

Appendix C

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**Technical Note:  
Methodology for  
Applying Distribution**



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Job title	Heyford Park Transport Assessment	Job number
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Subject	Methodology for applying distribution of trips to/from Heyford Park based on Census data	

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## Methodology

Distribution calculated by using Journey to Work data for car drivers from the 2001 Census supplied by the government's Office for National Statistics.

Data was extracted at Ward level for Cherwell District (which includes Astons and The Heyfords Ward) and three other Districts adjoining Cherwell that contained a significant number of trips:

- Aylesbury Vale
- South Northamptonshire
- West Oxfordshire

Outside this area the data was disaggregated to District level, with Counties slightly further out and at Region level beyond this. In total 73% of all driver trips were within the area examined at the finest (Ward) level.

The junctions agreed for possible assessment are all located within the Astons and the Heyfords Ward. In order to calculate routes that passed through these junctions trips to/from Heyford Park itself were disaggregated from the Ward data by extracting data for the four Super Output Areas that cover Heyford Park (and Upper Heyford Village). See figure 'Heyford Park Super Output Areas'. These four areas are described below as the Heyford Park Super Output Area.

The number and percentages, disaggregated by mode, relating to the Heyford Park Super Output Area were obtained for:

- Trips originating in Heyford Park and travelling away
- Trips originating away and travelling to employment at Heyford Park

Trips were applied onto OS base mapping using the most direct routes taking account of road hierarchy but also using local knowledge gained from a member of the study team who lived in the area for nine years and advice from an Ardley parish councillor regarding local congestion hotspots and 'rat-running'. The routes were allocated accordingly.

Once all trips were allocated onto the network, percentages were calculated for each link between the junctions for assessment and for trips passing through the junctions themselves.

## Assumptions

The following assumptions were made concerning trips with Heyford Park as origin:

- The 7% total for the M40 southbound were allocated; 3% via Ardley, 2% via Chesterton and 2% via Weston-on-the-Green.
- M40 northbound comprises 3% Banbury Grimsbury and 3% points further north
- 6% to Kidlington were allocated; 2% via Hopcrofts Holt and 4% via Bunkers Hill
- Oxford, Vale of White Horse and South West totalled 13%. 8% was allocated via Weston-on-the-Green, 2% via Kirklington, 2% via Bunkers Hill and 1% via Hopcrofts Holt
- All 3% to South Oxfordshire was allocated via Weston-on-the-Green

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- 3% of the 15% 'internal' within the Heyford Park Super Output Area, (including 1% to the rest of Astons and the Heyfords) was allocated to Upper Heyford Village.
  - The remaining 12% are assumed to be trips within Heyford Park
  - Percentages do not sum due to rounding.

The following assumptions were made concerning trips with Heyford Park as destination:

- Of the 10% internal trips, 3% are assumed from Upper Heyford Village and 7% within the site
- The rest of the Astons and the Heyfords Ward had 5% of trips. These were assumed to be 2% via Somerton, 2% via Lower Heyford and 1% via Ardley
- The M40 southbound trips exiting at Jcn 10 totalled 12%, comprising Banbury Grimsbury 3%, Middleton Cheney 1%, Wardoun 1%, West Midlands 5%, North West 1%, Wales 1%
- The M40 northbound trips exiting at Jcn 10 totalled 4%, comprising Wycombe 1%, Berkshire 2%, London 1%
- Oxford, Vale of White Horse and South West totalled 5%. 3% was allocated via Weston-on-the-Green, 2% via Kirklington
- Percentages do not sum due to rounding.