

Appendix C

Technical Note: Solent Sub-Regional Transport Model data

The Solent Sub-Regional Transport Model

The Solent Sub-Regional Transport Model (SRTM) is a multi-modal transport model, covering highway and public transport, which allows testing of the impacts and benefits of land use and transport interventions. It covers the Solent area from the West Sussex boundary to the New Forest and northwards to Winchester.

The SRTM is utilised primarily to test the economic impacts of these interventions. It is fully WebTAG-compliant and provides outputs which can robustly support the development of transport strategies and schemes and support development of funding bids and business cases.

Since its development in 2010, SRTM has also informed numerous Local Plans, major development transport assessments and transport strategies and studies. The model was extensively updated in 2015 and can be used for modelling of transport and land use scenarios for years through to 2041.

The model is owned by the Solent Transport group, which comprises four local authorities (Portsmouth City Council, Southampton City Council, the Isle of Wight Council and Hampshire County Council) working in partnership to deliver transport improvements in the sub-region. It is operated by transport consultants Systra.

The scenario used to provide inputs to the Bus Service Improvement Plan

The model scenario selected represents travel demand and costs forecast for the year 2026. The travel demand impacts of Covid-19 lockdown restrictions are assumed to be temporary and are not included. The following network changes from 2019 are included:

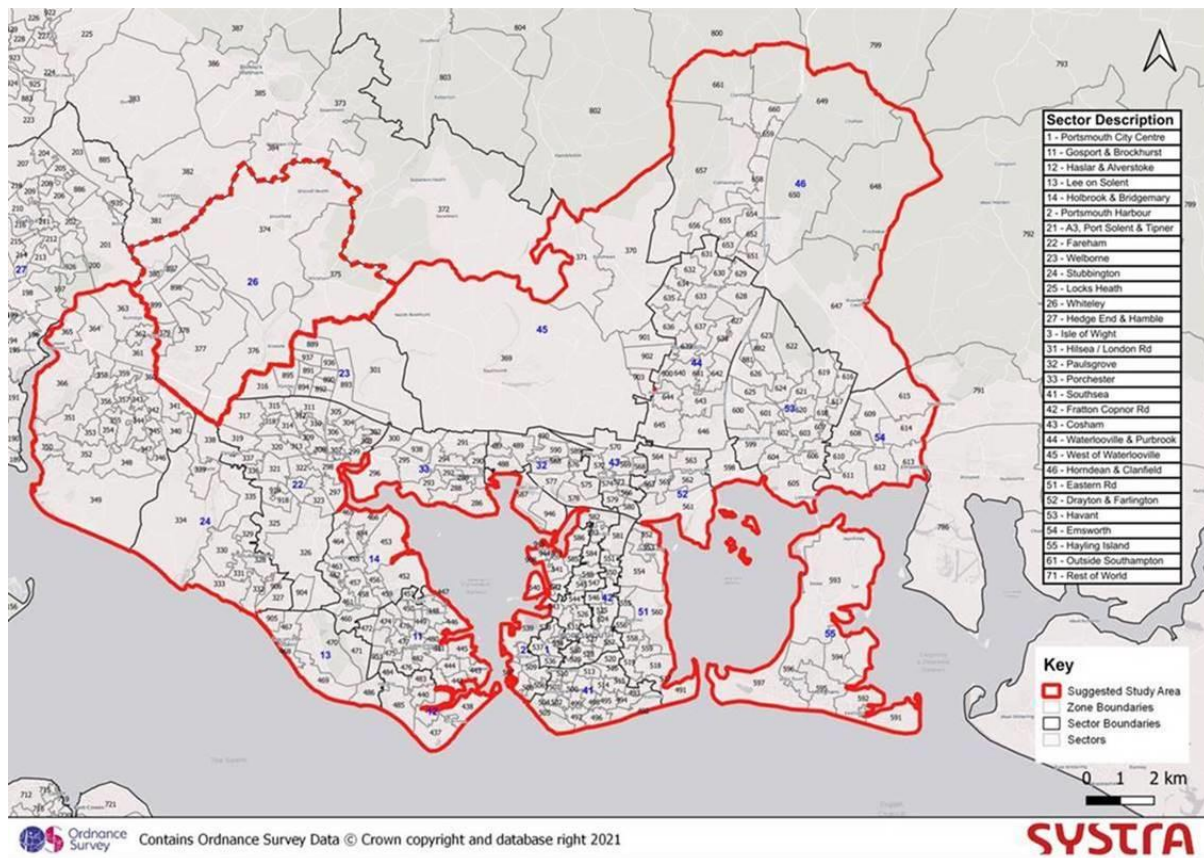
- South East Hampshire Rapid Transit Tranche 2 programme, as funded by the successful Transforming Cities Fund bid of 2020. This includes bus priority infrastructure, the Gosport Interchange and the following new rapid transit bus routes:
 - Fareham - Portsmouth
 - Waterloo - Portsmouth
 - Leigh Park/Havant - Portsmouth
- The M27 Junction 10 scheme.
- Southleigh junction scheme.

On the travel demand side, the scenario includes the Partnership for South Hampshire (PfSH) committed Strategic Development Opportunity Area locations, including Portsmouth City Centre, with their associated trip generation forecasts. Although these are not forecast to be fully realised by 2026, they do generate additional travel demand to that existing in 2019.

The area selected

The SRTM covers the entire Solent sub-region. However, only the Portsmouth travel to work area, shown in Figure 2 of the BSIP, is of interest. The SRTM zones selected therefore cover broadly the travel to work area, as shown in the map in Figure 1 below.

Figure 1 SRTM Zones in the Portsmouth travel to work area



Sectors or groups of zones were specified for the extraction of SRTM travel demand data. These sectors are listed as follows.

Portsmouth City Centre
 Portsmouth Harbour
 Gosport & Brockhurst
 Haslar & Alverstoke
 Holbrook & Bridgeman
 A3, Port Solent
 Fareham
 Welborne
 Stubbington
 Locks Heath
 Whiteley
 Hilsea / London Road
 Paulsgrove
 Porchester
 Southsea
 Fratton Copnor Road
 Cosham
 Waterlooville & Purbrook
 West of Waterlooville

Horndean & Clanfield
Eastern Road
Drayton & Farlington
Havant
Emsworth
Hayling Island

SRTM skim data

The following skim data were extracted from the SRTM model scenario described above.

- Sector-Sector car/van trip matrices for the AM/IP/PM/OP periods
- Sector-Sector public transport trip matrices for the AM/IP/PM/OP periods
- Bus journey purpose data for trips starting or ending in Portsmouth

Travel demand analysis

The SRTM travel demand was analysed to assess whether there are any significant gaps in the Portsmouth bus network. Gaps can be defined as sector-sector movements for which there is significant demand, a low public transport share of trips and no direct bus link.

The specified criteria are as follows.

- Trips/day: 25% of maximum in area = 31
- Max public transport share = 50%
- No direct bus route.
- One trip end inside Portsmouth.

This analysis identified the following sector-sector movements for consideration for possible connection by potential new or diverted bus routes.

Portchester - Drayton & Farlington
Southsea - Eastern Road
Waterlooville & Purrbrook - Drayton & Farlington
Horndean & Clanfield - Drayton & Farlington
West of Waterlooville - Drayton & Farlington
Emsworth - Drayton & Farlington

Certain of these sector-sector movements form the basis of bus route extensions and service enhancements proposed in the BSIP.

Journey purpose analysis

The travel purpose of all trips made by bus either starting or ending in Portsmouth were obtained for each of the time periods (AM/IP/PM/OP). These were aggregated into daily totals and percentages as shown in Figure 2 below.

Figure 2: Portsmouth bus travel purpose distribution

Journey purpose	% of Portsmouth bus trips
HBW – home based work	24%
HBB – home based business	5%
HBE – home based education	7%
HBO – home based other	53%
NHB – non-home based business	3%
NHO – non-home based other	9%
Total	100%
Work (HBB+NHB)	7%
Commuting (HBW+HBE)	30%
Other (HBO+NHO)	62%
Total	100%

The SRTM trip purpose classes (HBW etc) are aggregated to form the webTAG categories of work, commuting and other. The combined work and commuting total of 37% demonstrates the importance of buses to the local economy, in getting people to work.