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# *Transport Modelling and Forecasting*

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# The Transport Modelling Process

- Investigations undertaken for possible P&R sites to inform Cabinet's decision
- Department of Transport's web-based Transport Analysis Guidance (WebTAG) provides details of the prescribed process
- Links potential solutions to the defined problems and objectives

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# The Transport Modelling Process

- WebTAG helps to test transport proposals to an industry standard
- DfT and other agencies such as Highways England require use of WebTAG to consider any applications for funding
- Supports a business case for any public spending proposal

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# The Transport Modelling Process

- Process covers the strategic case (i.e. what the proposal is trying to achieve) plus all other aspects and impacts including economic and environmental
- Analysis requires modelling to determine demand forecasts which provides data fro economic appraisal and other assessments

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# The Transport Modelling Process

- Modelling is a complex activity that includes highway (traffic), public transport options and mode share models
- Recent survey data has been obtained
  - Roadside interviews
  - Public transport user surveys
  - Journey time data
  - Traffic count data
- Validation to WebTAG standards

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# The Transport Modelling Process

- Existing G-BATH model was used for Bath Transportation Package in 2007 which forecast substantial demand for Park and Ride to the east
- This was subject to scrutiny and approved by DfT

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# The Transport Modelling Process

- Updated G-BATH to base model 2014
- Forecast model 2029 takes into account proposed scheme(s) and other interventions including planned developments
- Applies demand to the network to determine people's transport options

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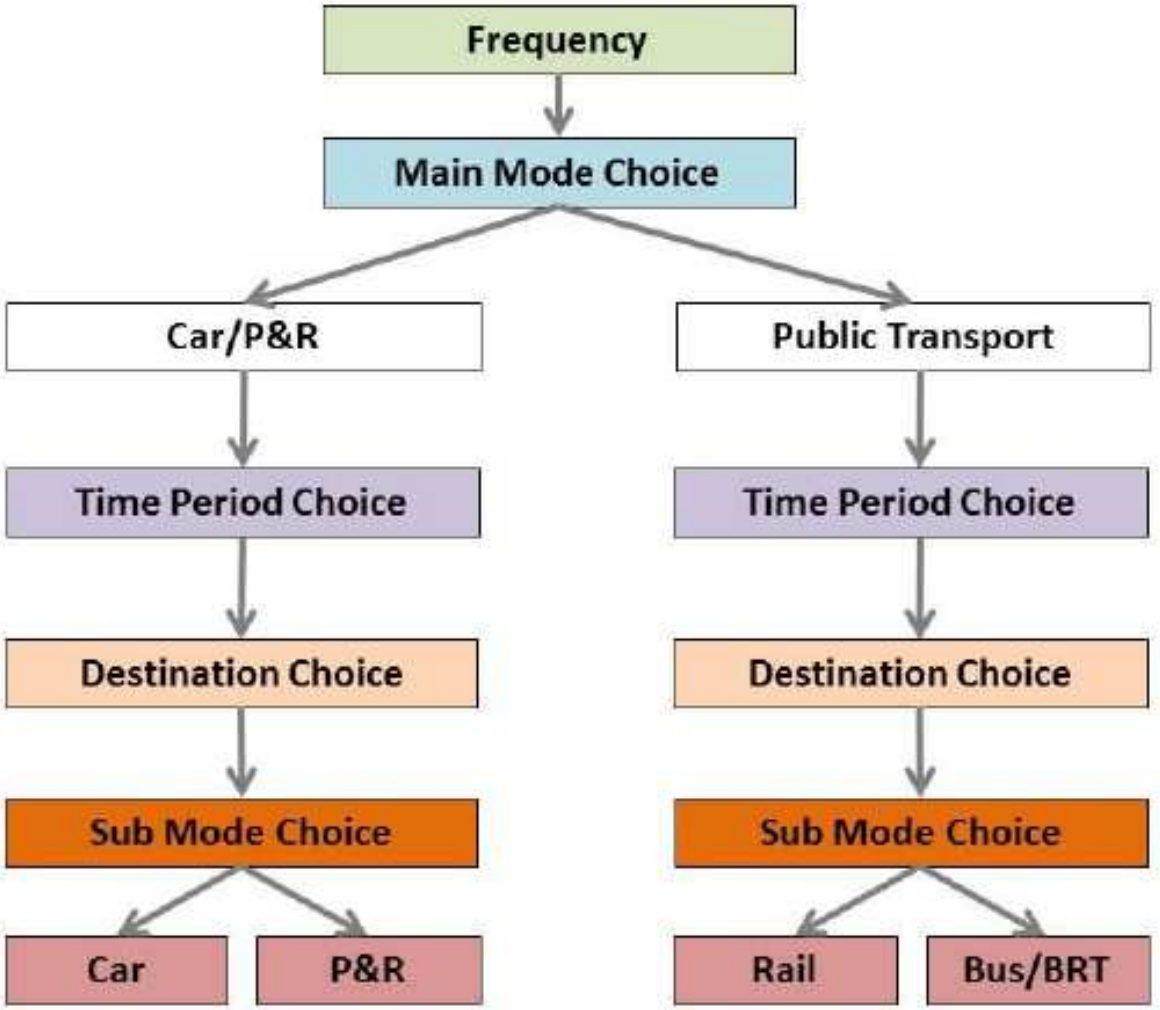
# Demand Forecasts



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# Demand Forecasts

- Park and Ride demand forecasts indicate how many vehicle units can be expected to use a site given user origins, relative costs, etc.
- Bath attracts journeys from the east and this demand is expected to grow over time

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# Demand Model Forecast (vehicles per day 2029)

| P&R Site | Do Minimum | Do Something based on Odd Down profile for new site (with RUH service) | Do Something based on Lansdown profile for new site (with RUH service) |
|---|---|---|---|
| A4 Eastern | -- | 1,245 (1,778) | 1,102 (1,588) |
| Odd Down | 1,755 | 1,662 (1,638) | 1,682 (1,638) |
| Newbridge | 639 | 580 (580) | 580 (580) |
| Lansdown | 1,260 | 853 (866) | 853 (866) |
| **Total** | **3,654** | **4,360 (4,862)** | **4,217 (4,672)** |

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# Demand Forecasts

- Note some abstraction from Lansdown P&R with a new P&R in place
  - Location of Lansdown presents problems
  - Surrounding road access poor
  - Journeys intercepted more appropriately with an additional site to the east

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# 2029 Predicted Traffic Flows A4 London Road (vehicles per day)

| Period | Do Minimum | Do Something without additional RUH service | Do Something with additional RUH service |
|---|---|---|---|
| AM Peak Inbound | 884 | 836 (-5.4%) | 792 (-10.4%) |
| InterPeak Inbound | 1,045 | 999 (-4.0%) | 906 (-9.0%) |
| InterPeak Outbound | 961 | 922 (-4.4%) | 893 (-5.7%) |
| PM Peak Outbound | 1,151 | 1,117 (-3.0%) | 1,008 (-3.8%) |

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# Demand Forecasts

- Lansdown P&R expected to exceed its current capacity if a new site to the east is not introduced
- 59% of demand for a site to the east from A4 to the east of Bath, 32% from A46
- Relief on London Road between 5% (AM inbound) to 10% (PM outbound) 2029

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# Summary

- The modelling process accords with DfT's guidance to generate reliable demand forecasts i.e. developed to industry standards
- The model has been updated to produce P&R demand forecasts for a selection of site options, highlighting the need for an additional site to the east