

Economic Development and Development Impacts in Worcester City Centre

Introduction

The Worcester City Centre Network Efficiency (Axis West East) scheme will deliver public realm improvements, including walking and cycling infrastructure, at the four locations identified in the scheme’s location plan in Appendix 1.

This will promote cycling and walking across the City Centre and its immediate context area. NPIF ‘Guidance on the Application Process’ (April 2017) states that “where other material factors not mentioned above... have particular relevance to the bid, these should be captured in applications. These could relate to benefits to... sustainable modes (walking and cycling and accessibility)”. Sustainable modes have the potential to unlock highway capacity and remove key transport constraints to development opportunities. Within this context, this section briefly outlines the modelling approach, key appraisal assumptions and results of the analysis into the scheme’s potential economic development impacts.

For the purposes of the assessment of economic impact, Worcester City Centre is captured by the core City area defined by four MSOA’s. The use of Office of National Statistics defined Middle Super Output Areas (MSOAs) to establish the study area ensures that data (census method of travel to work etc) can be collected at a recognised scale. In particular, the City Centre is defined as a grouping of the following four MSOAs: E02006742, E02006739, E02006740 and E02006744. This definition of Worcester City Centre broadly concurs with the influence area of the emerging Worcester City Centre Masterplan.

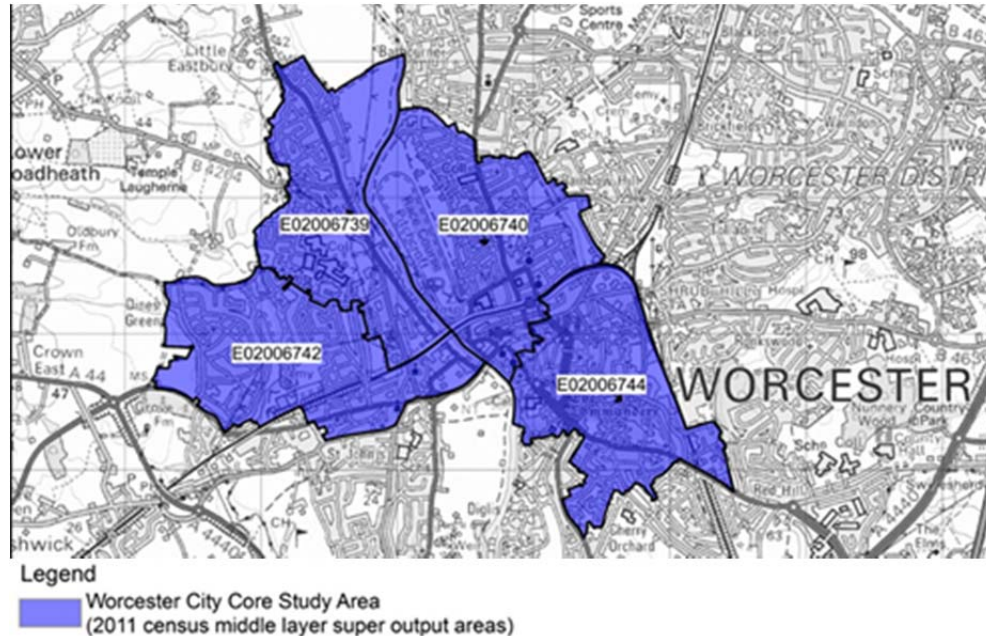


FIGURE 1: WORCESTER CITY CENTRE MSOAS

Existing Development Density in Worcester City Centre

A review of development densities across Worcester City Centre acts as a proxy for the concentration of economic activity and development opportunities in the area. Development density captures the intensity of land use by comparing floor space with plot area. In the context of economic activity and

development opportunities, locations with a high floor space to plot area ratio have high development densities, meaning that available land is being utilised to a greater degree with greater intensity of economic development.

MSOA	Floorspace (sqm)	Non-domestic development area (sqm)	Derived development density estimates
E02006742	21,000	282,110	7%
E02006739	177,000	508,000	35%
E02006740	48,000	152,730	31%
E02006744	208,000	923,130	23%
Total	478,989	335,292	143,697

TABLE 1: DEVELOPMENT DENSITIES IN WORCESTER CITY CENTRE

SOURCES OF DATA: CH2M CALCULATION, COMMERCIAL AND INDUSTRIAL FLOORSPACE AND RATEABLE VALUE STATISTICS (NEIGHBOURHOOD STATISTICS GEOGRAPHIES) AND CONTAINS OS OPEN DATA (2014)

Table 1 illustrates the development densities for Worcester City Centre. Data obtained from Neighbourhood Statistics provides information on how floor space varies across building types at MSOA level. GIS mapping available from OS open data (2014) allows the quantum of non-domestic development area to be measured, allowing for the derivation of development densities.

Results summarised in Table 1 show that overall development density is low in the City Centre. A low development density value indicates that land is not being intensely used within that location, whereas a high development density value demonstrates that non-domestic development area is being used effectively.

Development density is highest in E02006739 (35%) and lowest in the MSOA E02006742 (7%), this implies that within the City Centre, land usage is most concentrated within E02006739. The development density values indicate that there is significant potential for new developments to occur across the City Centre and within MSOA E02006742 in particular. By improving access to the City Centre through the cycling and walking schemes, footfall and therefore expenditure may increase, creating a multiplier effect in the region which could facilitate greater intensity of land use and higher development densities.

Benchmarking Analysis

The potential for development in Worcester City Centre is further exemplified by comparing development density values against similar city and town centre areas including Sheffield, Stratford-upon-Avon and Derby. Case study evidence for these comparator areas reveal that the development density of Derby City Centre is on average 100% (Derby HMA Employment Land Review: Forecasts Update ,2013)². Moreover, previous analysis undertaken for Stratford-upon-Avon District Council (2011)³ reveals that for Stratford-upon-avon the development density near the City Centre is 50%. Similar development density calculations undertaken for Sheffield for a range of MSOAs are summarized in Table 2 below.

CBD District	Baseline Development Density Metrics		
	Floorspace (sq m)	Plot Size (sq m)	Development Density
Cathedral Quarter	941,000	487,100	193%
Station Quarter	126,000	144,310	87%
Sheffield South	330,000	262,080	126%

SOURCE: CH2M REPORT- FAST TRAM TO MEADOWHALL HS2 STATION
TABLE 2: DEVELOPMENT DENSITIES IN SHEFFIELD CITY CENTRE

¹ Values rounded to the nearest 10 sqm

² Derby HMA Employment Land Review: Forecasts Update (2013), prepared for: Derby City Council, Amber Valley Borough Council, South Derbyshire District Council.

³ Stratford-on-Avon District Employment Land Study (2011), prepared for: Stratford-on-Avon District Council.

Comparing Table 1 and Table 2 reveals a vast difference in the intensity of land usage between Worcester and Sheffield. Comparing Sheffield South with MSOA E02006742, both of similar plot size, demonstrates a lower intensity of development in Worcester.

In summary, the above case studies indicate that comparator City Centres achieve significantly higher development densities than Worcester. To achieve comparable development density rates in Worcester, the City Centre requires investment in physical infrastructure to enhance access and improve public realm. Such improvements in Worcester City Centre could unlock business investment by enticing firms to open offices/retail outlets to take advantage of the improved transport links.

In conclusion, development densities in comparator City Centres range from 50% to 193%. The average development density from the literature review is 111%. The intervention could improve access to Worcester City Centre, leading to intensification of development in the area. To assess the impact of the scheme, a conservative target of 50% is adopted as the development density. This is appropriate as Worcester is most similar to Stratford-upon-Avon in terms of size and function. Both have a rich heritage of tradition and have similar demographics. Therefore, the development density achieved by Stratford-upon-Avon is considered a reasonable target for Worcester. This target of 50% development density is therefore used to forecast potential additional floor space.

Development Potential of Worcester

Despite the low development densities currently achieved across Worcester City Centre, the future vision for the area is of a dynamic, successful, attractive and vibrant place with a strong economy, recognised by businesses as a desirable place to invest and grow. To realise this vision, the City Centre Masterplan⁴ looks to increase development within the City Centre area particularly within the riverside corridors to accommodate for leisure and entertainment needs. In particular, the master plan identifies key development opportunities to help Worcester City Centre achieve this vision. These development opportunities are currently constrained by transport capacity, congestion and other access constraints.

Interventions such as the Worcester City Centre Network Efficiency (Axis West East) scheme will deliver significant reduction in congestion across the City Centre’s east-west axis, the City’s main arterial network. The reduction in congestion, supplemented with increase in active travel modes, will create additional capacity in the City Centre’s highway network. The capacity gains delivered by this investment package, along with other complementary measures within the wider City Centre area, will facilitate the delivery of the emerging City Centre Masterplan, including the Riverside Quarter. The key focus of this emerging Masterplan is to maximise the City Centre’s economic and market potential by intensifying development. WCC confirm that no further development can be delivered within the City Centre in the absence of any capacity improvements. Capacity gains delivered by this package will provide headroom for growth in the short term until further complementary substantial network upgrades are delivered in the City Centre.

Within this context, new development unlocked by transport interventions could increase the development density of Worcester City Centre in line with comparators such as Stratford-upon-Avon. Applying the development density target of 50% based on Stratford-upon-Avon, Table 3 highlights the total quantum of floorspace and additional floorspace that could be realised in the City Centre.

MSOA	Current floor space (sq m)	New floor space (sq m)	Additional floor space (sq m)
E02006742	21,000	141,057	120,057
E02006739	177,000	254,000	77,000
E02006740	48,000	76,367	28,366
E02006744	208,000	461,565	253,565
Total	454,000	932,989	478,989

TABLE 3 CHANGE IN FLOOR SPACE USING DENSITY DEVELOPMENT VALUE OF 50%

⁴ A master plan for Worcester City Centre (2012), prepared for Worcester City Council.

Table 3 shows that the highest increase in floor space occurs in MSOA E02006744 whilst the smallest change in floor space occurs at MSOA E02006742. In total, by increasing development densities to the benchmark level of 50%, floor space in the City Centre will double from around 450,000 sqm to more than 930,000 sq. m.

Implications of the Proposed Scheme

The spill over benefits of the proposed improvements to cycling and walking access can be measured in terms of the number of dwellings delivered, jobs created and associated gross value added (GVA) generated as a result of the scheme. These metrics highlight the economic benefits of the scheme. Table 4 shows the quantum of development floor space (by land use) that could be achieved through achieving development densities in line with the 50% target. Based on WCC advice, the analysis assumes that future City Centre development would be split 70%/30% between commercial and residential land uses respectively. By applying this ratio to the quantum of additional floor space, the land available for commercial and housing can be derived. MSOA E02006744 has the highest development potential for both housing and commercial use in comparison to the other MSOAs.

MSOA	Additional floor space sqm	Additional land for commercial development	Additional land for housing development
E02006739	120,057	84,040	36,017
E02006740	77,000	53,900	23,100
E02006742	28,367	19,857	8,510
E02006744	253,565	177,496	76,070
Total	478,989	335,292	143,697

SOURCE CH2M CALCULATION

TABLE 4 ADDITIONAL FLOOR SPACE CREATED DUE TO AN INCREASE IN DEVELOPMENT DENSITY

Applying an average employment density value of 34 sq. m⁵ to the additional land available for commercial development reveals that around 9,750 additional jobs could be created across Worcester City Centre. However not all the jobs created are attributable to the scheme. Based on transport modelling analysis, the scheme will increase highway capacity by 2%⁶. Adopting the 2% value as an attribution factor reveals a gross figure of 195 FTE jobs being generated as a spill over benefit of the scheme. The additional jobs created would generate an additional gross GVA of £8.75m per annum, based on a GVA per employee figure of around £45,000 for Worcestershire⁷.

By adopting a similar methodology, it is possible to derive the number of additional residential dwellings that will be delivered as a result of the scheme. Using the average apartment size value of 46 sqm⁸, more than 3,100 dwellings could be accommodated on additional land available for housing development. Based on a 2% attribution factor for the scheme an additional 63 apartments will be delivered which are directly attributable to the implementation of the scheme.

In summary, the intervention scheme proposed for Worcester City Centre could unlock an intensification of development density in the area. It is anticipated that the degree of intensification could result in 480,000 sq. m of additional development floorspace, supporting both commercial and residential development. This scale of development could support 9,750 FTE gross jobs and 3,150 new homes. It is

5 Derived by taking an average of employment densities across town centre type land use classes – A1 (excluding retail warehouse), A2,A3,B1a and D2 (budget fitness centre, amusement and entertainment centres and visitor and cultural attractions respectively). Values taken from Employment Density Guide (2015), prepared for Homes & Communities Agency.

6 This attribution factor is based on the increase in highway capacity unlocked by the scheme. Transport modelling demonstrates that highway capacity will increase by 2% as a result of the scheme. WCC have advised that future development in the area is constrained by transport issues. By providing additional highway capacity, the scheme will alleviate transport constraints, meaning a proportionate scale of development can be attributed to the scheme.

7 ONS Regional and Subregional Productivity January 2017 release

8 Housing standards: evidence and research Dwelling size survey (2010), prepared for CABE. Average flat size value is derived by taking an average of different flat types: studio, 1BF,2BF and 3BF.

estimated that a proportion of these impacts could be attributed to the Worcester City Centre Network Efficiency (Axis West East) scheme, amounting to 195 FTE gross jobs, annual gross GVA in the region of £8.75m per annum and 63 new homes.