
M27 Corridor Junctions 5 to 12 Transport Study

STUDY BRIEF

1. Introduction

1.1 The study area focuses on the M27 corridor between junctions 5 and 12. The study is required to **identify a strategic transport plan for 2016 and 2026**. Key emphasis should be placed upon strategic transport aspects, identifying and testing the feasibility of access links to the proposed Strategic Development Areas (SDAs) at North and North East Hedge End and North Fareham, links to proposed the major development area (MDA) at North Whiteley including an assessment of the need for and definition of Whiteley Way and Botley Bypass, and links to the eastern access to Southampton. The study should take account links to proposed development at Tipner and Port Solent/Horsea Island and also take into account but not include links to the proposed strategic employment site at Eastleigh RiverSide via the M27 junction 5.

The study should take account of and satisfy: regional, countywide and local policy and strategy directions, including the emerging DASTS work, and LDF Core Strategy work. The study should satisfy: PUSH; the Highways Agency; TfSH; and the County and City Council as Highway Authority that the **'cumulative' transport impact** associated with proposed developments in the study area, principally upon the strategic road network, can be reduced, managed and mitigated against. The study should also have regard for the requirements of Eastleigh, Fareham and Gosport Borough Councils; Winchester, Southampton and Portsmouth City Councils and; appropriate representatives of the Portsmouth Harbour Authority Group; the Project Boards, Project Managers and developer interests for the respective SDA's and MDA and impacts upon the local road network. **A parallel suite of studies will be required to focus upon more detailed local transport aspects** with more emphasis on the impact of smaller development sites proposed in the respective LDFs upon the local network and associated 'Stage 3' issues. It is recognised that in advance of the more detailed evidence base multi-modal model for the sub-region that the outputs from this study will only provide interim guidance. A map is provided at Appendix 1.

1.2 A brief summary of the study requirements is as follows:

- To briefly define the characteristics of the existing transport network, identifying areas with capacity deficiencies and key bottlenecks. Identify a **baseline situation** based upon a review and collation of all available data sources only and applying consistent methodology. (This part of the study should be relatively quick and is not the main focus of the study)
- To identify, based upon work already completed the **predicted cumulative trip generation and distribution** from all key sites either within the study area or likely to impact upon the area; in particular including the (SDAs) at North and North East Hedge End and North Fareham, development at North Whiteley and Tipner/Port Solent/Horsea Island Building on strategic aspects;
- To apply **sustainable reduce and manage methodology** to the above in order to mitigate the impact of the developments (based on available data sources only) ;
- To identify the **'combined' residual impact**, after applying reduce and manage methodology and including the contribution of public transport, upon: the strategic road network in particular the M27

and its junctions; the eastern approaches to Southampton and northwards towards Winchester District;

- To clearly identify, what the **strategic transport system** for this area should look like in 2016 and 2026, following an appraisal of possible alternative solutions, identifying a preferred mitigation and access strategy to minimise the impacts identified above;
- **A parallel suite of studies** will be required to cover more detailed aspects required to satisfy LDF requirements, focusing more upon the impact on the local road networks; and also to identify a multi-modal costed package of measures following feasibility / outline design and junction appraisal, which can be implemented incrementally as developments progress.

2. Background

2.1 The South East Plan (SEP)

The SEP proposes two SDAs at North Fareham and North & North East Hedge End, as a result of earlier collaborative working by the PUSH authorities. The SDAs will contribute towards the 80,000 new dwellings required across South Hampshire within the plan period to 2026. In the case of North Fareham SDA, the Plan envisages 10,000 new dwellings and 121,000 square metres of new employment development. At North and North East Hedge End, the proposal is for 6,000 dwellings and 74,000 square metres employment floorspace.

Alongside this requirement Policy SH7 of the South East Plan recognises the capacity and management performance of the M27 as a key issue to be addressed, along with the need for the transport and planning authorities to work together to resolve access to the two SDAs. Transport for South Hampshire (TfSH) is specifically named in this context. The bi-polar nature of the sub-region recognises the dual attraction of the two cities of Southampton and Portsmouth, with an expectation that the two SDAs will look primarily to their nearest city centres for higher level employment, retail and leisure facilities. It is recognised that that some of the opportunities will be provided in the neighbouring towns, such as Fareham.

2.2 Delivering a Sustainable Transport System (DaSTS)

The Department for Transport has requested that eight English Regions outside Greater London generate and consider a wide range of transport strategy and interventions options reflecting the five Departmental Transport goals consulted upon in Stage 1 of the DASTS process. In response the South East Regional Transport Board submitted a proposal for a regional work programme to the DfT on 30 June 2009. DfT is keen that preferred options for investment make best use of existing infrastructure and use innovative thinking to address identified problems, recognising that smaller schemes can represent higher value for money. The results from each study need to be able to inform the South East England Regional Transport board in providing evidence to the DfT at interim and final report stages in March 2010 and March 2011 respectively.

The outcome of the DASTS work is vitally important in informing the recommendations of this study and should be taken into account as far as is possible at this stage.

2.3 Local Development Framework Documents

The SEP requires the local planning authorities to prepare Local Development Plan Frameworks as a framework for the strategic development, identified above, within an agreed timescale to deliver the identified objectives. The agreed timescales are different for each of the authorities within the study area, as is the exact level of detail which each intends to submit at the various key stages. It should be noted that the amount of development and the land-use splits included in the Core Strategies differs to that identified in the SEP. (Fareham policy for the SDA, now envisages a development of between 7-8,000 dwellings, circa 75,000 sq m BI at J11, and up to 56,000 sq m of employment within the main body of the SDA; this could potentially

be broken down into 10,000 sq m of B1 in the district centre, 33,000 sq m B8, and 13,000 sq m of B2. This may change through the AAP process)

In brief the indicative programmes for each local authority are as follows:

- **Eastleigh** The Core Strategy will include detailed policies regarding the SDA and its access arrangements, subject to feasibility studies. More detailed masterplanning will be contained within a supplementary planning document (SPD) for the SDA, prepared jointly with Winchester. Public participation in the development of the SPD will take place in 2011. Consultation on the Core Strategy Emerging Issues and Preferred Options is planned to take place in October 2010 and publication is anticipated in June 2011.
- **Fareham** The Core Strategy sets out the overarching policy and high level development principles for the SDA, identifying a strategic location to guide the development of an Area Action Plan (AAP) and masterplan. The AAP will include a development boundary and details for the development. A Preferred Options consultation on the Core Strategy and Position Statement on the SDA took place in Jan/Feb 2009. The schedule in the current Local Development Scheme identifies Pre submission consultation to take place in November 2009; Submission to government in Feb 2010; with Adoption - November 2010. Preferred options consultation on the AAP is identified to take place in September /October 2010, leading to Adoption June 2012. The LDS needs updating and any timing changes are not reflected in the above.
- **Winchester** The Core Strategy will include a general enabling policy including the broad boundary of the North / North East Hedge End SDA (within Winchester) and key access points needed, and will include a detailed allocation for the North Whiteley development. A Development Management and Allocations Document (DPD) will also be prepared which includes the detailed site allocation and specific access and infrastructure requirements. This will be prepared in parallel with the SPD for the SDA. Publication of the Pre-Submission Core Strategy is programmed for October 2010, subject to the revised timing being ratified by Members.
- **Southampton** The Core Strategy promotes the city centre as the focus for significant additional employment, retail, leisure and residential development, including a Major Development Quarter in close proximity to Central Station. Additional residential and some employment development is also proposed elsewhere across the city. The Core Strategy was submitted in March 2009 and the Examination in Public was held in July 2009, it has recently been found to be sound. The City Centre AAP and Sites and Policies DPDs will be developed during 2010 and submitted in 2011. Transport assessment work has been undertaken in support of the Core Strategy to identify the impact of the proposed development, particularly on the Strategic Road Network (SRN). Further work is required to identify the full range of mitigation measures that will be required on the SRN and at the Core Strategy Inquiry, it was agreed that this work should take place in support of the City Centre AAP and Sites and Policies DPDs.
- **Portsmouth** The core strategy promotes the Western Corridor of the City (including the strategic sites of the city centre, Tipner and Port Solent) for significant amounts of housing, employment and retail development. Ongoing work on the Western Corridor Transport Study and the evidence base for these strategic sites will specifically address transport requirements and how these sites will access the Strategic Road Network, including a new junction onto the M275 at Tipner. Regulation 27 consultation on the core strategy is currently programmed for Nov/Dec 2010 with an interim consultation stage earlier in 2010, principally regarding the strategic sites. Adoption of the core strategy would then take place in January 2012.

Whilst the respective local authorities have identified indicative locations for the proposed new SDAs at both North Fareham and North & North East Hedge End, (In the case of Hedge End the site covers land within the

Winchester as well as the Eastleigh authority area.) in both cases there is a need to better understand the transport and access implications building on work already undertaken. This is vital for the progression of the Local Development Framework Documents in accordance with agreed programmes, as well as assisting the planning of the settlements themselves. **A key requirement of this study is to provide a technical appraisal that will form a background document to the Core Strategy and/or Area Action Plan for the respective local planning authorities.**

2.4 Transport for South Hampshire Strategy Framework

The TfSH strategic approach of Reduce, Manage and Invest seeks to: reduce the need to travel by encouraging shorter journeys and more sustainable travel modes, through land use planning and encouraging less car dependent lifestyles and more sustainable alternatives, such as extending the Bus Rapid Transit, making use of rail capacity and providing convenient facilities to encourage cycling and walking, in preference to car journeys; manage transport networks to optimise their performance through advances in technology to enable capacity to be better managed; and to invest in new infrastructure where appropriate and concurrent with planned development as even without the planned new growth it is recognised that interventions and some investment will be required. Note: the above approach is outlined in the 'Towards Delivery Statement' 2008. This is currently being reviewed to comply with the Department for Transport's Delivering a Sustainable Transport System' (DaSTS).

In April 2009 the TfSH Joint Committee approved the development of a robust evidence base to test the effects of the major transport schemes and interventions across the sub region. This evidence base modelling suite will be developed by the end of 2010, to allow option testing in 2011. It will enable the testing of these measures and the cumulative effect of the growth of traffic associated with development at the SDAs, together with the growth of traffic elsewhere in the sub-region, taking account of underlying background trends in demand for travel. **Note: the outputs from this model will be insufficiently advanced to fully inform the study defined in this brief.**

2.5 Highways Agency

In transport terms, the common factor for both SDA settlements and the North Whiteley development is the M27 motorway, and the Highways Agency has expressed concerns in this respect. The M27 currently suffers from peak period congestion around many of its junctions and this is forecast to worsen as a result of the underlying growth in traffic. The M27 is forecast to be operating above capacity by the proposed 2016 commencement year for the two SDAs. Against this backdrop, the planned development growth, presents a major challenge if South Hampshire is not to suffer from serious problems on its transport arteries. The Highways Agency has expressed serious concerns about the prospect of additional traffic being added to the already congested M27 without careful consideration being given to suitable mitigation measures. Concern has also been expressed that recent studies have not looked at the combined impact of planned development on the motorway network, or have not been able to rely on an agreed strategy where they have attempted to do this, and that a holistic approach should be taken. HA agreement to the approach and methodology will need to be built into this study.

2.6 Key Studies

A number of studies have recently been undertaken or are currently underway which will either need to inform the basis of this study, be amalgamated into it, or serve as secondary more detailed linked tiers following on from or running concurrently to this higher level study.

3. Key Issues

3.1 The timeframe of this study is relatively short to seek to reflect the agreed Core Strategy timescales of the Local Authorities and to inform the feasibility and joint masterplanning work for the respective SDAs. The immediacy of this requirement means that the evidence base modelling data will not be available to inform this study and that a high level, technical spreadsheet assessment will be required. The HA agrees in

principle that this approach is sufficiently robust to inform Core Strategies. There are however clear limitations with this approach which should be identified and methodology should be agreed with the Client and the HA at an early stage.

3.2 This study needs to provide resolution to a number of key issues not least access arrangements for the respective SDAs and MDA but also the residual impact upon the motorway junctions, the form of and need for Whiteley Way and a Botley Bypass (see 4.2)

3.3 Whilst seeking to provide a single study combining the various independent studies in this study area a key issue is the need to avoid duplication of ongoing studies. This applies particularly to the following:

- ‘Assessing the impact of the Harbour Authorities LDF proposals on the strategic highways network Stage 2’, the most appropriate way to progress this work is currently being agreed. Areas of overlap and impacts upon M27 Junctions 9 to 12 need to be taken into account;
- *Southampton and Eastleigh LDF Core Strategies Transport Impact Assessment Stage 2 Report* Outstanding work on this Stage 2 study in particular for the Eastleigh elements, should be covered as far as is practicable given certain unknown issues, at this time;.(As part of the more detailed level follow study there may be a requirement for a Stage 3 Transport Assessment dependant on the results of the Stage 2 TA.. Junction analysis and feasibility design will also form part of the parallel suite of studies at identified locations on the SRN.)
- ‘Access to Gosport Study’ . This study has been commissioned through Mott/Gifford and should form a separate but linked study to the M27 Corridor Study. Strategic aspects should be reflected in the M27 Corridor Study and more detailed analysis associated with specific development sites eg Daedalus being covered by the Access to Gosport Study.
- ‘Botley Bypass Study’ A separate study is expected to be commissioned to consider detailed design work for Botley Bypass, following on from this study. The M27 Corridor Study should fully inform the potential need and role for Botley Bypass, related Whiteley Way issues and access to the North and North East Hedge End SDA and will precede the design study.
- *DASTs Study* should be taken into account and outputs from this study will need to be consistent with DASTs work;
- *BRT Wider Next Steps* ; should be taken into account as far as possible bearing in mind that the outputs will be insufficiently advanced in the timescale of this study.

4. Study Scope / Methodology

4.1 Review of Existing Data

The study should provide a comprehensive update and review of all available policy and relevant transport data including that defined in all previous studies, relevant documents of PUSH, TfSH, the HA, local planning authorities and the promoting developers. **An across the board consistent baseline scenario should be identified for both am and pm peak periods** A fully transparent detailed spreadsheet approach should be adopted which can take into account option testing and which should be supplemented with maps and plans where appropriate.

Existing modelling. e.g. the Whiteley Saturn am peak traffic model, the Solent Strategic Transport Model, the Highways Agency’s VISSIM model for M27 and LATS data for the motorway network where available, Stage 1 and 2 Transport Assessments for Southampton and Eastleigh and Stage 1 Transport Assessments for the

Portsmouth Harbour Group (HBC, FBC, GBC and PCC) should be taken into account as part of the review of base data.

This study should review and update the findings of the various studies in light of more recent policy frameworks including that set out in the emerging Developing a Sustainable Transport System (**DASTS**) work, which seeks to identify mitigation measures at a broad level.

The study should briefly review the existing transport network provision in the study area focusing on the M27 and its junctions 5 to 12 as part of the strategic road network; and the main links on the local road network including the A32 and B2177 linking Fareham to Winchester; the A27 and A3051 Botley Road; and links to the eastern access to Southampton via the M27 junction 8 and Portsmouth and Tipner via Junction 12.

4.2 Traffic Impact

The study should review and update where necessary all of the studies already completed, currently underway or about to be commissioned, some being more up to date than others, considering the respective conclusions in a holistic context in relation to the required cumulative outputs of this study, identifying clearly the combined rather than individual impact of all committed development proposals upon the study area using an agreed, across the board, consistent assessment methodology. The studies need to be developed into one at this stage in order to provide a **combined area based impact at 2016 and 2026**. Estimates of the impacts on the number of trips by all modes are required for evening peak, as well as morning peak periods.

This study will need to be undertaken at a fairly high level, focusing upon a detailed spreadsheet analysis and **interim desk top technical studies** to identify existing traffic loadings and trip generation and distribution associated with key development sites before and after mitigation measures are put in place. This approach will be necessary because of the relatively short study timescale and the fact that the South Hampshire Transport Model will not be available in this study timeframe to provide a fully detailed evidence base. The approach should be agreed from the outset with the HA.

The trip generation associated with the SDAs should be reviewed to ensure that the development type and unit / floorspace amounts previously identified in the studies listed above and in the Appendix remain consistent with the local authorities current proposals re mix of development types and unit / floorspace amounts. Both the SEP targets (worst case) and the Local Authority proposed allocations should be tested as two separate scenarios. Trip rates should also be reviewed to ensure that a consistent approach is being used throughout the study area and justification of rates provided. The trip generation outputs from the Stage 1 Reports should be considered on a zone basis looking at origins and destinations and manually reassigning new trips onto the network, taking into account local traffic behaviour and local knowledge in relation to potential redistribution.

Trip distribution should be determined and the relative attractiveness of centres of employment taken into account. The combined impact for all journey purposes should be identified.

Transyt or other appropriate junction modelling at key junctions will not form part of this study and will be undertaken as part of the parallel suite of studies.

Key areas which are not mutually exclusive but which *must* be considered in this part of the study (not detailing the various scenarios relating to trip generation etc) include:

- **North and North East Hedge End SDA** – Within the defined search area different locational scenarios for development should be tested, highlighting the respective transport impacts and issues and associated access arrangements and sensitivity testing should be undertaken. In addition the impact of a bus link across the M27 junction 7; the impact upon the M27 junction 8 to Windhover and the potential for access across this junction, (taking into account the safeguarding for potential future park and ride at this location but not testing the feasibility of such a scheme) the A3024 eastern approaches to Southampton, and the northern approaches to Winchester.

- **North Fareham SDA** – Two access scenarios should be tested for development with and without a business park and the impacts upon the M27 junctions 10 and 11 identified.. Proposals for wider BRT which link into the SDA need to be taken into account and referred to as far as possible at this stage.
- **Development North of Whiteley** will impact primarily upon junction 9 of the M27 – A key emphasis of the study is to fully evaluate and test scenarios to help determine the nature and role of the proposed Whiteley Way extension. The potential effects of the solution for **Whiteley Way** should be considered in the context of the overall strategy for the study area and the impact upon transport movements should be identified considering its status . (WCC advocate it should be a local distributor road). Impact upon the A3051 should be considered. The large number of vacant units on existing Whiteley development with potential for an additional 5,000 employees, should be taken into account in determining trip generation. In addition the need and form of a **Botley Bypass** which could potentially link to the new Whiteley Way (via the A3051) and offer part of a link to the North and North East Hedge End SDA also needs to be established which considers the role and function of the bypass.
- Although the development of employment at **Eastleigh River Side** does NOT form part of this study this regionally significant employment site needs to be taken into account in determining travel patterns to it, from planned developments in the study area. The site supports the economic and growth aspirations of the South East Plan. The study should consider the relative attraction of centres of employment, with the assumption that not everyone accessing these areas will be from the immediate locality.
- The proposed employment, retail and leisure development in **Southampton city centre** will have a significant impact on journeys at the western end of the study area and although this does NOT form part of this study, it needs to be taken into account, when determining trip and generation and distribution for 2016 and 2026.
- Access to the proposed development site at **Tipner** does not form part of this study, however the impact of development at Tipner upon the strategic road network should be taken into account.

4.3 Methodology to Mitigate Impact

Key sustainable transport impact mitigation measures should be identified to encourage a modal shift away from the car and to reduce the numbers of new car trips on the network as far as possible. An overall proportion by which predicted traffic generation can be reduced should be provided based upon the reduce strategy and subsidiary elements below. The following key areas must be taken into account

- *Self Containment / Local Containment* - The planning assumption is that each of the SDAs / MDAs will feature employment, retail, education, community and some leisure facilities within their sites, so as to encourage a high degree of self containment and to discourage long distance commuting. Much deliberation has taken place regarding this issue and whether proportions / percentages should be produced simply for the SDA sites themselves or whether a wider area may be more appropriate given the close proximity of sites to nearby towns and facilities. The resulting local containment proportion / percentage should clarify whether the sites plus 2 miles surrounding the sites is identified as the best way forward. A range of proportions / percentages have been identified but these require further ratification and justification in order to be capable of satisfying high level scrutiny on this matter. Either a single proportion / percentage or a high and low range which can be applied consistently will be identified.
- *Rail* - Rail is a key means by which modal transfer can be employed with stations on the Botley line in proximity to the key development sites and the proportionate contribution that this aspect can make needs to be considered. The requirements for an Eastleigh Chord prospects for Knowle halt, and an additional

station at North Whiteley..should be considered to provide an up to date response on this issue The recently approved 'Vision for Rail in South Hampshire' should provide direction;

- *Bus* - Existing and potential new services need to be considered and the proportionate contribution of this mode should be identified, taking into account the potential for bus priority measures, and also the contribution that the proposed BRT can make to the study area. Bus links across motorway junctions should also be investigated.
- *Park and Ride* – Park and Ride can contribute to the mitigation strategy by intercepting car users before they access congested areas. Whilst the identification or ratification of proposed Park and Ride sites does not form part of this study, the study should take into account proposed sites and the contribution that could be made if these are to be progressed.
- *Smarter Choices* – a full range of smarter choice measures in line with the Reduce Strategy should be considered including home working, car sharing, travel planning etc and a proportionate contribution that these measures can make be identified. Justification will be required to provide evidence which can be drawn upon under high level scrutiny.
- *Cycling, walking* – Existing and planned measures to maximise the contribution of these sustainable modes should be identified and the contribution qualified and quantified.
- *Demand Management* –should be considered to determine the scale of impact of policies upon transport and access issues, including work place charging and other price controls such as reduced fares.

4.4 Mitigation Strategy

Having quantified the traffic impacts of the planned developments upon the study area and provided a justifiable case for both reducing and managing the impacts as far as possible, mitigation measures and a preferred strategic plan should be identified. The plan should clearly identify what the transport network should look like in 2016 and 2026 and what mitigation and interventions are likely to be required to deliver the planned growth in the area and in particular the SDAs and MDA, and identify how the network is likely to perform.. Preferred multi-modal access strategies for the key development sites must be identified.

4.5 Additional Work

A suite of parallel studies are required which will identify the required mitigation strategy for local roads to satisfy the detailed aspects of LDF work and also detailed identification of what measures are required at the motorway junctions, taking into account the proposals for managed motorways to satisfy the HA . Interventions will be identified for phased development of the strategic sites and will be required to outline feasibility design stage with outline costs.. The parallel studies will identify an investment framework showing who will be responsible for delivering the identified reduce, manage and invest mitigation measures, providing initial outline costs for softer measures as well as infrastructure solutions. (eg HCC, HA, developer, TfSH, etc) Initial thoughts on how the measures could be funded, delivery timescales and delivery or implementation plans will also be developed to be staged in accordance with the timescale of development coming forward with trigger points or critical paths for provision of key infrastructure items.

5. Required Outputs

- **Inception Meeting**
- **Draft Report**
- **Presentation to Steering and Officer Reference Groups**
- **Final Report**
- **Presentation to Steering and Officer Reference Groups**

6. Project Management

- A Project Steering Group should be set up to include: TfSH, HCC and M/G to oversee the Project . A reporting and feedback protocol will need to be established. (3 meetings)
- An Officer Reference Group comprising TfSH, HCC, PUSH, HA, EBC, FBC, WCC, SCC and PCC should be set up to advise throughout the study as and when required,. (as required)
- The respective promoting developers and associated consultants (Terence O'Rourke and I-Transport for North North East Hedge End SDA; Smart Futures and WSP for North Fareham SDA; and Terence O'Rourke and PBA for North Whiteley) will be kept informed by the relevant local planning authority member of the Working Group and will need to be engaged in the project through focused meetings as required. (as required)
- Regular updates are to be given to the Client Manager - the frequency and mechanism for updates will need to be agreed.

7. Project Time scale

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| • Brief to be agreed and issued | Oct 2009 |
| • Inception meeting with Consultants | Oct 2009 |
| • Initial and interim meetings with Steering Group | Oct 2009 – March 2010 |
| • Draft Report and presentation to Steering Group | Feb 2010 |
| • Final report and presentation to Steering Group | Mar 2010 |