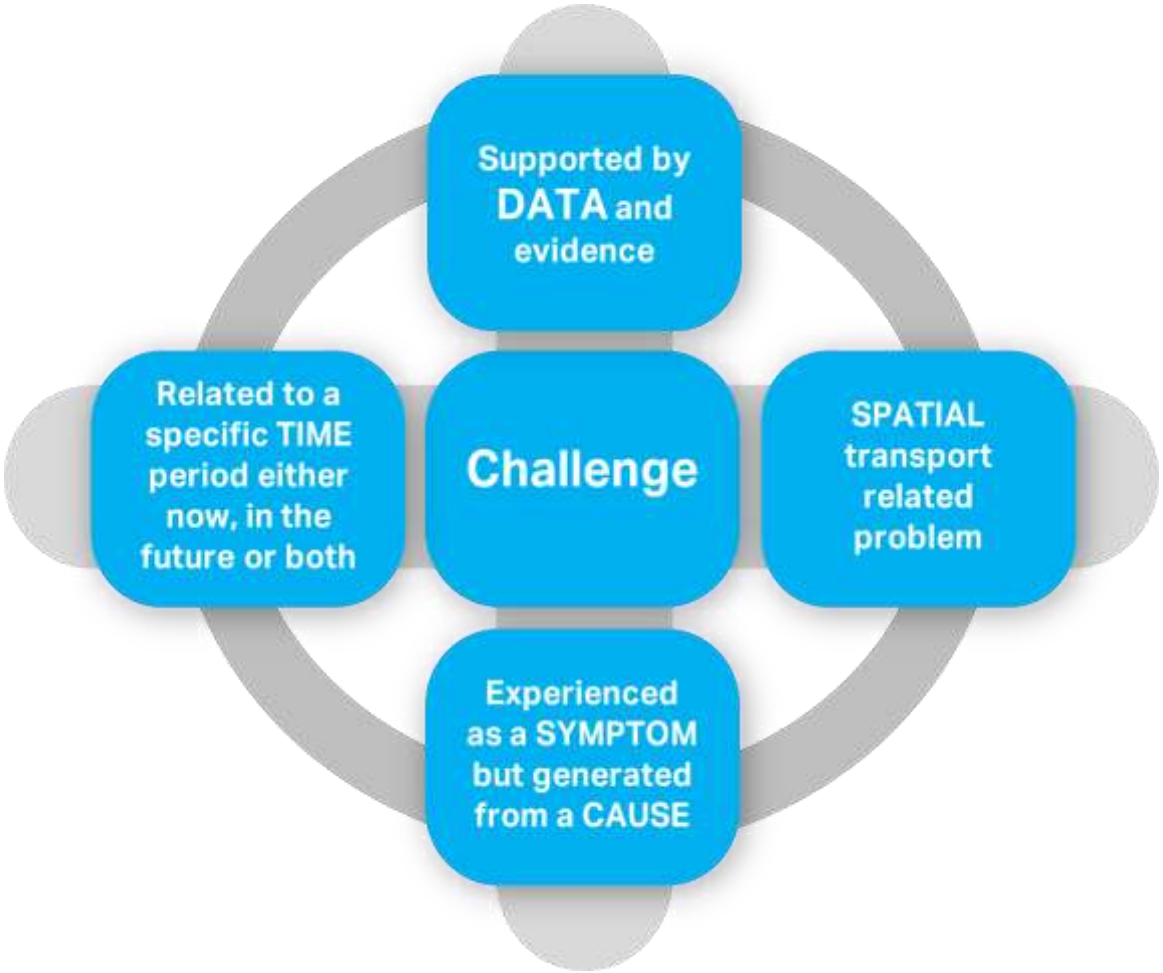
The geographical scope of the South West Herts Growth and Transport Plan includes the urban areas Watford, Hemel Hempstead, St Albans; the inter-urban routes between these areas; and inter-urban routes towards London, Luton, Aylesbury and eastern Hertfordshire. The scope of the plan therefore includes the boroughs of Dacorum and Watford, and part of St Albans City and District, Three Rivers District and Hertsmere Borough.

2. Challenge Identification

Challenge identification workshops were held with Hertfordshire County Council officers and members in May and June 2016. These workshops used a structured approach to guide participants in sharing their local and operational knowledge in order to identify key challenges to transport in South West Hertfordshire.

Challenges were identified primarily in terms of symptoms and causes. For example, a symptom might be highway congestion on routes between Watford and St Albans. The participants also attempted to identify potential underlying causes of the symptoms, for example poor multi-modal connectivity between these two urban areas leading to a high car mode share, or insufficient highway capacity. Furthermore, challenges were identified in terms of their spatial extent, when they occur, and relevant data which might help to evaluate the challenge. This terms in which challenges are described in the Growth and Transport Plan are summarised in **Figure 1**.

Figure 1 Challenge Identification Method



In addition to the growth and transport challenges presented during officer and member engagement, the project team used their local operational knowledge of the area in order to identify further challenges that may not have been picked up in the workshop.

A large number of challenges were identified, and it was then necessary to group these challenges for further analysis. The challenges were grouped spatially and by symptom in order to give six challenge groups as set out in the following table.

Table 1 Challenge Groups

Challenge Group	Key Symptoms
Hemel Hempstead Urban Area	Highway Congestion Limited accessibility for non-car modes
Watford Urban Area	Highway Congestion Limited accessibility for non-car modes
Watford <-> St Albans Strategic inter-urban route	Highway Congestion Limited accessibility for non-car modes
Watford <-> Hemel Hempstead Strategic inter-urban route	Highway Congestion Limited accessibility for non-car modes
M1 Corridor Strategic inter-urban route	Highway Congestion Limited accessibility for non-car modes Poor network resilience
Rail Commuting	Pedestrian Congestion at rail stations Difficulty in accessing rail stations

The Challenges identified during Stage 1 are listed in

Table 2 to Table 7. Some challenges are included in more than one challenge group due to their location and characteristics.

Table 2 Local Highway Congestion within the Hemel Hempstead Urban Area

Symptom	Cause	Location
A414 Breakspear Way/Green Lane roundabout congestion	Many amenities off roundabout, only access to/from M1for HH, no rail access to urban areas northwards on the M1	Local: Hemel Hempstead
Peak period congestion on roads surrounding the station	Hemel Hempstead railway station remote from main town	Local: Hemel Hempstead
Congestion levels in Hemel Hempstead	Herts E-W connectivity is poor, high car mode share and number of HGVs accessing Maylands,	Local: Hemel Hempstead
Insufficient car parking capacity in Hemel Hempstead	Sub-regional employment area, high car mode share for employment trips especially amongst local traffic to Maylands	Local: Hemel Hempstead

Poor use of land within Hemel Hempstead urban area	Used land not attractive to develop on, restrictive planning laws	Local: Hemel Hempstead
High car mode share, especially on journey to school	Limited infrastructure for walking and cycling, popularity of linked trips (school/shops/work), public transport uneconomical and limited coverage	Area-wide

Table 3 Local highway Congestion within the Watford Urban Area

Symptom	Cause	Location
Congestion on A4008 Stephenson Way and at M1 Junction 5	Main M1 Junction for Watford, also connects to A41 - major regional interurban route, poor rail connection between Watford and St. Albans	Local: Watford, Interurban: N. London-Watford, Watford-HH, Watford-Luton
Congestion on A41 Colne Way in Watford	Major regional interurban route, numerous exits encourage local traffic to use as an orbital route	Local: Watford, Interurban: N. London-Watford, Watford-HH
Congestion and poor air quality on the "Dome" Roundabout - St Albans Road, A41	Many amenities nearby to junction and many trips generated, bottlenecks on the network, many bus routes with low levels of bus priority, poor cycling provision	Local: Watford, Interurban: Watford-St Albans
Congestion in West Watford on A412 route to/from Rickmansworth	Limited alternatives to car as tube does not serve central Watford, on street parking west of Croxley station	Local: Watford/Interurban: Watford-Rickmansworth
Watford business parks poorly connected	Located on edge of town, not near any stations, poor bus services	Local: Watford
High car mode share, especially on journey to school	Limited infrastructure for walking and cycling, popularity of linked trips (school/shops/work), public transport uneconomical and limited coverage	Area-wide
Bushey Arches Junction congestion, Watford	Rail line constraint, demand exceeds capacity, overprovision of parking on local routes	Local: Watford

Table 4 Strategic Highway Congestion between Watford and St Albans

Symptom	Cause	Location
A405/A414 congestion south of St Albans, in vicinity of Park Street Roundabout and M25 J21a	Demand on the road network between Watford and St Albans exceeds capacity, Abbey line not frequent enough to offer an attractive public transport alternative	Inter-urban: Watford-St Albans
Low patronage on Abbey Line	Infrequent rail service on the Abbey Line, poor connectivity at either end	Inter-urban: Watford-St Albans
Poor inter-urban multimodal connectivity, east-west congestion county-wide	High car mode share	Interurban: St. Albans, Watford, Hemel
Congestion and poor air quality on the "Dome" Roundabout - St Albans Road, A41	Many amenities nearby to junction and many trips generated, bottlenecks on the network, many bus routes with low levels of bus priority, poor cycling provision	Local: Watford, Interurban: Watford-St Albans
Watford business parks poorly connected	Located on edge of town, not near any stations, poor bus services	Local: Watford
Congestion at M1 Junction 6	Constrained junction layout with short merging sections	Local Watford; Inter-urban Watford-St Albans,

Table 5 Strategic highway Congestion between Watford and Hemel Hempstead

Symptom	Cause	Location
Congestion on A41 Colne Way in Watford	Major regional interurban route, numerous exits encourage local traffic to use as an orbital route	Local: Watford, Interurban: N. London-Watford, Watford-HH
Poor inter-urban multimodal connectivity, east-west congestion county-wide	High car mode share	Interurban: St. Albans, Watford, Hemel
Congestion at M1 Junction 8	Travel patterns of traffic using this junction are routes not well served by public transport (e.g. between Luton and Hemel Hempstead)	Interurban: Luton-HH, Watford-HH, St Albans-HH
Watford business parks poorly connected	Located on edge of town, not near any stations, poor	Local: Watford

	bus services	

Table 6 Congestion and resilience issues on M1 corridor

Symptom	Cause	Location
Peak period congestion on A1081 through Harpenden	Incidents on the M1 cause traffic to re-route. Lack of bypass, frontage access and frequency of side roads cause disruption	Local: Harpenden, Interurban: Luton-St Albans, Harpenden-Luton, Harpenden-St Albans
A5183 Holywell Hill St Albans Congestion	High car mode share and limited network capacity in historical centre of St Albans, traffic diverting away from the M1 during incidents increases demand on this route.	Local: St Albans
Congestion in St Albans area	Lack of cycling infrastructure, buses expensive, lack of multi operator ticketing, social stigma around bus, surrounding road network weak, historic road network unsuited to cars	Local: St Albans
High car commute mode share from Redbourn to St Albans/Harpenden	Limited to no alternatives, lack of cycling infrastructure	Interurban: Redbourn - St Albans
High congestion at Peahen Junction, King Harry Lane, Hatfield Rd (St Albans)	Low capacity junctions, demand exceeds capacity, historical road network unsuited to cars	Local: St Albans
HGVs using unsuitable routes	Satellite Navigation issues, location of delivery points	Area-wide
Congestion at M1 Junction 6	Constrained junction layout with short merging sections	Local Watford; Inter-urban Watford-St Albans,

Table 7 Rail Commuting

Symptom	Cause	Location
Constrained access/egress at St Albans City Station during peak period.	Existing ticket hall(s) have insufficient capacity to cope with influxes in passengers (train arrivals in PM peak)	Local: St Albans
Peak period congestion at key rail stations (Watford Junction, St. Albans,	Large demand for rail travel into central London, need for improved interchange	Local: Watford, St Albans, Borehamwood

Borehamwood)	between modes at rail stations and improved pedestrian access.	
High car mode share accessing Tring station	Station is outside of town, poor public transport access	Local: Tring
People driving from London Colney to use St Albans station	Lack of adequate public transport or cycle infrastructure. London Colney does not have a railway station.	Local: St Albans

3. Evidence Analysis

For each of the Challenge Groups identified above, evidence analysis has been undertaken to understand the challenges in greater detail.

The results of this analysis are presented in the Evidence Analysis Pro-Forma. The Pro-Forma present data on a number of indicators related to each challenge, including:

- Key routes
- Inbound and outbound commuting patterns
- Highways traffic volumes
- Highway delay
- Comparative highway and public transport journey times
- Mode choice
- Public transport and active travel provision
- Committed and local plan development
- Car parking

Based on these indicators and the challenges identified, a summary is provided for each group of the key challenge symptoms and their potential causes.