

Cross Boundary Study – Easy Read Guide

Overview

‘Cross Boundary’, for the purpose of this study, refers to a journey or ‘trip’ which starts in one local authority area and ends in another. Examples include someone making a journey from their home in Midlothian to their place of work in the City of Edinburgh.

The SESplan Cumulative Impact Cross Boundary and Land Use Appraisal is known as the ‘Cross Boundary Study’. The Study considers how growth set out in the 2013 Strategic Development Plan, such as new housing and employment, will impact on transport movements crossing Local Authority boundaries within the region.

The key components of the Cross Boundary Study are:

- To predict transport impacts from journeys which cross Local Authority boundaries and are predicted to occur as a result of development from the 2013 Strategic Development Plan;
- To identify possible transport interventions which could resolve these transport impacts;
- To set out the type and likely scale of these interventions; and
- To understand how effective these interventions would be.

This information will be used by SESplan in the creation of a developer contribution mechanism for the region. The developer contribution mechanism is a way to gather money from developers to contribute towards the cost of the transport interventions required as a result of their development. It will take the form of Supplementary Guidance referred to as the Cross Boundary Transport Contributions Framework in SESplan’s Proposed Strategic Development Plan.

The Study Team

The Study was prepared by a team of transport and planning consultants employed by Transport Scotland. In preparation of the study Transport Scotland, the consultants, SESplan, SEStran and the six member local authorities have worked together.

The Study

The Cross Boundary Transport Study gathered information from the six Local Authorities in the region to determine the likely amount and location of development which would take place up to the year 2024.

It looked at information on land allocated for housing or employment development in proposed and adopted Local Development Plans, land with planning permission and also any other significant development sites with planning permission. Land with planning permission was considered to be ‘committed’ whilst land allocated for housing or employment was considered ‘non-committed’. This distinction was made as land which was considered ‘committed’ would not be able to contribute to funding future infrastructure as legal agreements required to secure funding to address the impacts of development could not be applied retrospectively. The study also takes into

account any transport infrastructure which is due to be completed within the SESplan region up to 2024.

Committed Development	Non- Committed Development
Land within the region which has an approved planning application* for housing or employment development. This may be land which has been allocated in a development plan or land not identified but which has come forward through a planning consent.	Land which is allocated for housing or employment within proposed or adopted Local Development Plans that does not have a current planning consent.
*For the purposes of the study this data is up to the year 2015.	

The study used national transport, economic and land use modelling to identify the likely patterns of development in the region by predicting the distribution of people, jobs and households. This development data was then further analysed using a regional transport model to establish the number and frequency of cross boundary transport movements and where problems are forecast to occur in the transport network as a result.

The study considered transport movements as they were in the year 2014 / 2015 (the 'Baseline') and compared this with two different scenarios. Firstly, it compared the baseline with the transport movements predicted to occur as a result of the committed development in the region i.e. what would happen if all the development with planning permission was built. This is referred to in the cross boundary study as the 'Reference Case'. Secondly, it compared the baseline to transport movements as a result of the committed and the non-committed development i.e. what would happen if all the development set out in the 2013 Strategic Development Plan and sites with planning permission were built. This scenario is referred to in the cross boundary study as the 'Test Case'. Both scenarios included transport infrastructure which was considered to be committed i.e. had funding or was a requirement of committed development.

The second scenario which considered the additional impact from non-committed development was the most relevant. This is because the non-committed development would be the source of any funding in relation to the development contributions framework.

'Base' or 'baseline' = Year 2014/2015	'Reference Case' = Committed Development in 2024	'Test Case' = Committed Development + Non-Committed Development in 2024
This refers to transport movements in the region as they were in 2014/2015 (the year at the start of the transport study). It is used to enable comparison with proposed development.	This is a scenario where future transport movements were modelled based on the amount and location of development which had planning permission (committed development) up to the year 2024.	This is a scenario where future transport movements were modelled based on the amount and location of development which had planning permission (committed development) plus development which though planned did not have planning permission (non-committed development) up to the year
This is based on the region having the following:	This is based on the region having the following:	
Households 553,000	Households 612,700	

Population 1,202,100 Employment 521,000	Population 1,244,000 Employment 559,400	2024. This is based on the region having the following: Households 635,900 Population 1,289,100 Employment 597,600
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Results of the Study

Key facts:

- The study included journeys which cross local authority boundaries made by public transport as well as by private car. It was important to consider different modes of travel as there are pressures on public transport, such as crowded train services, which will make it harder to try and get people to use public transport over private cars. The results found that 80% of cross boundary trips were made by private car with the remaining 20% by public transport.
- The largest number of trips which cross local authority boundaries are from journeys to or from the City of Edinburgh. This reflects Edinburgh's status as having the largest concentration of existing households and a significant proportion of employment sites in the region.
- The majority of trips can be attributed to commuting.
- In looking at the base, test and reference cases the study finds that there are existing problems with cross boundary transport movements in the region's transport network such as congestion and capacity on both road and rail services. Demands on the transport network from both committed and non-committed development will add to this.

It is important to remember that the purpose of the study was to look at cross boundary trips rather than problems isolated to one local authority. This is to ensure that a contributions mechanism could be directly attributed to the direction of growth from the SDP.

Key findings:

- Travel demand is predicted to increase as a result of committed development by 10% for road and 7% for public transport by the year 2024
- Travel demand is predicted to increase a further 3-4% by both road and public transport as a result of non-committed development
- Travel demand is predicted to exceed network capacity at key locations including the A720, A8, M8, M90, the Queensferry Crossing and capacity at Waverley and Haymarket rail stations in both reference and test case
- Junctions on the A720 (Edinburgh City Bypass) where demand exceeds capacity include Sheriffhall, Newbridge, Hermiston Gait, Gogar and Old Craighall

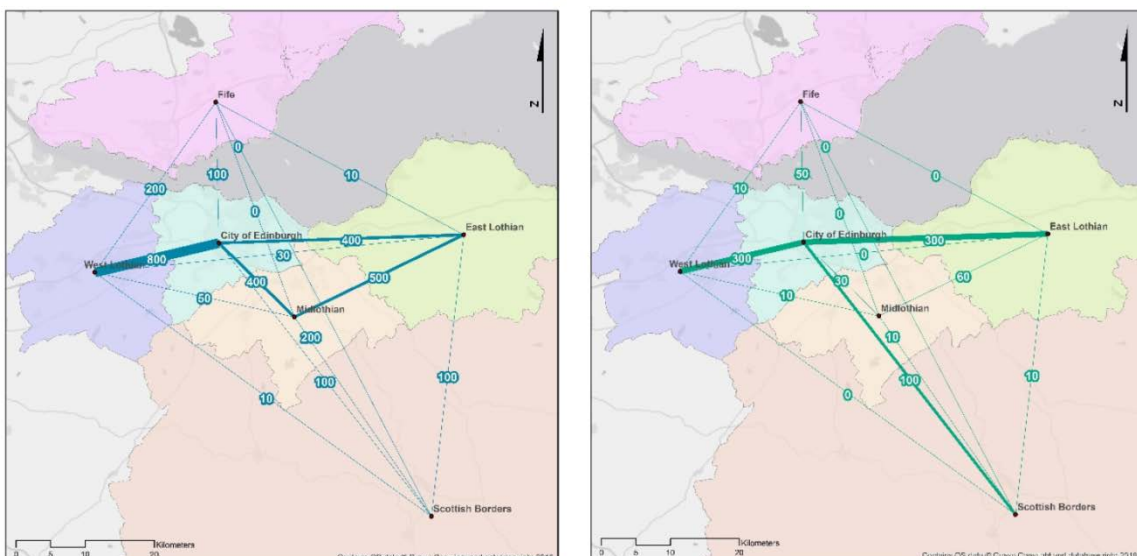
- Demand exceeds capacity at the Barnton and Maybury junctions in Edinburgh city in both scenarios
- There are problems with lack of connectivity on key regional cycling and walking routes between local authorities
- Delays due to road congestion increase by 25 - 40% from committed development and a further 10 - 15% from non-committed development whilst actual length of journeys increases by a smaller amount
- Delays due to road congestion increase at a much higher rate than the distance travelled as a result of both committed and non-committed development and add to an already congested road network

Cross Boundary Journeys:

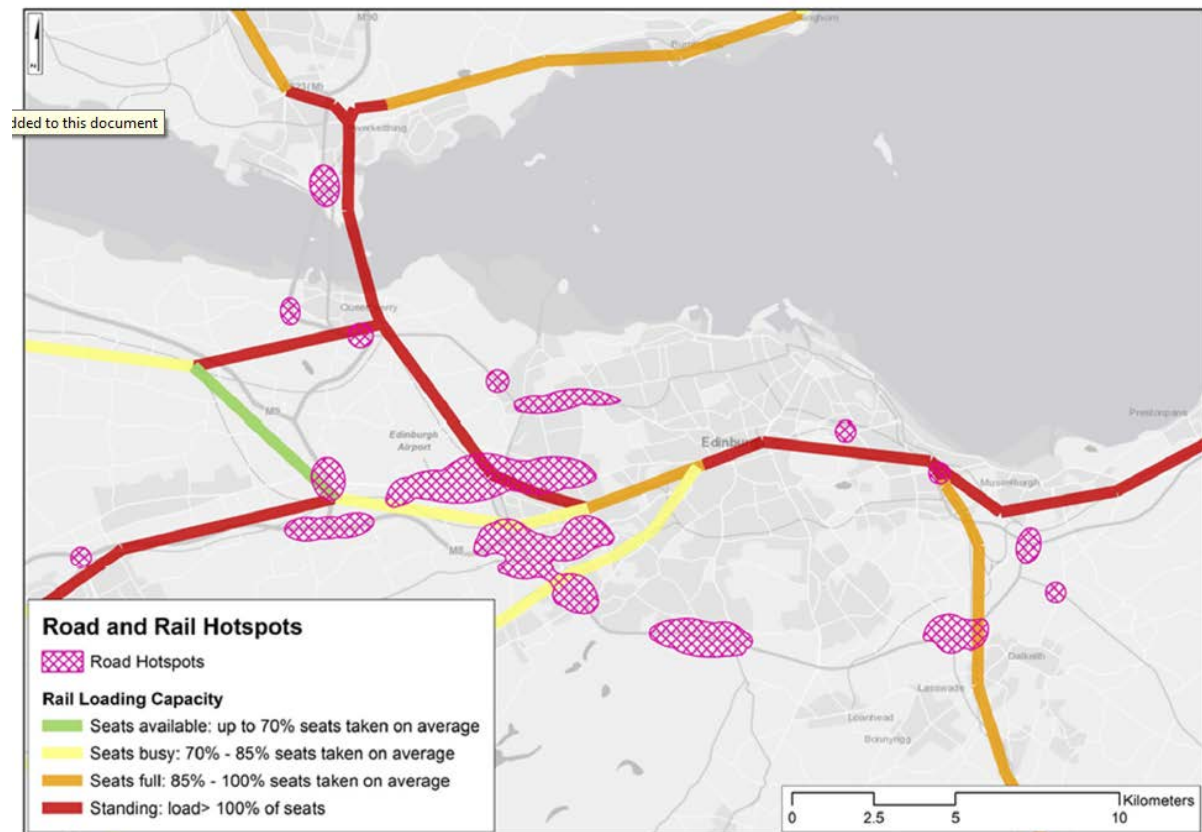
- Journeys crossing local authority boundaries as a result of new development both committed and non-committed are only a small part of travel demand in the region
- Cross boundary journeys from non-committed development i.e. land which is allocated for housing or employment within proposed or adopted Local Development Plans that does not have a current planning consent are predicted to account for 1.5% of total travel demand
- The study found that by examining the morning peak hour of travel by road there were around 35,000 cross boundary trips. 2,900 of these would be from non-committed development. Overall road demand in the region is approximately 207,000 am trips
- The main demand for public transport cross boundary trips is to and from Edinburgh. Of 59,000 public transport trips (am) 11,000 are cross boundary and 900 would be as a result of non-committed development. PM patterns were similar.
- The scale of intervention which could be delivered to directly address the impact of cross boundary trips generated by non-committed development is likely to be small in the context of the overall transport network and have limited impact on performance.

The figure below illustrates the additional journeys predicted to be made from non-committed development.

Figure 1 Non-committed development cross boundary trip diagrams



The study also finds that there is demand for further trips which are not represented as the route are already oversubscribed and that this situation would be made worse with the addition of non-committed development. The study finds that this would push many parts of the network 'beyond practical limits at critical locations'. These locations are identified in the figure below.



Interventions

From this assessment the Cross Boundary Study states (page 18) that the following interventions would benefit from being addressed:

- Sheriffhall Grade separation
- Old Craighall Junction upgrade
- Straiton junction upgrade
- A90 intelligent signal measures
- Fife – Edinburgh Rail services
- East Lothian – Edinburgh Rail services
- Shotts – Edinburgh service enhancement
- Addressing gaps in the active travel network

Packages of Measures to Deal with the Effects of Development

The cross boundary developer contributions mechanism could only seek contributions from developments which could be considered to result in increased cross boundary trips and which do not already have planning permission. This means that the proportion of transport measures which could be funded through the framework is relatively small and it would not be able to solve all of the transport problems. The study takes account of this fact and sets out three options packages which could deliver transport improvements proportionate to the scale of non-committed development, that are deliverable and that can be linked to a developer contributions mechanism.

In considering options for packages the study looks at regional and local objectives including improving efficiency and reliability, reduction in journey times, reduction in accidents and increasing travel by sustainable modes.

The options packages are set out below.

Package A – ‘nil detriment’ – interventions would seek to deal with the impacts of increased journeys and travel demand crossing local authority boundaries and which could be attributed to development which though proposed as a result of the Strategic Development Plan, did not yet have planning permission. This would address the original aims of the study and would reflect the fact the developer contributions could only be sought from development which did not have planning permission and that the contributions would have to be for measures attributable to the development.

It is recognised however that pressure on the transport network in the region is such that mitigating the cross boundary impacts of non-committed development only would do little to address wider concerns the performance of the transport network . To address this, **Packages B and C** put forward further improvements which would improve travel by public transport and by road, in part mitigating the effects of development already committed, which means they would have to be funded through other sources.

Travel Mode	Package A: Nil Detriment	Package B: Network Betterment Public Transport Focus	Package C: Network Betterment Public Transport and Road
Road	<ul style="list-style-type: none"> Intelligent signals at Barnton, Calder, Gogar, Hermiston Gait, Maybury, Sheriffhall and M8 J3 Junctions Local approach widening A8 Newbridge and A720 Straiton Signal control and left turn slip Old Craighall M90 J1 lane merge and diverge upgrades Fife Intelligent Transport Management 	<p>As Package A (except for changes st Gogar and Sheriffhall) with the addition of:</p> <ul style="list-style-type: none"> A90-M90 left turn slip A8 Gogar local widening Grade separation at Sheriffhall Extend slips and tapers Baberton Ramp metering on local A720 junctions 	<p>As Package B (except for Hermiston Gait) with the addition of:</p> <ul style="list-style-type: none"> M8/A720 widening / smart motorway Right turn flyover (Hermiston Gait) A8 junction approach widening (Eastfield Road) Gogar link road A68 Millerhill northern spur A720 Gilmerton junction removal
Public Transport	<ul style="list-style-type: none"> Rail: Increased seating capacity and service frequency on Edinburgh – Shotts / Fife Rail: Increased seating capacity on Edinburgh / North Berwick service Rail: Station parking at Kirknewton, West Calder Bus: priority at Maybury junction Bus: Park & Ride at Hermiston 	<p>As Package A with the addition of:</p> <ul style="list-style-type: none"> Rail: Rail lines (Inverkeithing-Halbeath, Levenmouth) Rail: Rail station (East Linton) Rail: Additional rail service (Edinburgh-North Berwick, all stops) Rail: Increased seating capacity / service frequency (Edinburgh – Bathgate) Rail: Rail Park & Ride expansion (Dalgety Bay and Inverkeithing) Bus: A720 Orbital bus services – online (includes additional lanes) Bus: Bus lanes (M8 and M9 hard shoulder, A8 Newbridge – Gogar) Bus: Bus priority (Sheriffhall) Bus: Employee shuttle bus (Edinburgh West) Bus: Bus Park & Ride expansion (qualitative assessment) 	<p>As Package B (except orbital bus online, bus lanes on A8 / M8, Sheriffhall bus priority and Rosyth Park & Ride) with the addition of:</p> <ul style="list-style-type: none"> A720 Orbital bus services
Active Travel - Cycling	<ul style="list-style-type: none"> Cross boundary cycle improvements (10% reduction in cross boundary vehicle trips on corridors affected by the scheme) 	<ul style="list-style-type: none"> Cross boundary cycle improvements (10% reduction in cross boundary vehicle trips on corridors affected by the scheme) 	<ul style="list-style-type: none"> Cross boundary cycle improvements (10% reduction in cross boundary vehicle trips on corridors affected by the scheme)

Appraisal Conclusions

The study examines the impacts of package A in more detail as this is the only package which relates directly to the study remit on the developer contributions framework. It also considers how easily measures can be delivered, how feasible they are, how affordable they are and what the overall cost would be.

The study concludes that package A would not result in significant improvements to road and rail journeys at a regional level. This is as a result of improvements targeting the impacts of non-committed development only. It would improve capacity at some key junctions but would not give a significant improvement in journey times. The package addresses some local transport planning objectives at cross boundary 'hot spots' and by making cross boundary journeys by active travel such as by cycle more attractive. There would be minor improvements to the economy, integration and accessibility and social cohesion. Impacts on the environment would be neutral.

It also found there would be some areas where the impacts of non-committed development would not fully be dealt with and would require further measures and investigation in particular, that the grade separation at Sheriffhall would be required alongside package A to ensure the continued safe and efficient operation of the road network in this part of the region. It was also noted that further modelling of these would be required to fully consider impacts elsewhere, for example, impacts such as the relationship between Old Craighall junction and Sheriffhall junction.

The study also noted that further appraisal and consideration of affordability and priorities is required.

Work on the most significant and extensive packages B and C will be considered further by Transport Scotland and fed into the ongoing development of the National Transport Strategy.

Next steps

The findings of the study will be used as a building block for the preparation of a developer contributions mechanism. This will include preparation of Supplementary Guidance known as the 'Cross Boundary Developer Contributions Framework' forming part of the Development Plan for the region. The guidance will:

- scope a 'developer contribution tool' that is compliant with national planning policy, SESplan's Proposed Plan and SESplan member authorities local Development Plans;
- identify strategic transport intervention costs and set obligation levels that are realistic and viable;
- ensure that cross boundary obligation levies do not burden particular local authorities with onus on those locations or developers with most impact;
- be a material consideration for SESplan member authorities staff and others when considering planning applications; and
- agree regional governance arrangements for collecting, using and monitoring cross boundary obligation money.