

A higher percentage of on-street running for NET Phase Two has seen improved integration with business parks such as NG2.  
Neil Pulling



# WIDER IMPACTS OF NET PHASE TWO

Will Rossiter of Nottingham Trent University analyses some of the economic and employment benefits of the recently-opened Phase Two expansion of the city's tram network.

**T**his article provides an overview of recent research undertaken by a team from Nottingham Business School<sup>1</sup> into the economic impact of constructing the recent extension to the Nottingham Express Transit tram network.<sup>2</sup>

NET Phase Two extended Nottingham's existing tram network by 17.5km (10.9 miles) and 28 new stops, more than doubling the size of the network. The original estimate for the value of the 22.5-year Public Finance Initiative contract to design, build, operate and maintain the extended NET system was GBP570m (approx. EUR780m)<sup>3</sup>, making it one of the largest construction projects undertaken within Nottingham in recent years. In considering the nature and impact of NET Phase Two, it is important to note the differences between this route and that utilised for NET Line One.

Although clearly planned as the first phase of a local light rail network, we can characterise the strategic objective of the construction of Nottingham's first tramline as being primarily regeneration related.

Its function was to connect a number of communities to the north of the city to the centre, stimulating regeneration and reducing traffic congestion.

Opening in March 2004, the initial lines between Nottingham Station, Hucknall and Phoenix Park quickly established themselves, attracting a ridership of 8.3m per year by 2014-15<sup>4</sup>. NET Phase Two shared a number of similar objectives, but added more relating to network integration and economic growth – factors reflected in the route choices, linking strategic employment sites to the city centre and residential areas served by the lines. The timing of the procurement and construction distinguishes it from the earlier phase of development in that it took place in the immediate aftermath of the Great Recession. Indeed, it is this that led Nottingham City Council to prioritise the delivery of local social and economic benefit through the manner in which the scheme was delivered.

### Differing challenges

In engineering terms, the two phases of development are quite different. Line One

was able to take advantage a number of current/former railway routes through the conurbation; by contrast, Phase Two saw a greater proportion of the route sharing road space with other traffic. It also required the construction of five major structures to effect crossings of the Midland Mainline railway, the River Trent and major highway arteries within the City. The line's topography, coupled with the need to effect multi-modal interchange at Nottingham Station resulted in a more complex engineering scheme.

Line One is 14km (8.7 miles) long, 70% of which is segregated. Phase Two is longer at 17.5km (10.9 miles), 65% of which is segregated. These figures do not suggest much difference in complexity, but there has been less opportunity on Phase Two to re-use or share rail corridors<sup>5</sup> and considerably more on-street running along narrow and residential roads. Overall, it is more integrated with larger sections of the existing urban fabric than Line One and this has led to significantly greater impacts on local communities during construction and has increased associated mitigation requirements. ➤

The need to integrate with highways and other public infrastructure (including utilities) has presented particular challenges. One indication of the greater complexity faced in terms of integrating the new lines into the existing urban landscape is that Phase Two required approximately 80 properties to be demolished and 500 plots of land to be compulsorily purchased. No properties were demolished in order to facilitate the construction of Line One; this was largely a function of the re-use of existing rail corridors.

## Procurement

The legal framework permits contracting authorities to make the realisation of socially beneficial objectives, such as the alleviation of unemployment through the up-skilling of local workforces, an aspect of a contract award. In light of this, the inclusion of contractual targets relating to local procurement of services and supplies, employment, education and training of local people for the building of NET Phase Two is not novel. However, the approach adopted for this project is unusual.

An example of this was the specific targeting of young unemployed people as beneficiaries of the training and employment opportunities afforded through this project. In this case, the tramway operator became a partner in a wider network of agencies including the local authority, Job Centre Plus and local colleges working to deliver specific local benefits. In this way, NET Phase Two represents an excellent example of localism in procurement. Indeed, this particular procurement exercise provides a useful demonstration of how the requirements of the Public Services (Social Value) Act 2012

might be satisfied in future infrastructure projects.

## Economic stimulus

The focus of our economic impact assessment is on the relatively short run impacts arising from increased employment and expenditure in the local and regional economies resulting from the design and construction of Phase Two and the initial operation of the new routes.

At its peak, around 1600 people were directly employed on the construction of NET Phase Two (see right) and inline with normal practice the duration of an individual's employment varied considerably. The profile of employment was typical of that seen on many major construction projects and peaked in July 2014 before falling away as this phase neared completion.

Our assessment of economic impact can be summarised as:

- ▶ Around 2900 years of employment in the local economy and a further 1600 years in the regional economy have been created, generating around GBP108m (EUR128m) and GBP61m (EUR72m) of gross value added respectively;
- ▶ Supply chain expenditures have generated around GBP140m (EUR165m) in the local economy and a further GBP77m (EUR91m) in the regional economy
- ▶ Around 230 jobs are estimated to have been created as a result of operation of the new services, through additional drivers, control staff and so on, which will generate around GBP78m (EUR92m) of gross value added in the local economy during the next decade.

## Employment and training

A particularly noteworthy aspect of this project was the way in which Nottingham City Council and the members of the Tramlink consortium actively sought to deliver local training and employment benefits through the scheme.

The City Council's investment in its own employment services, the Employer Hub, to facilitate the matching of local people to training and employment opportunities linked to the project was important and something from which other local authorities affected by major infrastructure projects may be able to learn. A key feature of this scheme was the collaborative approach between Nottingham City Council's Employer Hub, Job Centre Plus, local Further Education providers and the Tramlink consortium members in delivering pre-employment training, local recruitment programmes, Apprenticeships, work experience and workforce training.

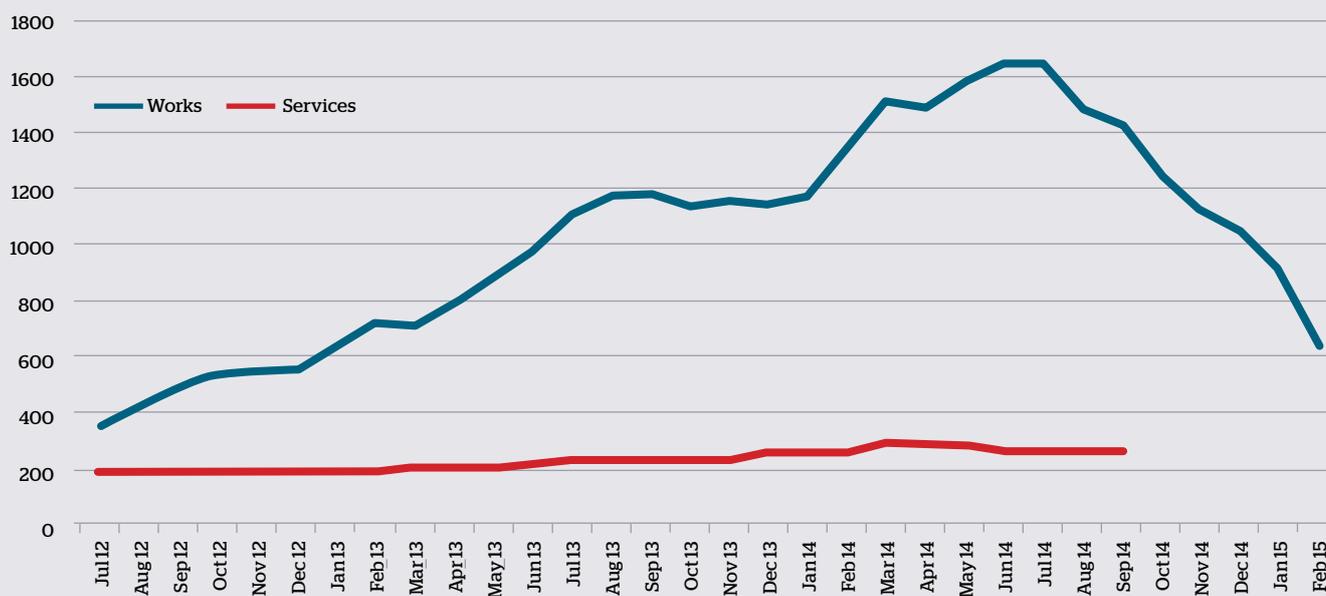
This approach resulted in 80 candidates completing courses and attaining a NVQ Level 1 and a Construction Skills Certification Scheme Card; approximately 50 of these achieved employment in the project. The 'work like' training experience offered by New College – who constructed a section of tram track to facilitate training on its Basford Construction Academy site – was highlighted as a real strength that helped to improve the 'work readiness' of potential recruits.

Over 200 jobs were directly filled by candidates supplied by the Employer Hub, despite the Hub concept being in its infancy at the start of the construction phase. The NET project was fundamental in establishing its role as a local employment service, prioritising support for the unemployed in Nottingham. Around 700 local young people also benefited from work experience opportunities provided through this project.



Improved interchange with local bus services is a prominent feature of Phase Two, exemplified by the new Holy Trinity stop on the Clifton line.

## Employment opportunities associated with NET Phase Two



Source: Tramlink Employment and Sustainability Reports July 2012-February 2015

The importance of such measures is a key lesson for project sponsors in other cities and regions seeking to maximise the local benefit of major infrastructure projects. Other authorities are now reported to be considering similar delivery models following the Nottingham Employer Hub model.

### Potential future benefits

The research combined insights from literature on the impacts associated with light rail with qualitative evidence gathered from a sample of stakeholders and project participants in order to comment on the likelihood of Nottingham realising similar benefits as a result of the extension of its tramway.

It is possible to identify a range of common impact types associated with the development of LRT schemes. It is likely that NET Phase Two will generate similar future impacts: **Extension of labour catchment areas:** The combination of strategic employment sites and communities served by NET Phase Two – coupled with the integration of the new lines with heavy rail and park-and-ride facilities at Toton and Clifton – suggests that these types of impacts are likely. Some employers interviewed felt that this was happening already.

**Stimulating inward investment/city image:** Several interviewees suggested that the tram has delivered further benefits in enhancing the image of the city – and will likely continue to do so. Attributing particular instances of inward investment to a particular infrastructure project is difficult due to the wide range of factors that influence commercial investment decisions, nevertheless respondents confirmed that transport infrastructure is clearly a factor considered by prospective inward investors. **Unlocking previously hard to access sites for development:** Some interviewees suggested that NET Phase Two has already influenced developers' perceptions of the potential offered by particular sites served by or in close proximity to the new tramlines.

**Stimulating growth through addressing transport network constraints:** NET Phase Two has addressed local transport network constraints and, particularly in concert with other recent and ongoing improvements (A453, Ring Road and Station), is likely to facilitate local economic growth.

**Land and property value increases:** The research team have found some evidence of property price increases in residential areas served by the new lines. It remains too early to assess the likely nature and scale of these effects however.

Evidence from stakeholders suggests these kinds of benefit are likely to be realised by NET Phase Two in Nottingham, to a greater or lesser extent, over the long term although it

**“Around 230 local jobs are estimated to have been created as a result of operation of the new lines.”**

remains too early to take a definitive view on the likely scale of these effects.

The fact that with the completion of Phase Two, Nottingham's tram system has become a network serving the wider conurbation and facilitating cross-city movements of people is likely to be a significant factor in determining the scale of these future benefits.

### Conclusions

The construction and initial operation of NET Phase Two took place during a period when the UK economy was recovering from the financial crisis of 2008-09. The advent of recession led the scheme's promoters to place more emphasis on delivering local economic benefits. It is also likely that the project helped to provide a degree of continuity of

employment for construction workers during a period when the sector was under some stress in the aftermath of recession.

The project has illustrated the way in which major infrastructure projects can play an important role in providing a local economic stimulus in recessionary environments. The employment, skills and supply chain impacts associated with this project were invaluable for Nottingham because they came at a time of particular economic stress. The procurement approach adopted for the concession was a significant factor in achieving this outcome.

Equally important was the investment made by Nottingham City Council in the Employer Hub – which played a central role in achieving positive employment and training outcomes for local people. Indeed, local authorities seeking to maximise the benefit from major infrastructure projects should seriously consider the approach adopted by NET Phase Two.

From a transport and spatial planning perspective, it is clear that NET Phase Two has demonstrated a good level of strategic integration with other transport infrastructure and wider development in and around the city. This is likely to promote future economic and social benefits within the localities served by the extended network. **TAUT**

### NOTES

1. Will Rossiter, Craig Bickerton, Rick Canavan, Chris Lawton and Peter Murphy.
2. The full report is available at <http://irep.ntu.ac.uk/28095/>
3. This figure was reduced by 15% by the then Coalition Government in 2011 at the final approval stage of the project.
4. NET annual report 2015.
5. NET Phase Two did make some use of former Great Central Railway alignments – particularly in the vicinity of Nottingham Station.