



Department
for Transport

Local Sustainable Transport Fund - Analysis of employment impacts

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Executive summary

The Local Sustainable Transport Fund provides £600m of Departmental funding to 96 projects run by local authorities, including funding for Bikeability cycle training. Together with local funding contributions, over £1bn is being invested in a wide range of sustainable travel initiatives.

This note provides an estimate for the economic impacts of the 96 projects¹, both through directly supporting jobs and wider impacts on productivity and growth. The main aim of this note is to illustrate the methodology for making such estimates. In the future, more funding decisions for sustainable and active travel will be made at local level. When making the case for investment, scheme promoters might want to use similar analyses to communicate the full impacts of their proposal.

The analysis presented here concludes that the Fund is potentially supporting between 4,700 and 6,150 jobs per year through the 96 projects funded, at an average cost per job of £44k to £57k. The expected long term positive impact on businesses and growth can be estimated as being in the order of £3bn.

¹ The analysis does not include bikeability as this programme is administered in a different way to the remainder of the funding.

1. Estimating Employment Impacts

Background

- 1.1 The Local Sustainable Transport Fund (the Fund) was launched in January 2011 and has made £600 million available in grant funding to 96 bespoke local projects over a four year period to 2014/15. This includes funding for Bikeability cycle training. Together with local funding contributions, a total of over £1bn is being spent across the individual schemes.
- 1.2 This note aims to estimate the impact on employment of the 96 funded projects² and provides an illustration of a methodology that could be replicated by scheme promoters seeking to make a case for investment in sustainable transport. The impacts are considered under two headings:
 - **Direct and supply-chain jobs:** these are jobs that are supported in the sectors benefitting from funding and within their associated supply chains; and
 - **Indirect jobs:** these are job that are created as a result of the increased attractiveness of an area resulting from transport improvements.

Direct and supply chain jobs

- 1.3 The number of people employed as a direct result of Departmental spending is not routinely monitored. However, it is possible to make high-level estimates of the employment impact of transport spending by considering the proportion of funding that is spent on direct employment.
- 1.4 Using the annual outputs monitoring data together with financial information from the original bids, the total spending for the 96 projects can be categorised into local authority staff wage costs, other revenue spending and capital expenditure. Analysis of a sample of detailed business cases suggests that other revenue is mostly spent on activities similar to advertising, market research or passenger transport. Capital funding is mostly planned to finance construction and IT services.
- 1.5 Data is publically available that shows the breakdown of intermediate inputs (including staff costs) that these industrial sectors use to provide their final goods and services. Based on this we can estimate that the projects may jointly keep between **4,700 and 6,150 people employed** per year (this calculation is detailed in Chapter 2).

² The impacts of bikeability funding on employment are excluded from this analysis.

- 1.6** These figures include jobs in local authorities to manage schemes; the sectors receiving funding (for example, construction workers); the supply chains of those sectors (for example, factory workers producing inputs for construction); finally the people who take up these jobs will spend some of their income, resulting in a final round of supported jobs (e.g. in the local retail sector).
- 1.7** These estimates of employment account for both central Government spending as well as any local contribution. We recognise that, in the absence of spending from the Fund, it is very likely that there would have been public money spent on other priorities. Alternatively the funds could have been returned to the (future) taxpayer through reduced taxation or lower borrowing. This analysis presents gross estimates as it does not account for impacts of alternative uses of the money on employment (the counterfactual).³

Indirect jobs

- 1.8** Good transport infrastructure and services are important for the labour market and the wider economy. Transport schemes increase productivity where they reduce businesses' travel times and transport costs and this, in turn, may incentivise the private sector to increase investment, output (often measured as gross value added [GVA]) and employment. It is an explicit objective of the Local Sustainable Transport Fund to support local economic growth through targeted sustainable transport interventions.
- 1.9** Transport costs, such as congestion, may act as a barrier to investment. As well as benefiting existing businesses in the area, a sustainable transport scheme will increase the attractiveness of that area and attract investment that would also increase GVA and employment.
- 1.10** Transport costs can also act as a barrier in the employment market. If a transport scheme reduces commuting costs, it will improve the efficiency of labour markets by encouraging more people to look for work and by better matching employees to jobs.⁴
- 1.11** Where the direct and supply-chain jobs discussed in the previous section (paragraphs 1.3 to 1.7) represent the short-term impact of government spending, the impacts described above are likely to be more long-term in nature. Long-term growth and job creation are more likely to come from increasing firms' productivity and improving the flexibility of labour markets, by reducing transport costs, than from spending money in labour intensive sectors to achieve short-term increases in employment.
- 1.12** Transport appraisals do not usually provide explicit estimates of impacts on GVA or employment. This is mainly due to transport often being an enabler rather than the sole driver of such benefits. However, many of

³ By estimating gross jobs, additionality issues are equally not taken into account, i.e. if jobs would otherwise be supported with out the scheme, either in the same location or elsewhere.

⁴ For more details on how Transport supports the economy, see 'Understanding and Valuing the Impacts of Transport Investment' available from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/253860/understanding-valuing-impacts-transport-investment.pdf

the benefits that are routinely measured might contribute to GVA. For example, decongestion benefits for businesses would reduce business travel costs, which increases productivity and thus potentially employment and GVA. The appraisal undertaken for the Fund's 12 large schemes suggests that nearly half of modelled benefits consist of business time savings and wider economic benefits, worth in total around £1bn⁵.

- 1.13** These large schemes represent one third of the total spending on the Fund's projects. As we have no equivalent evidence for the smaller projects, our best assumption would be that the large projects also generate a third of the benefits. This suggests wider economic benefits for the whole Fund could be of the order of £3 billion as a very rough estimate.
- 1.14** It is important to remember that these indirect job impacts are already accounted for in the traditional cost benefit analysis of transport schemes and care has to be taken when presenting these separately not to double count them.

⁵ Department for Transport (2014) 'Value for Money Assessment for the Local Sustainable Transport Fund', available at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/347894/vfm-assessment-of-lstf.pdf

2. Employment impact calculations

- 2.1** The calculation of impacts starts by splitting the total Central and Local Government investment (Step 1 in table 2.1 below [1]) into spending on local authority staff costs (2), other revenue (3) and capital spending (4).⁶
- 2.2** ONS input-output tables⁷ provide information of how much overall spend within a given industry is attributed to wages. As mentioned, analysis of a sample of detailed business cases suggests that other revenue is mostly spent on activities similar to advertising, market research or passenger transport. Capital funding is mostly planned to finance construction and IT services. The weighted average share of wages in these sectors is 26% (5).
- 2.3** To convert the resulting increase in wage payments (6) into the number of people employed, the average annual employment costs for the UK⁸(7) has been used (Step 8).
- 2.4** Together with the staff working on projects within local authorities (9), the total number of directly supported jobs are estimated as just below 10,500 (10).

Table 2.1: Local Sustainable Transport Fund employment impact

Step		Total
1	Central & Local Government investment (£m)	1,076
2	Direct spending on LA employment	130
3	Other revenue spending (1-(4+2))	253
4	Capital spending	693
5	Average proportion of total costs accounted for by labour	26%
6	labour costs (£m) (5×(3+4))	247

⁶ The overall capital/revenue split is taken from the original application forms. Revenue is further split into staff costs and others based on 2013 LSTF output reports on staff numbers, assuming figures are representative of full funding period. Average salary for LA staff taken from Sustainable Travel Towns. Source: The Effects of Smarter Choice Programmes in the Sustainable Travel Towns: Full Report - Chapter 3.

⁷ ONS – Input-Output tables for 2005 - available at www.ons.gov.uk/ons/rel/input-output/input-output-analytical-tables/2005/index.html

⁸ This can be estimated by using average salary (from ONS – ASHE 2012, Gross Annual Salary for Full-Time employees) and adding average non-wage employment costs to it (Employment cost uplift is available from: Eurostat - Labour cost data for UK2012)

7	Average employment costs (£)	£38,225
8	direct employment (in full time equivalent years (FTE years)) (6÷7)	6,461
9	Local Authority jobs (from annual output reports)	4,037
10	Total direct employment (8+9)	10,498
11	Supply chain multiplier	1.14
12	supply chain employment (FTE years) (11×8)	7,374
13	Induced multiplier	0.2
14	Additional induced employment (FTE years) (13×(10+12))	3,521
15	Total Supported employment from investment (FTE years) (10+12+14)	21,393
16	Total employment impact per year during LSTF (FTEs)	5,348
17	Cost per job (£LSTF funding / FTE year)	£50,315

2.5 The spending on other revenue and capital that does not directly flow into employment costs buys intermediate products (e.g. concrete for construction or paper and ink for advertising) and creates further employment opportunities in the sectors providing these. According to the ONS, the additional employment costs for the supply chains most likely to benefit from the Fund is 1.14 times the direct employment cost estimated in step 6.⁹

2.6 The additional income that people receive either directly or through the supply chain will result in increased spending in the wider economy, resulting in further induced jobs being created ultimately as a result of the Fund. This effect has been estimated to add a further 20% of more direct employment impacts (13)¹⁰. Applied to the number of jobs supported directly and through the supply chains, this impact is estimated at 3,521 (14).

2.7 The total of all employment as a result of the investment under the Fund would be best estimated as 21,393 'FTE years' over 4 years, or around 5,350 per year.

Uncertainty and sensitivity testing

2.8 The analysis above requires some assumptions which are based on evidence from the first year of output monitoring data and from a review

⁹ The ONS input-output tables provide estimates for this impact in form of employment cost multipliers

¹⁰ This is the residual included in the Type III multipliers but not in Type II multipliers, available from Scottish Government - Input-Output data for 2011, available on <http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/input-output>

of a sample of bidding documents. It has been assumed that this evidence provides a fair approximation over all years and all projects.

- 2.9** Without reviewing all 96 applications and waiting until the final output reports have been submitted in 2016, these conclusions will depend on assumptions that cannot be ultimately verified. However, we can test a range of alternative assumptions to understand the impacts on the number of jobs supported by the Fund.

Capital/revenue split

- 2.10** There is an equal split between capital and revenue for the central funding provided by the Department over the entire period. For local contribution, however we know that split only for the first year. For that year the split was 20% revenue and 80% capital.
- 2.11** Assuming a lower share of revenue for the full period would slightly reduce the estimate of jobs to around 5,300 per annum. Applying a 50/50 split as for central funds raises the figure to around 5,600.

Local authority staff levels

- 2.12** As above, the analysis assumes the first year of data to be representative of the full four years of funding. This assumes the first year employment (FTE) to be 25% of the total.
- 2.13** Alternatively the first year might only represent a lower proportion, for example 15%, (as projects have not yet reached full employment) or a high ratio, for example 40% (projects might require more administrative tasks at their outset). Applying these two alternative settings reduces the final figure to 5,100 or raises it to 5,800 (for the 15% assumption).

Sectors invested in

- 2.14** The information from a sample of bids was used to understand which sectors of the economy would experience increased revenues as a result of the Fund. For capital (two thirds of total funding) this was mostly construction (80%) but also IT equipment (20%). For revenue that is not being spent on staff, 40% is estimated to be spent on activities similar to 'market research' and 'other land transport' each, with the remainder of 20% on 'advertising'.
- 2.15** If a larger proportion of capital was spent on construction, the total job figure would fall to 5,100; if as much as half the investment was funnelled into technology, a slightly higher total of 5,600 would be the result.
- 2.16** The balance of revenue funding has an even smaller impact with the range of values lying between 5,285 and 5,385 for different assumptions on that split (up to 100% going into only one of the three categories).

Combined sensitivities

- 2.17** Combining the above mentioned sensitivity tests to achieve high and low totals results in a range of reasonable estimates of between 4,700 jobs per year and 6,150, with a central estimate of 5,350. The cost per job implied by these figures is in the range of £44,000 to £57,000.

3. Summary

- 3.1** This note outlines a methodology that scheme promoters can follow to estimate the direct job impacts their proposal is likely to have. The data required is readily available from published sources.
- 3.2** When applying this method illustratively to the 96 projects funded under the Local Sustainable Transport fund, a number of assumptions have to be made but using sensitivity tests shows that the resulting uncertainty is limited, as the total jobs figure will lie within a rather narrow range of 4,700 to 6,150 jobs per year.
- 3.3** For individual proposals the uncertainties will be smaller still, as the proposals will allow a more straight forward match to the various sectors of the economy that will see a rise in turnover.
- 3.4** These shorter term direct job impacts are not included in the indirect impacts that are traditionally covered in cost benefit analyses. In the case of the Local Sustainable Transport Fund, those wider growth impacts over the long run might be as large as £3bn.