



Accession Data

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Produced by:

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Central Bedfordshire Council

1. Introduction

- 1.1 Accession Software enables assessment to be made of accessibility for different areas and different population groups. It can use a range of transport modes, including public transport, car, walking and cycling. Accession can either use frequency-based services data, time, or cost and also takes into account the time period during which services are available.
- 1.2 Accession's time and cost maps can help in pin pointing the barriers to accessibility and facilitate the development of alternative solutions.
- 1.3 All the accessibility targets and indicators are now encompassed within the LAA, but still remain in the LTP as their defining document. In this case this indicator measures access to district centres by people using public transport, walking and cycling. The proportion of new residential development within 30 minutes travel time by public transport, walking and cycling to district centres will be measured.
- 1.4 This indicator has been chosen to help reduce congestion by encouraging and monitoring the use of public transport, walking and cycling to access services. Monitoring the modes of travel to access services will also help in the planning and delivery of those services, it also ensures that any new development is located in sustainable locations and ensures that they are accessible by means other than the car.

2 Assessment Parameters and Technical Information

2.1 In order to run a calculation in Accession there are required project components

- Public Transport Networks
- Road Network
- Origin Sets
- Destination Sets

Public Transport Network

2.2 This data set consists of the most up to date public transport service and stop information that is available to Central Bedfordshire Council. This is a combination of Bedfordshire and its surrounding counties public transport information downloaded from the National Public Transport Data Repository (NPTDR).

2.3 This data consists of existing conventional public transport services for Central Bedfordshire and within the surrounding local authority areas, namely Bedford Borough, Luton, Cambridgeshire, Hertfordshire, Buckinghamshire, Milton Keynes, and Northamptonshire. These public transport services typically include buses (both commercially operated and council supported services), coaches, rail travel, and metro travel (i.e. London Underground). These services typically exclude school contract and Demand Responsive Transport Services.

2.4 For the purposes of measuring this indicator and to ensure consistency with figures produced for previous years, only bus (both commercially operated and council supported) services have been included in this case.

Road Network

2.4 The Integrated Transport Network (ITN) has been obtained from Ordnance Survey for Bedfordshire and its surrounding authorities. This data is generally used by Accession to establish accessibility by walking or cycling to destinations or bus stops.

Origin Sets

- 2.5 Origins are a set of points that represent the start of any journey. They form the basis for any type of accessibility calculation and are often selected to represent where people live. The Easting and Northing points of all housing completion sites in Central Bedfordshire from 2008-2009 were used as origin points. In the cases of larger developments, these locations are typically the geographical centre of the development site.

Destination Sets

- 2.6 The destination set contains the end point for the trip and the number of destinations can range from a single destination to hundreds of destinations.
- 2.7 The destination set used for these calculations are based on the Easting and Northing points of Hospitals (with Accident and Emergency facilities), GP Surgeries, local employment sites, retail centres, and Lower, Middle, and Upper Schools.

Time Periods

- 2.9 Accessibility calculations can be assessed for any time period in a day. Knowledge within Central Bedfordshire Councils Transport Policy team, Integrated Public Transport Unit and the Accession calculations generally suggest that few if any locations in Bedfordshire which have an am peak public transport service do not have the opposite service in the pm. With this knowledge only assessments within the am peaks have been assessed.
- 2.10 Accession calculations have been undertaken to assess how accessible key services are to the residents of the housing completion sites in Bedford Borough Council and Central Bedfordshire.

- 2.11 Access to all of the above facilities has been based upon typical time periods when demand for the service is likely to be greatest. This is typically between 7am and 9am on weekdays.
- 2.12 The accessibility was assessed for bus and walking modes. Walking has been included as this is generally the method of transport by which people access the bus stop

Default Values

- 2.13 For the purpose of this assessment, the default values within Accession have been used;
- Walk Speed – 4.8km/hr
 - Straight line walk distance factor – 1.2 metres (to account for walk routes not being direct)
 - Maximum connection distance – 0.8 km (distance to bus stops)
 - Maximum interchange distance of 0.5 km (walk distance to make a public transport connection)
- 2.14 This ensures that the approach to these results is consistent across all areas of the county.

3 **Assumptions**

- 3.1 Accession software has a number of built-in operating assumptions that need to be taken into account when considering the results.
- 3.2 **Choice** – Accession makes an assumption that people will access their local facility (that is the easiest to get too based on the transport modes selected in the options for the calculation). No account is taken of preferential choice to access one facility over another, for example, reflecting the fact that different town centres often have different shops and personal choice. However, the impact of this issue is considered minimal as it is an exercise to represent the availability of any service location, rather than one of preferred choice.
- 3.3 **Buses run on Time** – Accession assumes that buses run exactly to their timetable. This assumption means that connections between services can always be made (if the timetable and walk times allow) and it takes no account of the knock on effect that a delay to one service may have on further connections necessary to complete the journey.
- 3.4 **Buses aren't full** – No account is taken in Accession of bus loadings and the ability for people to physically get on a bus. Accession assumes that if a bus serves a particular route then it will always have the capacity to accommodate people wanting to board the bus.
- 3.4 **Walk to the nearest stop** – Accession assumes that people will walk to the nearest public transport stop from the defined origin point. This is regardless of service quality and time, for example if Bus Stop A is 200 metres away and has a half-hourly service, and Bus Stop B has an hourly service but is 50 metres away, Accession will assume all people will walk to Bus Stop B.
- 3.5 **Walk Time** – As out lined above, Accession assumes a walk time to bus stops that is stipulated in the options before undertaking the calculation. This is then applied to all users of public transport. In reality, user groups walk at different speeds when accessing public transport.

Quality

- 3.6 The Public Transport Data was obtained from the NPTDR. This is an evolving and improving data set. As the suppliers of the data seek to improve the quality,

it is clear that there are changes to services taking place across Bedfordshire which will have an impact on the indicator. The most up to date information available to Central Bedfordshire Council has been used.

- 3.7 The ordnance survey data was assumed to be complete and correct and no checks were made on its accuracy. There is anecdotal evidence of roads that are not connected correctly and of poorly defined lanes, but Ordnance Survey have indicated that they have addressed the most significant problems.