

# Bradford Place Bus Facility Feasibility

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This technical memo has been prepared at the request of Transport for West Midlands and Walsall Council. The scope of work is to undertake a preliminary assessment of a high-level business case for the proposed redevelopment of Bradford Place interchange in Walsall, which may require the compulsory purchase of land to facilitate the scheme's delivery.

## 1.0 Background

The current bus interchange at Bradford Place comprises a series of bus stands on public highway arranged around the civic Cenotaph. Six departure stands are provided in total, with the three on the northern side accommodated within a long continuous shelter, whilst the three south-western stands are individual shelters. An alighting-only stand is also provided at the western end of the northern side.

From bus operator information and recent TfWM surveys, approximately 4.5 million passengers per year use Bradford Place (boarders and alighters) on 18 services provided by five operators with 4,175 departures per week, making the facility one of the regions' more significant transport hubs.

However, the current facility experiences various operational issues such as:

- Highway layout dictates stand arrangement, which is sub-optimal for current levels of service;
- Pedestrian desire lines cut across the facility, leading to incidents and near-misses;
- Footway layout means that passenger facilities are limited, and of a lower quality than provided in St Paul's bus station;
- Bus access to the facility (via Bridgeman Street) can be impacted by vehicles queueing to enter neighbouring car parks (Jerome Retail Park and Saddler Centre), this is particularly an issue on Saturdays and in the lead up to Christmas;
- The highway is restricted to local buses, taxis and for loading, with a taxi rank located near the Cenotaph and loading for some frontages on the south-western side; the need to maintain access for other users means there is no option to make the area bus-only;
- No layover spaces are available for buses, making service regulation difficult. This is particularly so for longer services such as the 4/H/M and 11/13 which serve multiple bus stations en-route and so have to be carefully scheduled in order to ensure that allocated stand slots at each facility are achieved.

The historic importance of the Cenotaph, in terms of its location (built on the site of the crater from a World War One Zeppelin raid, in which the Lady Mayoress was killed) and the Grade II listing of the Cenotaph and the approach steps (separate listings), means that its relocation to make further improvements would not be locally supported.

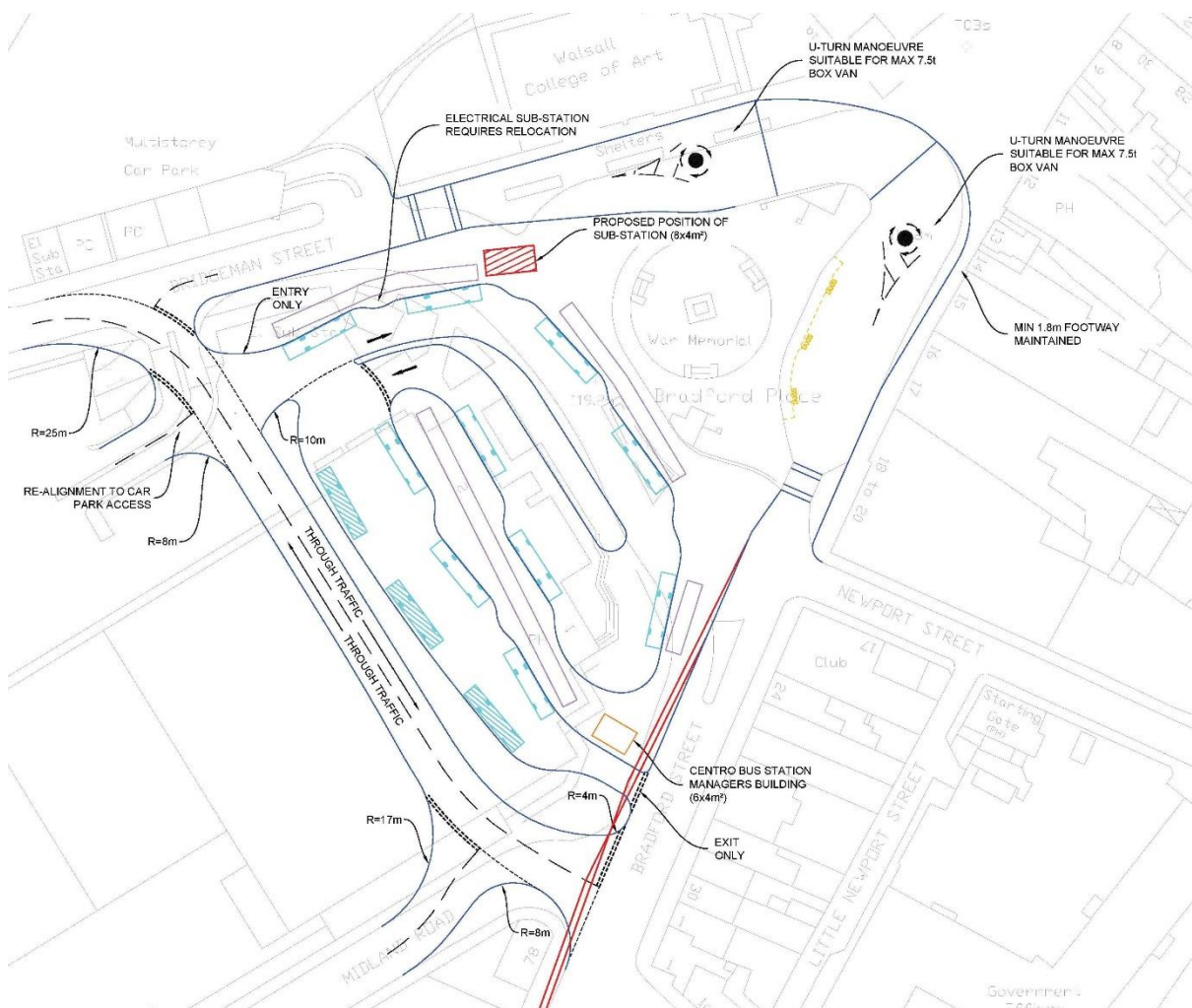
## 2.0 Proposed scheme

Consideration of significant improvements to the Bradford Place interchange have been ongoing for several years. Preliminary and feasibility studies have explored options from completely relocating the facility to another site within the town centre, combining it within an expanded St Paul's bus station, constructing a new facility in the immediate vicinity or making minor improvements to the current arrangement where possible.

The studies have determined that a new facility in the immediate vicinity would be of greatest benefit to the town centre, by providing an improved western gateway to the town centre, reducing bus circulation kilometres, providing a more appropriate setting for the Cenotaph and helping to raise the quality of facilities for bus passengers.

Walsall Council are currently developing an Area Action Plan for Walsall town centre, to support the on-going regeneration of the centre. As part of this Plan it has been suggested that the new Bradford Place facility should form part, particularly in its role of improving the western gateway to the town centre, and making the surrounding area more pleasant for pedestrians through an improved urban realm.

Given the historic importance of the Cenotaph, a new facility would require land to the west of the current facility. The current preferred option was drawn up by AECOM in 2014, and would provide an 'e'-shaped facility with ten departure stands and three layover spaces. The departure stands would be accessible without needing to cross bus movement areas, thereby improving the safety of the bus station.



The indicative layout requires the diversion of Bridgeman Street away from its current alignment in order to accommodate the new bus station whilst maintaining access to the two car parks. Land is

required from the Jerome Retail Park, with an approximate value of £5million. If this land cannot be acquired through agreement, a Compulsory Purchase Order may be required.

### 3.0 Initial high-level business case

In order to determine a high-level business case for the new Bradford Place facility, it is necessary to understand the potential benefits of the scheme. Normally for a highway scheme, these are generally journey time savings for vehicles, with values of time applied to determine the most significant benefit. Other savings, such as reductions in accidents, with their associated costs, or emissions reductions, provide additional benefits.

#### 3.1 Benefits

For a scheme such as that proposed for Bradford Place, the most significant benefits will be experienced by pedestrians/bus passengers. As such, alternative methodologies can be applied to determine these benefits. Two tools have been used to assess the potential benefits of the scheme, the first considers Facility Benefits for Passengers and the second assess the Value of Urban Realm for all users. Note this is a preliminary assessment of a scheme not yet fully worked up.

The Facility Benefits tool provides a monetary value for the facilities in the new interchange, whether they are an enhancement over the current amenities or completely new provision. Stated preference and other techniques have been used to derive the factors, which are then applied to the number of passengers experiencing that benefit. It is assumed that the benefits are experienced by passengers boarding buses in the facility, as they are more likely to spend longer in the bus station and make use of the facilities. Table 1 details the facilities assumed to be within the scheme as part of this preliminary assessment.

Table 1: Facilities within interchange (preliminary assessment)

<b>Staffing</b>	
Staff at the interchange	Extra facilities
<b>Comfort</b>	
Bus shelters providing weather protection	Upgraded
Well lit shelters	Upgraded
Modern seating	Upgraded
A large shelter with large waiting area	Upgraded
<b>Information</b>	
'Real Time' display showing bus status	Upgraded
Direction signs to show where buses depart	Upgraded
Printed timetables at stops	Upgraded
A local area map showing key places	Upgraded
A central information display	Upgraded
A bus network map at each stop	Upgraded
PA system at stops	Upgraded
<b>Interchange</b>	
Easy access to buses at stops	Upgraded
Short wait pick-up/set-down parking	Upgraded
Attractive walk routes to the stops	Upgraded
<b>Safety</b>	
CCTV system covering all stops	Upgraded
Emergency help points at stops	Extra facilities

Considering the proposed scheme for Bradford Place, it has been calculated that a benefit of 26 pence per journey is experienced – this is in 2016 prices and is weighted to take account of the

overall package of the new facility, thereby ensuring that excessive benefits aren't claimed or double-counted. Additional benefits are calculated for new users attracted by the improved facilities where benefits include the carbon savings generated by the abstraction of trips from car.

It has been assumed that the updated facility will generate approximately 5% patronage growth. Using the results of Bus User surveys, it is recorded that 21% of bus passengers have a car at home and could have used it for the journey they've made by bus. Assuming a West Midlands average car speed of 28kph and a 3km average one-way trip length, combined with the two patronage figures it is therefore possible to estimate a saving in car vehicle kilometres due to modal shift, and apply financial values to this saving for carbon reduction, decongestion benefits, infrastructure maintenance savings, local air quality, noise and indirect taxation. Modal shift and carbon reduction are locally sensitive subjects, due to the potential need to introduce a Clean Air Zone.

Over a 60-year appraisal period, these benefits are estimated as approximately:

- £3.02million financial benefits (additional revenue from generated patronage)
- £17.06million passenger benefits from the improved facilities
- £0.98million benefits from modal shift (carbon, decongestion etc)

This gives an initial scheme benefit of £21.06million.

The Valuing Urban Realm Toolkit adopts a similar methodology, applying financial values to the improvements made as part of the scheme, and has been developed by Transport for London to assist with the determination of benefits for schemes such as that proposed for Bradford Place.

It has been assumed that the urban realm improvements will include factors such as higher-quality public space around the Cenotaph and in front of the Globe Building, along with the creation of a new gateway to the town centre and a large new civic space. These benefits are calculated over a 19 year period.

For the preferred option, these benefits are estimated to be approximately £1.53million in total.

Further benefits have been calculated based upon reduced bus operating kilometres which will result in reduced carbon and fuel savings. Based upon the existing provision and the one proposed it is estimated that on average a reduction of 108 metres per service saving approximately 23,500 kilometres per year. It is also assumed that some of the recent accidents in the current facility will be saved due to the improved layout. There have been four slight accidents in the past three years, with this saving then factored by the estimated annual accident growth rate.

Over a 60-year appraisal period, these benefits are estimated to total approximately £3.42million

In summary, scheme benefits have been estimated as (discounted):

- Financial, economic and carbon: £21.06m
- Urban realm: £1.53m
- Additional: £3.42m.

### 3.2 Costs

It is currently estimated that the facility shown above will have a land acquisition cost of approximately £5million, with an estimated capital cost of approximately £5.7million including contingencies. Adding a further £2.3million for design, legal and management fees etc, this brings the total estimated capital cost to **£13.0million**.

For this initial calculation and given the current level of scheme development, an optimism bias figure of 44% has been applied to the estimated £13million capital cost, giving a cost of £18.72million for appraisal purposes.

Other costs are assumed to be:

- Structural replacement every 20 years: £2,000,000

- Five-yearly refurbishment: £100,000
- Annual staffing costs and other light maintenance: £60,000.

Over the 60-year appraisal period, these costs are calculated to be (discounted):

- Capital (land acquisition, construction and periodic refurbishment): £20.85m
- Revenue (annual staff and light maintenance) £1.52m

### 3.3 Appraisal

Using these figures, the following calculation is made:

(,million)	Initial benefits	Including Urban Realm	Including Urban Realm and Additional
Present Value of Benefits:	£21.06	£22.59	£26.00
Present Value of Costs:	£22.37	£22.37	£22.37
Net Present Value:	-£1.31	£0.22	£3.63
<b>Benefit:Cost Ratio</b>	<b>0.94:1</b>	<b>1.01:1</b>	<b>1.16:1</b>

### 4.0 Additional scheme costs and benefits

The initial BCR quoted above are preliminary figures which excludes various other potential costs and benefits. Given the preliminary nature of this scheme's development, many cost and benefit elements have not yet been determined.

Costs not considered above include items such as:

- More detailed assessment of difference in revenue costs
- Additional capital and revenue costs for the urban realm improvements
- Changes in bus operating costs (potentially levying a departure charge or rent for use of a layover bay)
- Implications whether the facility remains as public highway or becomes a private off-street facility

Benefits potentially to include are:

- Value of time benefits due to reduced congestion in the area, for general traffic and buses
- Carbon benefits from reduced congestion
- Noise savings (although an initial assessment determined very few residential properties within 400 metres of the facility)

Once scheme development has progressed to a more detailed stage, a further appraisal assessment can be made to better inform the on-going outline business case.