

Appendix E: NGT Economic Forecasts

The NGT Economic Forecasts were derived from the report; Wider Economic Impacts prepared by SDG in January 2014. See Appendix F. The background and explanation of the assessment used is detailed below;

- 1 DfT Guidance establishes that a form of model known as Land Use Transport Interaction (LUTI) models can be used to assess how a transport intervention such as NGT affects the size of the population and number of jobs, as well as how that population and those jobs are distributed. In turn, these models can be used to project the economic impact of both additional jobs and the relocation of jobs from less to more productive areas. (For some sectors of the economy, such as the service sector, jobs in city centres are typically more productive than jobs located elsewhere.)
- 2 Such a model – known as the Urban Dynamic Model (UDM)– is available for West Yorkshire. This model has been developed for Metro and has been used for the last decade or so to support the development of transport policy and investment programmes. Analysis from the UDM has helped the Leeds City Region develop and prioritise its West Yorkshire Transport Fund Plus programme of investment. The UDM has been used to assess the Wider Economic Impacts of NGT. A description of the model, its application for NGT and the results of this application are covered in a technical report.
- 3 The Urban Dynamic Model, which is a strategic land use, transport and economic model was first developed by SDG thirteen years ago, and has been used previously in the Eddington Study, Northern Way Study, the WY LTP2, Merseyside LTP2 and South Yorkshire.
- 4 It works by taking the land projected to be available for employment and housing growth, and allowing that land to be developed, if the right conditions are in place. These include: for employment land - an accessible workforce, accessible markets and access to other businesses, and for housing land – accessible jobs, and access to other services. The model recognises that different locations compete for some of these resources, particularly the work-force. It focuses on commuting trips and business trips (by mode) and was calibrated to 2010. One of the major constraints to growth is the rising cost of transport which will have the effect of reducing accessibility. Changing transport costs are converted into generalised cost, but include key influences of highway congestion, rail crowding, fares, fuel costs, parking and journey times.
- 5 The UDM was used to predict the scale and distribution of locations where future employment growth would be constrained because of rising transport costs such as public transport fares, highway congestion and rail crowding, which would lead to:
 - A reduction of around 22,000 jobs in WY
 - Reduction in the size of labour pools for employers in West Yorkshire to recruit from (average reduction of 23% in 2026);
 - Reduction in the number of accessible jobs for commuters in West Yorkshire (average reduction in accessible jobs of 18% in 2026, but 20% for commuters from the most deprived communities);
 - Rising costs and reduced productivity for business.

- 6 The scale and distribution of the UDM's forecasts of constraints in employment and housing growth has been an important basis for identifying where new transport infrastructure schemes would be most effective in unlocking growth – this was in a large part of basis for Growth Deal 2 approval. The spatial evidence suggested employment constraint would be experienced:
- globally across the (urban) area
 - within all urban centres, particularly Bradford, Halifax, Huddersfield and Wakefield
 - within and along a number of corridors and key potential growth areas including: Aire Valley Leeds, M62 between Castleford and south Leeds, Canal Road Bradford and the A62 corridor east of Huddersfield
 - in areas surrounding the urban centres, and particularly focused in in the northern edges of Leeds city centre (including the University and Hospital areas)
- 7 The UDM forecast that NGT would:
- Lead to an increase of 3,687 jobs in Leeds District by 2031.
 - Result in Wider Economic Impacts of £115m PV (in 2010 prices). As noted, these were not included in the DfT-specified Cost Benefit Analysis (CBA) but they did appear in the Appraisal Summary Table (AST). If they were included in the CBA they would increase the Benefit Cost Ratio (BCR) of the project to 3.65:1.
 - Increase Gross Value Added of the Leeds District in 2031 by £235.6 million per annum. (This is an alternative way of expressing the Wider Economic Impacts and should not be added to the User Benefit figure.)
- 8 It is clear from this analysis that the Leeds economy would have received a significant and positive economic benefit from NGT.
- 9 It is also widely accepted that well specified rapid transit schemes can support regeneration and redevelopment. The NGT scheme served South Leeds and in particular areas that are designated in the Leeds Local Development Framework for regeneration and redevelopment: the Aire Valley Action Plan area and the area covered by the South Bank Planning Statement. NGT would have supported the realisation of these initiatives and the permanence of the system would have been a notable contribution to this.