

Job Name: Brentwood Local Plan – Transport Modelling
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Prepared By: Jamie Pound
Subject: Use of NTS to inform Trip Rates by Accessibility Level

Introduction

This technical note is one of a series of notes produced to assist in the understanding of the methodology in developing the modelling tools used to assist in the development of the transport evidence base for the Brentwood Local Plan. This note sets out how NTS trip rates have been used to account for differing accessibility levels for zones within the model area.

Use of NTS Data to Inform Accessibility Levels

NTS has been used within the development of the model to date to provide trip rates for different trip purposes and age groups. This approach has previously been agreed with Essex highways and Highways England through dialogue with AECOM, as part of the earlier study. A comparison of these rates, against TRICS was also previously undertaken and it was agreed that an adjustment would be made to NTS rates to reflect some differences. NTS provides a rich source of data, as it can break trip rates down by trip purpose, mode and age group, unlike TRICS, which provides additional flexibility within the modelling tool..

As part of the updated modelling, PBA have been considered the NTS data further to take account of different accessibility levels, depending upon the geographical location of proposed developments, NTS includes categorisation by area definitions for five types, which are:

- Major Conurbation
- Urban City or Town
- Rural Town or Fringe
- Rural Village,
- Rural Hamlet or Isolated Dwelling

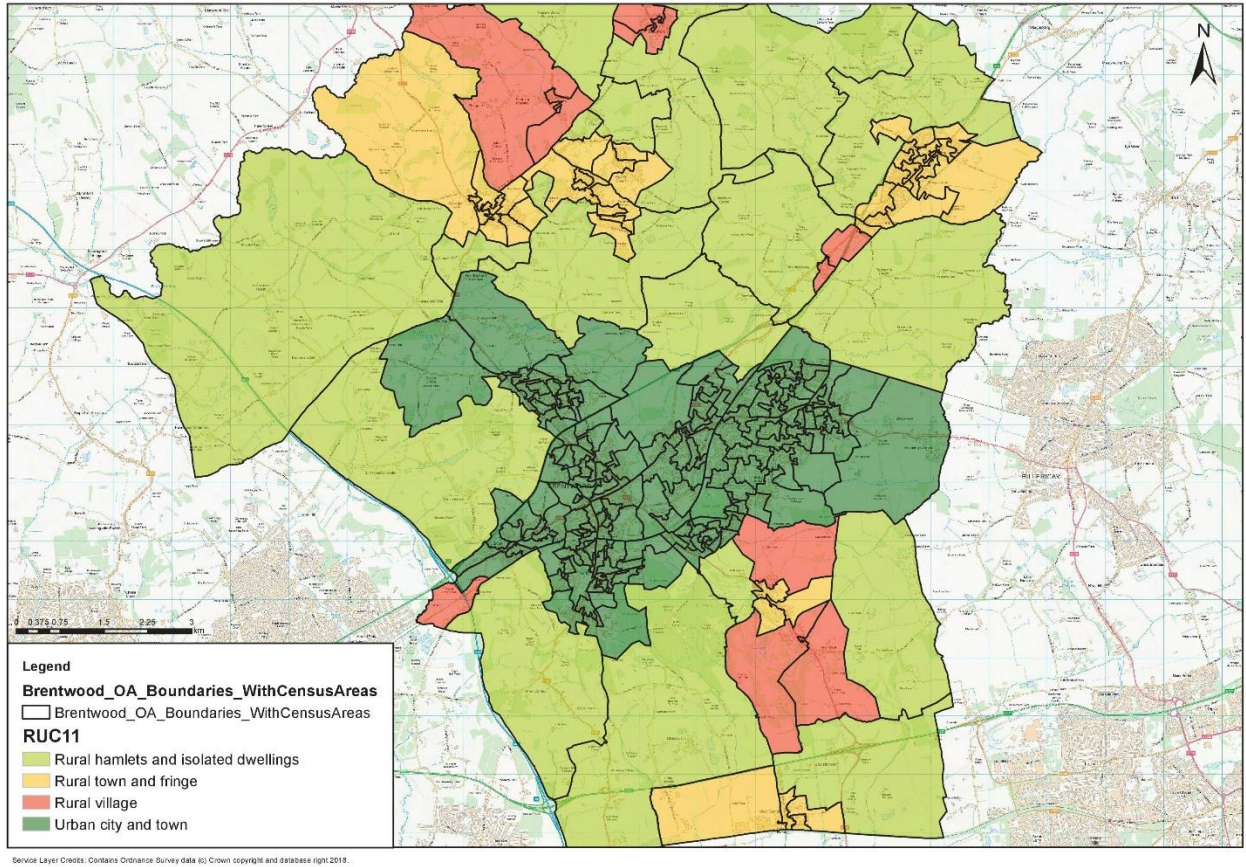
The previous model combined the latter three definitions, to provide a single set of trip rates by trip purpose and age group.

To allow different accessibility levels to be taken into account for development zones, a set of trip rates for each of the latter three definitions have been produced. The categories used within NTS, match those assigned to census output areas, with each output area within the UK, falling into one of the four definitions. Within the model, this allows the zones to be categorized in the same way, as they are based on census output areas.

Each of the zones in the model have been allocated one of the area definitions, based on the census output area definition for that zone. By using this data, combined with the location of each of the committed/LP developments it was possible to assign an appropriate NTS trip rate.

Figure 1 shows the census OA classifications.

Figure 1: 2011 Census OA area classifications



Using this methodology means that the number of trips for each of the developments will be more accurate with higher levels of car trips outside of the urban areas and a lower level of walk/cycle trips.

The NTS trip rates will be used within the initial assessment of the local plan developments. As part of the mitigation that will be required to assist in delivering the local plan, sustainable travel measure will be required. These will be taken on board and will require further adjustment to trip rates/trips from both the local plan developments and the other areas which may benefit from the introduction of such measures. The methodology for deriving this further reduction will be detailed in a separate technical note.

NTS Trip Rates Used

An extract of the trip rates used for each of the categories are shown in Tables 1, 2 and 3 for Urban City or Town, rural town or fringe and rural village/rural hamlet and isolated dwellings respectively. The rates shown are for 08:00-09:00, home to purpose, work/employers business and education.

TIME PERIOD :	0800-0900							
NTS Trip Rates								
Home-to-Purpose Trips								
						Trips per Person	Trips per Person	Trips per Person
						Age 0-16	Age 17-64	Age 65+
		Destination Purpose :		Work & EB				
		Mode :	Walk & Cycle			0	0.030752	0.010705
		Mode :	Car/Van Drive			0	0.112582	0.064583
		Mode :	Car/Van Passenger			0.007231	0.014216	0.003335
		Mode :	All Modes			0.012773	0.176157	0.081401
		Destination Purpose :		Education				
		Mode :	Walk & Cycle			0.199752	0.005874	0
		Mode :	Car/Van Drive			0	0.003167	0
		Mode :	Car/Van Passenger			0.102753	0.003203	0
		Mode :	All Modes			0.471097	0.018993	0

Table 1: NTS Rates Urban City or Town

TIME PERIOD :	0800-0900							
NTS Trip Rates								
Home-to-Purpose Trips								
						Trips per Person	Trips per Person	Trips per Person
						Age 0-16	Age 17-64	Age 65+
		Destination Purpose :		Work & EB				
		Mode :	Walk & Cycle			0	0.020023	0.001601
		Mode :	Car/Van Drive			0	0.116461	0.04987
		Mode :	Car/Van Passenger			0	0.010568	0.003146
		Mode :	All Modes			0.020462	0.156727	0.054616
		Destination Purpose :		Education				
		Mode :	Walk & Cycle			0.061139	0.001914	0
		Mode :	Car/Van Drive			0	0.003341	0
		Mode :	Car/Van Passenger			0.085308	0.002227	0
		Mode :	All Modes			0.406418	0.014872	0

Table 2: NTS Rates Rural Town or Fringe

TIME PERIOD :	0800-0900							
NTS Trip Rates								
Home-to-Purpose Trips								
							Trips per Person	Trips per Person
							Age 0-16	Age 17-64
								Age 65+
		Destination Purpose :		Work & EB				
			Mode :	Walk & Cycle		0	0.003213	0
			Mode :	Car/Van Drive		0	0.123126	0.074839
			Mode :	Car/Van Passenger		0	0.0105	0.001056
			Mode :	All Modes		0	0.141887	0.075895
		Destination Purpose :		Education				
			Mode :	Walk & Cycle		0.012638	0.000745	0
			Mode :	Car/Van Drive		0	0.00539	0
			Mode :	Car/Van Passenger		0.105079	0.002824	0
			Mode :	All Modes		0.380083	0.013426	0

Table 3: NTS Rates Rural Village/Rural Hamlet and Isolated Dwellings

Summary

The approach used to inform accessibility levels by geographical location, has utilised NTS area definition categories. It is felt that this is a proportionate approach to account for the different accessibility levels within the model and maintains a level of consistency with the use of NTS data to provide trip rates.

NTS is a rich source of data for providing trip rates and can be broken down easily by trip purpose, which is an advantage over TRICS.