

Mid Sussex Strategic Highway Model and Mid Sussex Transport Study Explanatory Note

1. Introduction:

- 1.1. As part of the preparation for the Site Allocations DPD, Mid Sussex District Council (MSDC) commissioned SYSTRA to build a strategic highway model to underpin the Mid Sussex Transport Study and update the Mid Sussex Transport Study. The SYSTRA work is required to test the impact of proposed development on the strategic and local transport network and upon significant routes in Ashdown Forest (adjacent to but outside of Mid Sussex district).
- 1.2. In addition, SYSTRA were commissioned to undertake environmental impact and road safety impact analysis to comply with National Planning Practice Guidance on transport evidence bases in plan making for the 'preferred' development as part of the Mid Sussex Transport Study to inform the emerging Site Allocations DPD for housing and employment.
- 1.3. The Transport Study is required to inform the allocation of housing and employment sites and;
 - i. Assess the capacity performance at local road network links/ junctions for proposed Site Allocations DPD development scenarios;
 - ii. Inform consideration of the sustainable transport options and assumptions to be incorporated into the Site Allocations DPD evidence base; and the Mid Sussex Infrastructure Delivery Plan;
 - iii. Address the requirements of WSCC and Highways England (HE), both of whom aim for a sustainable approach to transport with the common objective of managing travel demand to minimise congestion, delays and adverse environmental / safety impact;
 - iv. Be in general conformity with current Government planning practice guidance on transport evidence bases in plan making and in line with current best practice; and
 - v. Identify forecast changes in traffic flow on roads entering the Ashdown Forest, as a result of proposed housing and commercial development in Mid Sussex and provide results in a format that can be readily interpreted and used for the air quality (i.e. eutrophication by nitrogen deposition) and ecological interpretation work.

1.1 Purpose of the note and background:

- 1.1.1 This note provides a summary of the Development Scenarios that have been tested through the Strategic Transport Assessment to inform the preparation of the Site Allocations DPD.
- 1.1.2 The Mid Sussex District Plan was adopted in March 2018 and provides a strategic framework for growth in Mid Sussex to 2031, including identifying the level of housing need in the District and the spatial strategy by which this growth will be distributed. The key policy framework for the Site Allocations DPD is provided by Policy DP4: Housing and Policy DP6: Settlement Hierarchy.

1.1.3 The Site Allocations DPD cannot change the adopted spatial strategy or settlement hierarchy set out in the District Plan. The sites allocated in the DPD are therefore consistent with the strategy set out in Policies DP4 and DP6 of the adopted District Plan.

2. Development Scenario Testing:

2.1 Various Development Scenarios have been tested and refined over a number of iterations, with a total of 8 different Scenarios being tested overall; each is broadly summarised below. Each Scenario has been assessed against a 2031 Reference Case Scenario which includes recently committed highway infrastructure, committed development in the District and background growth. This acts as a baseline when assessing the impacts of the development Scenarios; the Reference Case has been updated accordingly over the period of testing, from Reference Case 1 (tested against Scenario 1) in the first scenario test up to the most recently updated Reference Case 5 (tested against Scenarios 7 & 8). The changes made to the 2031 Reference Case therefore means that the results of each of the Scenarios cannot be directly compared and should be considered in context with the relevant baseline.

2.1.1 The various Scenarios tested through the Transport Study have helped inform the plan making steps which have been undertaken to determine the preferred list of sites. Scenarios 7 and 8 most closely match the 'reasonable alternatives' considered by the Sustainability Assessment (SA) however they also include some additional housing sites which have not ultimately been taken forward. The impacts of Development Scenarios 1 – 6 were tested without mitigation whilst Development Scenarios 7 & 8 were tested both without and with mitigation. The results of each of the Scenarios along with a summary table of the affected junctions are available on request.

Development Scenarios 1, 2 and 3:

2.1.2 Development Scenarios 1 – 3 represent a consistent group of 28 housing sites selected from the SHELAA (April 2018) which were selected on a high level basis ahead of any technical work on sites, in order to broadly test the adopted spatial strategy and settlement hierarchy as set out in Policies DP4 and DP6 of the District Plan. The differences are summarised below.

2.1.3 Scenarios 1 - 3 were tested in order to broadly assess whether the spatial distribution of development, largely consistent with the housing targets for each settlement set out in accordance with Policies DP4 and DP6, worked in transport terms. No detailed assessment of the sites themselves had been undertaken at this stage and the sites were simply chosen on the basis of their location in each of the settlement categories and the potential yield in order to meet the residual figures defined in the District Plan.

2.1.4 Scenarios 2 and 3 assisted in providing an assessment of the differing impacts between the North and South Science and Technology Park site options with the only variation between the two Scenarios being the Science Park's location.

Scenarios 1 – 3 variations:

<i>Scenario 1:</i>	In addition to the 28 housing sites, this Scenario includes a Science and Technology Park at Hickstead south of the A2300
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<i>Scenario 2:</i>	In addition to the Scenario 1 sites and previous committed sites this Scenario includes new housing commitments, updated to January 2019. It also includes the Horley Business Park, allocated in the Reigate and Banstead Local Plan and employment sites at Bolney; Bolney Nursery and Marylands Nursery along with the Science and Technology park located <i>north</i> of the A2300 east of Hickstead.
<i>Scenario 3:</i>	Scenario 3 is as per Scenario 2, other than the Science and Technology park east of Hickstead is located <i>south</i> of the A2300 in this scenario.

Development Scenarios 4, 5 & 6:

2.1.5 Scenarios 4 – 6 are standalone Scenarios, each Scenario represented a potential package of sites with 32 housing sites in common, plus a constant set of proposed employment sites. Each Scenario tested the same employment sites as Scenarios 1 – 3, but only tested the Science and Technology Park *South* of the A2300, on the basis this was determined to be the ‘worst case scenario’ in transport terms, ascertained from the results of scenario testing 2 and 3. The results of these Scenarios are combined in a single note and are available on request; each was tested without mitigation only in relation to Baseline Reference Case 4.

Scenarios 4 – 6 variations:

<i>Scenario 4:</i>	This Scenario includes 32 housing sites across the District, along with the Haywards Heath Golf Club.
<i>Scenario 5:</i>	This Scenario includes a total of 36 housing sites – this represents the 32 sites tested in Scenario 4, along with 4 additional sites (not contained within Scenario 4) at South of Folders Lane and does not include the Haywards Heath Golf Club.
<i>Scenario 6:</i>	This Scenario includes a total of 42 housing sites, represented by the 32 constant housing sites plus an additional 10 across Settlement Categories 2, 3 and 4.

Development Scenarios 7 & 8

2.1.6 Scenarios 7 & 8 closely represent the two final ‘reasonable alternatives’ following further technical evidence testing as part of the detailed sites selection process. Each Scenario has 26 housing sites in common and tests consistent employment sites across both including the *north* Science and Technology Park. Note that, following further work documented within Site Selection Paper 3: Housing, 6 of the housing sites have been removed from the Site Allocations process (these are small in scale and are more likely to proceed as windfall sites in the future).

2.1.7 The results of these Scenarios are combined in a single note, available on request and have been tested both with and without mitigation, showing a total of 2 junctions 'Severely' impacted *with* mitigation under both Scenario 7 and 8. The note also sets out next steps to be undertaken to determine appropriate mitigation for the impacts.

Scenarios 7 & 8 variations:

<i>Scenario 7:</i>	This Scenario includes the Haywards Heath Golf Club site and excludes 4 sites South of Folders Lane.
<i>Scenario 8:</i>	This Scenario includes the 4 sites South of Folders Lane and excludes the Haywards Heath Golf Club.