

# Barnsley Market Gate Pedestrian Bridge

## Technical Note: Review of Revisions to Midland Street Turning Head

**Date:** August 2021  
**Client Name:** Barnsley MBC  
**Document Reference:** WIE13257-107-TN-1-2-3

This document has been prepared and checked in accordance with Waterman Group's IMS (BS EN ISO 9001: 2015, BS EN ISO 14001: 2015 and BS EN ISO 45001:2018)

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## 1. Introduction

### Overview

Waterman Infrastructure and Environment (WIE) was commissioned in 2019 to undertake the structural design of the proposed Market Gate Pedestrian Bridge, which will span over the existing level-crossing at Kendray Street, Barnsley Town Centre.

As part of the design process, WIE has undertaken an Accessibility & Desire-line Assessment which was submitted in August 2019. Since then, there has been a change in design of the Midland Street turning head. Therefore, this technical note aims to provide a:

- Review of the validity of the previous Accessibility & Desire-line Assessment Report with the revisions to the turning head on Midland Street and;
- Review of the implications of the bridge landing point, the turning head area and (any impact to) the level of comfort/customer experience of visitors to the town on the transition between the interchange and the proposed development. This includes an assessment using pedestrian comfort guidance produced by Transport for London.

## Project Overview

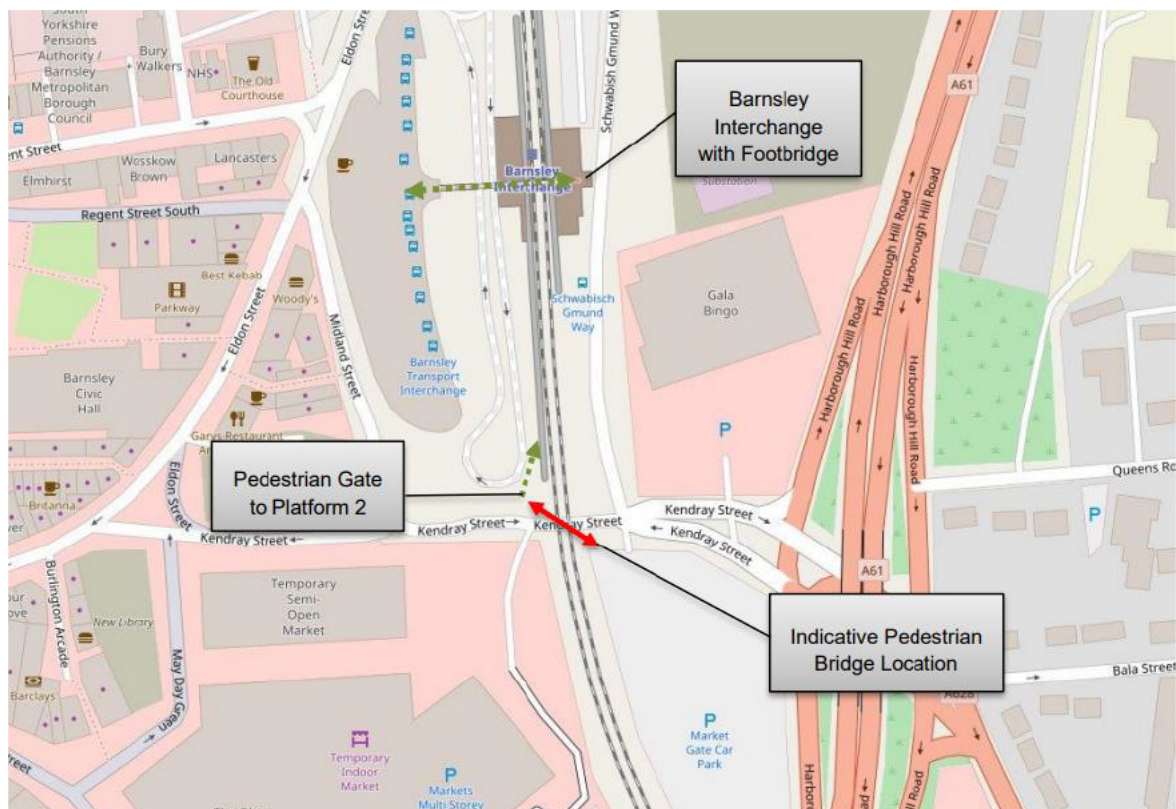
In 2014, Barnsley Metropolitan Borough Council (BMBC) announced a £46 million investment into their town centre regeneration plans. The plans involve the Council taking on the role of developer and committing to a major programme of work including:

- Demolition of the former county council offices and adjacent shops;
- Redesign and redevelopment of the metropolitan centre and indoor market;
- Redevelopment of the Kendray Street site as a leisure and retail centre;
- Creation of a new public square to accommodate a new open market and town centre events;
- Public realm improvements; and
- Work to attract new retail investment.

The site location is shown in **Figure 1** below.

In conjunction with Network Rail, BMBC see the provision of a pedestrian bridge to replace the current level-crossing on Kendray Street as beneficial to the town centre regeneration scheme. The bridge is seen as a landmark feature of the scheme providing a gateway from the existing public transport and parking provisions to the new retail and leisure quarter.

**Figure 1: Site Location**



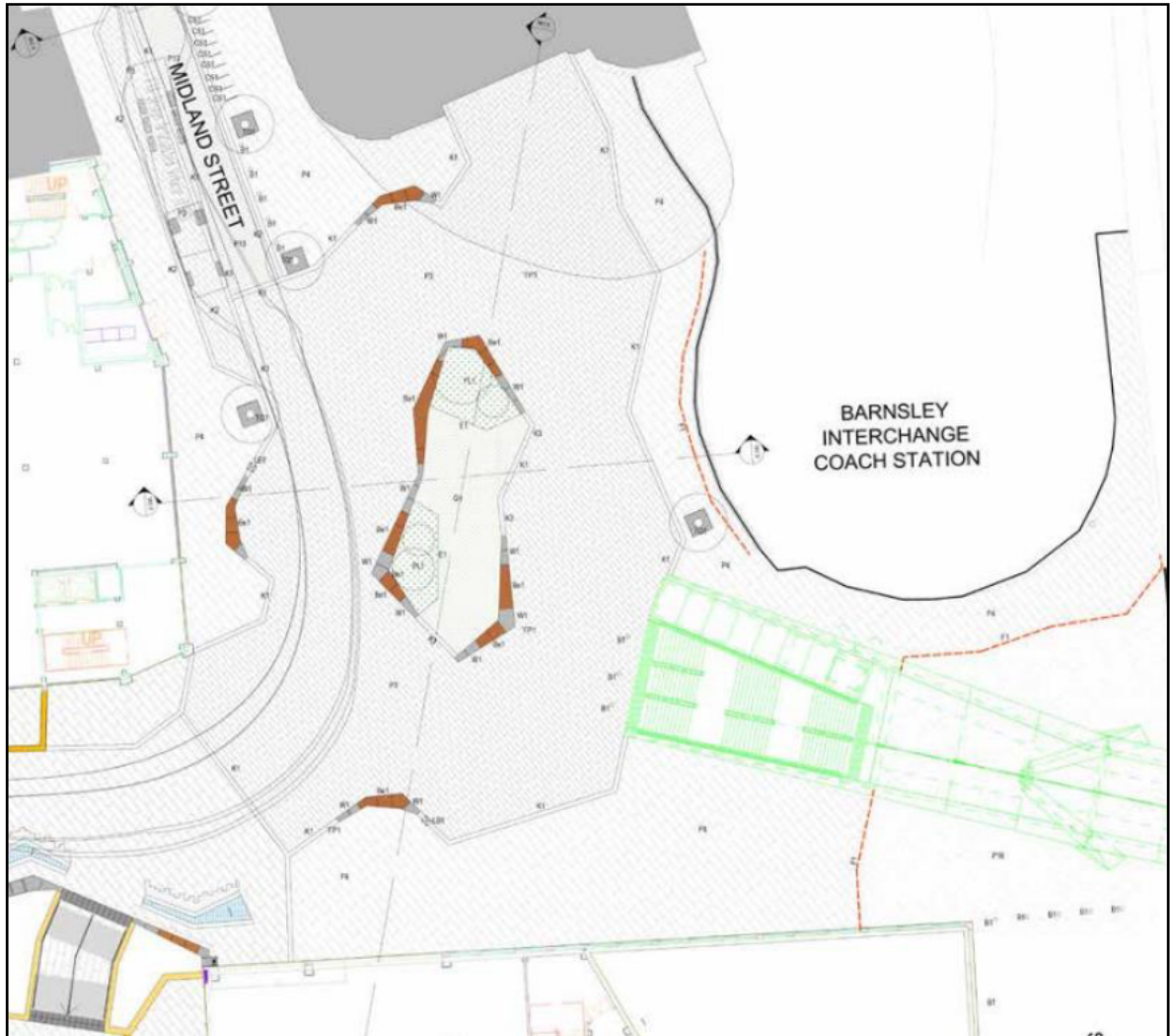
Source: [Openstreetmap.org](https://www.openstreetmap.org)

## 2. Turning Head Revisions along Midland Street

As stated in the IBI Group Design and Access Statement; *“The initial layout for the Interchange area was prepared with consideration given to many of the constraints and issues”*

The initial layout is shown in **Figure 2**.

Figure 2: Initial Midland Street Turning Head



The Design and Access Statement continues to state: *“The space became very important for the town centre as it was an arrival area for people using the Bus and Train connections into the town centre but it is also the point that people first see when arriving into the town centre by foot over the new bridge. From the entrance of the Interchange, views can be seen over the square and into the main square.*

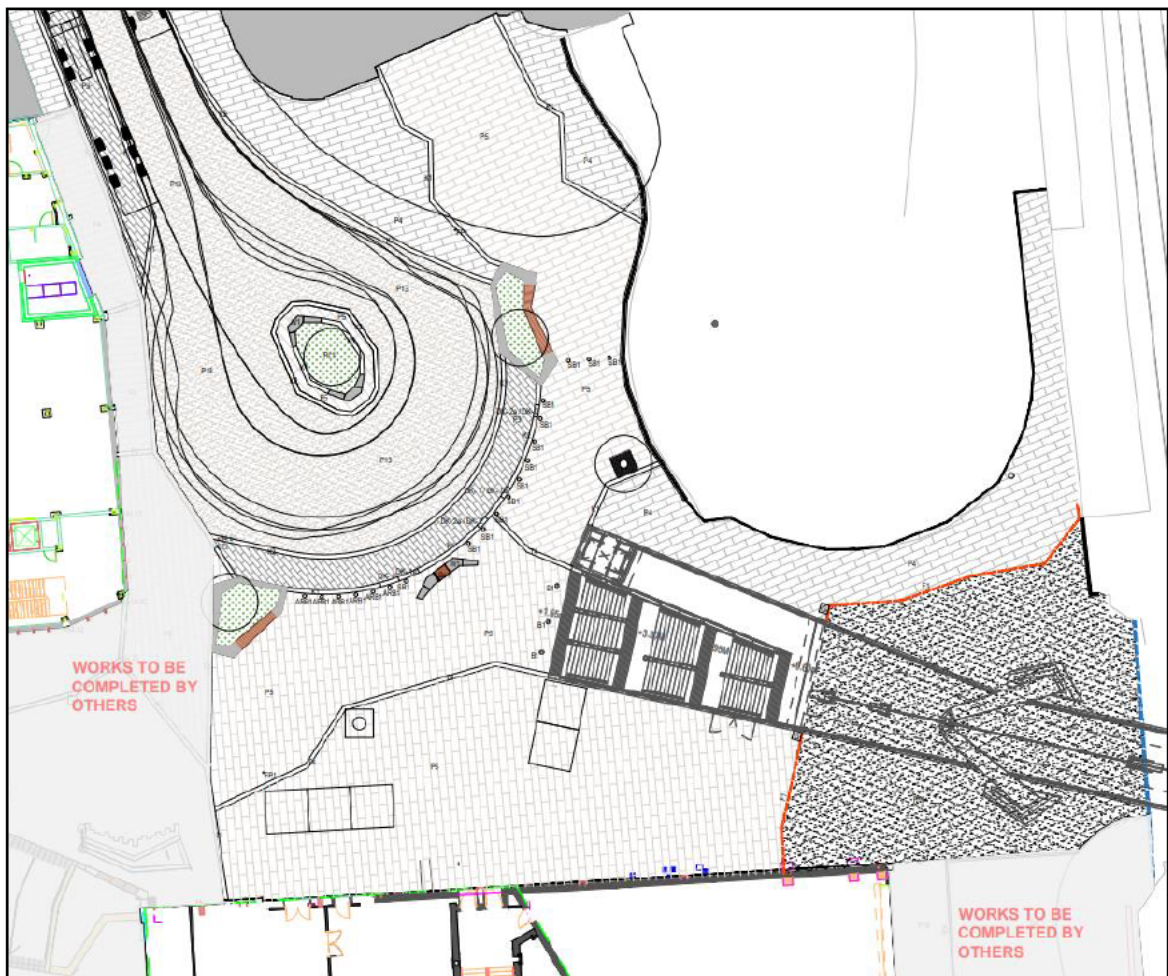
*As part of the wider Better Barnsley Town Centre scheme, it was agreed with the client that as much of the existing vehicular traffic using this space should be removed and that the strategy to help*

*achieve this involved moving the taxi rank from Midland Street onto Eldon Street. All vehicles other than emergency and service vehicles would then be allowed to travel through here. This allowed the whole of Interchange Square to be focused on pedestrians and turned into a shared surface space with high quality materials, bespoke street furniture, planting areas and flush or no kerbs.”*

Taking this information into consideration IBI Group undertook an internal review of the Town Centre Masterplan which led to the decision to change the strategy for vehicular movement along Midland Street in order to omit all movement onto Kendray Street and the Main Square other than emergency vehicles.

The updated layout of Midland Street is illustrated in **Figure 3** below.

**Figure 3: Updated Midland Street Turning Head**



The Design and Access Statement resumes by stating the reasoning for updating the turning head on Midland Street: *“Midland Street was changed to become a two-way street and vehicles were given the space to turn within Interchange Square. At this stage it was discussed that pedestrians should continue to be given priority with high quality materials shown, flush kerbs used to distinguish vehicular zones and help with directional paths. Plenty of bespoke street furniture and market stall space has been retained in this design revision to encourage people into the space. It was felt giving pedestrians’ priority within this option was still achievable as the only vehicles using this area would taxis and service vehicles. This design was also to include a small zone for taxis to use. Including a small number of bays for this purpose was seen as important due to its central location and proximity to the Interchange Coach Station and new bridge.”*

### **3. Review of the Implications of the Bridge Landing Point**

#### **Impacts on the Customers Experience**

Pedestrians have continued to be at the forefront of the design process as the area will continue to be ‘pedestrian friendly.’ The updated design includes:

- Pedestrian only areas, reducing the risk of pedestrian/vehicles conflict;
- Forethought into levels of shade during Spring, Summer and Autumn;
- 2.8m-4m wide footways along the east and west of Midland Street, providing enough space for pedestrian movements;
- Open space allows pedestrians to have visibility for a clear line of sight;
- Clear zones to provide access and egress to nearby buildings;
- Careful thought and consideration to market stall locations;
- Thought-out areas specifically for landscaping, artwork and seating areas, enhancing pedestrian experience;
- Simple adjustments to the paving and trims are possible to help direct pedestrians around the vehicular turning area rather than directly across. This is possible whilst still maintaining a high-quality finish to one of the town’s main arrival spaces; and
- Restriction of vehicular access to the Midland Street turning head to taxis and service vehicles. Moving the taxi rank from Midland Street to Eldon Street. In addition there is provision of a small zone for taxis to use on Midland Street.

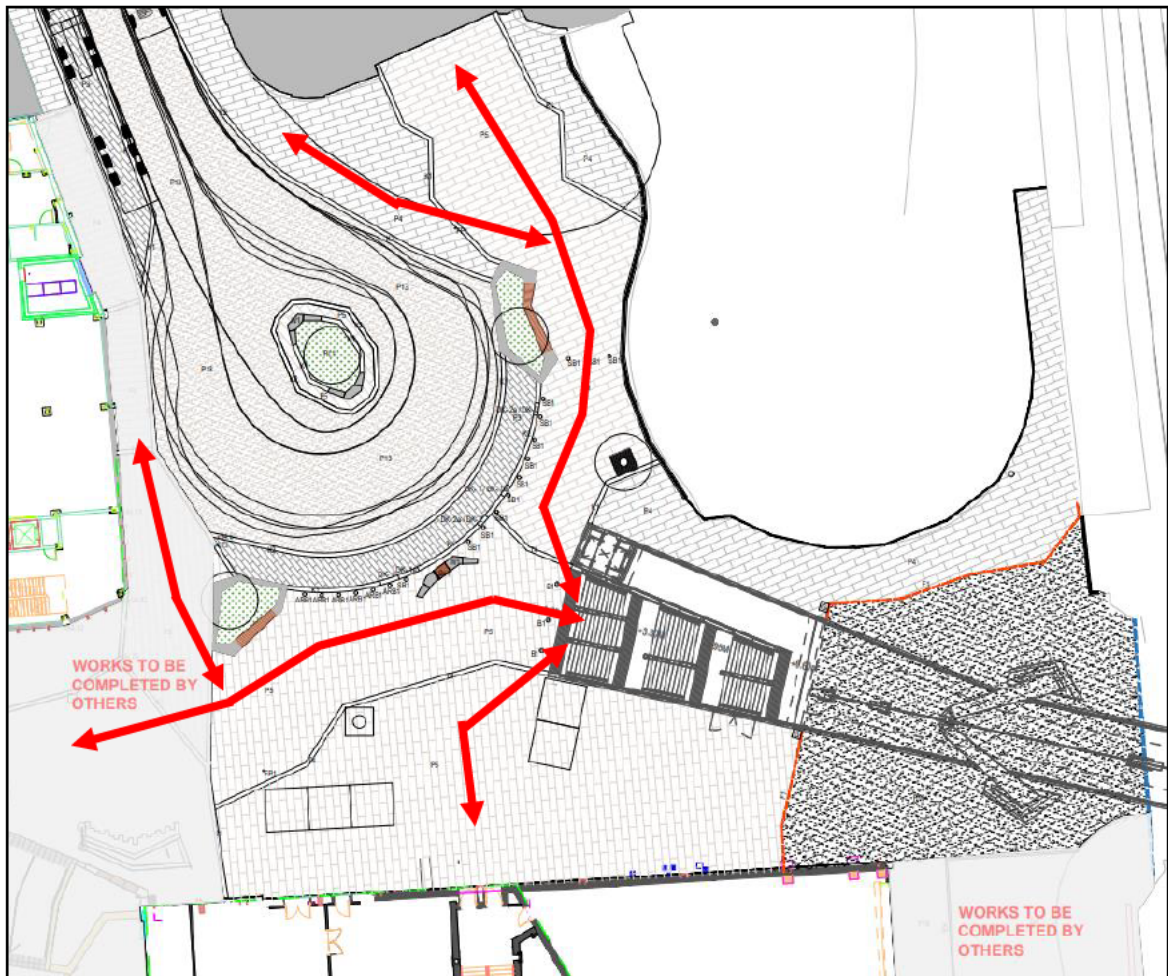
There is limited information however regarding the likely levels of taxi usage of this small zone facility. Should additional inappropriate vehicle parking occur within the vicinity of the revised turning head then this could potentially impact upon the experience of visitors and other users of the area due to the presence of parked vehicles. Access management and control of taxi usage should therefore be provided to ensure that the turning head does not become inappropriately used by motor vehicles

### Review of Pedestrian Movements in Vicinity of Proposed Turning Head

It is considered that the proposed changes continue to facilitate the number of pedestrian movements which were stated in the Accessibility & Desire-line Assessment Report.

Figure 4 shows the main predicted pedestrian movements (red arrows) once works are completed.

Figure 4: Predicted Pedestrian Movements



## 4. Pedestrian Comfort Guidance - Transport for London 2019

To analyse the pedestrian comfort offered by the proposals the Transport for London (TfL) Pedestrian Comfort Guidance approach has been used.

*'The aim of a pedestrian comfort assessment is to understand the pedestrian experience as people walk along the street. Therefore, a number of locations along a street (the site) are assessed to understand the level of comfort, and how this may change due to street furniture or changes in width for example.'*

The survey data contained within the Accessibility & Desire-line Assessment Report indicates that a Saturday match day has the peak level pedestrian crossing flows (1,217). It was found in this survey data that 573 (47%) pedestrians head towards Kendray Street West and 504 (41%) head towards the interchange.

Using this information the TfL pedestrian comfort level calculator has been used and the results are shown in Figure 5 below.

Figure 5: Pedestrian Comfort Level Calculator Results

MAYOR OF LONDON		PEDESTRIAN COMFORT ASSESSMENT: FOOTWAY COMF			
Sign Off		Assessed By		Date	
		Reviewed By		Date	
Summary Info	Location Name	Guidance p 9 Location A	Guidance p 9 Location B	Guidance p 9 Location C	
	Location Type	Full Footway Width	Street Furniture (Single)	Full Footway Width	
	Area Type	High Street	High Street	High Street	
	Average Flow (PPH)	64	64	64	
	Peak Hour Flow (PPH)	1,217	1,217	1,217	
	Total Footway Width	6.8m	6.8m	4.2m	
	Clear Footway Width	6.4m	5m	3.8m	
	Total Street Furniture Impact	0m	0.6m	0m	
Pedestrian Comfort (At peak hour flow levels)	Pedestrian Comfort Level (PCL)	A : 3 ppmm	A : 4 ppmm	A : 5 ppmm	
	Total Width Required for PCL B+	2.10	3.30	2.10	
	Clear Width Required For PCL B+	1.70	1.70	1.70	
Pedestrian Comfort (Average of Maximum Activity)	Pedestrian Comfort Level (PCL)	A+ : 1 ppmm	A+ : 1 ppmm	A+ : 1 ppmm	
	Total Width Required for PCL B+	1.90	3.10	1.90	
	Clear Width Required For PCL B+	1.50	1.50	1.50	

The results of these pedestrian comfort level calculations show that the site has high levels of comfort for pedestrians. The calculated assessments show either A or A+ which is classed as 'comfortable for all areas' with 'plenty of space for people to walk at the speed and the route that they choose.'

There may be a need to reassess pedestrian comfort levels in the future should relevant factors change. The future reassessment may be required if:

- Temporary obstructions such as roadblocks or hoardings are erected
- Significant changes occur in land use or pedestrian activity
- New street furniture is installed such as wayfinding signs

## **5. Summary**

In conclusion, the proposed re-design of the turning head on Midland Street has no material effect on the conclusions within the Accessibility & Desire-line Assessment report on the suitability of the proposals for the bridge users. The results of the pedestrian comfort analysis also indicate that the comfort for pedestrians is more than sufficient unless any changes are made in the future.

For the reasons identified, the revised turning head area should therefore, not reduce the level of comfort / customer experience of visitors to the town on the transition between the interchange and the GWP2 development. It is however recommended that analysis be undertaken regarding provision for and control of taxi usage of this area so that inappropriate taxi usage of the area in the vicinity of the turning head are controlled.

A pedestrian comfort level assessment has been undertaken, based upon TfL guidance. This assessment has identified that the proposals will provide either A or A+ ratings of pedestrian comfort, even at peak pedestrian usage levels.