

Design and Access Statement

Bar Lane / A61 to Lee Lane Active Travel Scheme,
between Athersley North and Royston, Barnsley

On behalf of Barnsley Metropolitan Borough Council, Transport
Department

Date: May 2022

Revision Record					
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1 Context

1.1 Background

At the start of 2019, Sheffield City Region (SCR) adopted a new Transport Strategy setting out the desire for an ambitious and transformational programme of transport infrastructure investment that would unlock the economic potential of the Region. This need was identified due to a predicted 500,000 extra journeys being catered for on the transport system by 2026, which without mitigation, would lead to worsening congestion, less vibrancy in towns and cities, economic restrictions due to businesses holding back on investment and worsening hotspots of poor air quality. Transforming Cities Fund (TCF) was identified as an enabler to put this plan into action.

Subsequently, SCR along with 11 other shortlisted areas were invited by central government to develop a business case for TCF, which was submitted to Department for Transport (DfT) in November 2019. In March 2020, SCR were awarded £166m, with the Mayor allocating half to active travel schemes across the Region.

The objectives which drive SCR's investment plans and have informed the development of the TCF bid include:

- Residents should be able to walk, cycle, drive or use public transport from their home to their nearest town center in no more than 15 minutes;
- By using public or private transport, people should be able to travel within the Sheffield City Region in no more than 30 minutes;
- Journey times to at least four major cities in the North, including Leeds, Manchester, Birmingham and Hull, will take no more than 75 minutes.

As part of this process, Barnsley Metropolitan Borough Council (BMBC) have been allocated funding for a collection of schemes designed to bring improvements to bus priority and active travel infrastructure, to encourage modal shift by making sustainable travel a more attractive and viable option. This will allow the Barnsley economy to grow and reach its full potential whilst tackling long standing economic and health inequalities, whilst also improving air quality and highway safety.

1.2 The A61 Town Centre to Royston via Smithies Lane Active Travel Scheme

The scheme will provide a direct segregated and off-road active travel route between Barnsley town centre and Royston. BMBC also has aspirations to improve bus priority along the A61 itself. This and the Active Travel Link will substantially improve sustainable travel connectivity along the A61 Corridor. Starting at Barnsley town centre, it heads north, running parallel with the A61, crossing the A61 Gyratory, heading to Smithies Lane, Bar Lane to Lee Lane and a spur from Bar Lane to Carlton, linking an existing bridleway and shared cycleway network constructed as part of a Safer Route to Schools project. This link has a corridor length of 3.6km and shown in Figure 1.

BMBC has aspirations to create an uninterrupted active travel link connecting Royston to Goldthorpe via Barnsley town center, to significantly improve and expand east/west connectivity and the *A61 Active Travel Link* forms a key piece of this larger network.

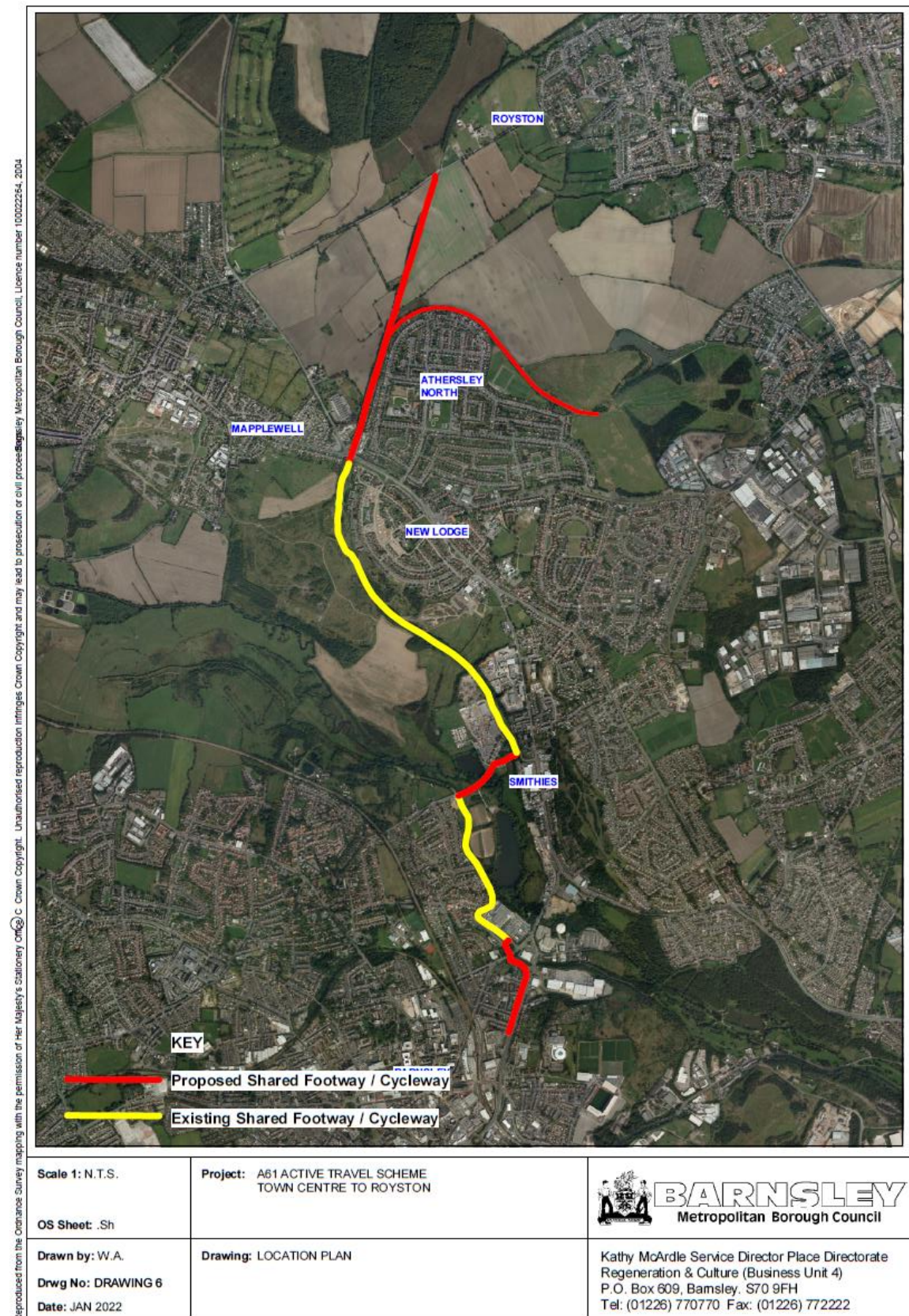


Figure 1: A61 Town Centre to Royston, via Smithies Lane, Active Travel Scheme route.

1.3 The surrounding area

The A61 is one of Barnsley's key strategic transport corridors with a large movement of people and significant public transport flows. It provides cross boundary connectivity into Barnsley town centre, as well as direct connectivity to Wakefield and Leeds. It also connects to the principal towns of Darton and Royston and is the conduit for the A628 and A633 to the eastern side of Barnsley.

The Barnsley Local Plan has indicated significant economic expansion up to 2033, with growth to be located at either end of the A61 corridor. Much of this growth is now coming forward, consisting of the redevelopment of Barnsley town centre and significant housing growth in Royston. Without mitigation, congestion levels on the A61 can only worsen leading to further declines in journey times and reliability to the detriment of connectivity. This reduction in connectivity will have an economic impact by restricting access to employment opportunities and restricting the area's economic potential. The proposed active travel link therefore seeks to ensure that the A61 corridor remains competitive and will allow future growth arising from changes in housing and redevelopment across the area to be facilitated. This will support BMBC's wider economic ambitions for the district by boosting productivity and increasing living standards.

Barnsley also suffers from high levels of social exclusion and poor health, resulting from historically high levels of inactivity and obesity. The provision of an active travel link aims to improve connectivity to social facilities, encourage the uptake of physical activity and remove one of the main barriers that residents have for participating in active travel. When combined with travel planning and non-capital interventions, provided by the Barnsley Active Travel Hub, the aim is to promote better inclusion and help alleviate poor health by encouraging better levels of physical activity.

The need for the scheme is also determined by environmental considerations. In September 2019 BMBC declared a Climate Emergency, which committed the Council to be net carbon zero by 2040, with the borough by 2045. Transport currently contributes to 26 % of all carbon emissions in Barnsley, which needs to be reduced if these targets are to be met.

1.4 Public consultation

Public engagement events for the scheme were held at the following venues:

- Honeywell Community Centre, S71 1PZ, on 10th March 2022;
- Athersley Roundhouse Library, S71 3AE, on 14th March 2022



Figure 3: Image, looking south, of the A61 highway bridge arch infill and formed incline.

The site runs for approximately 750m within a cutting, at the southern end, transitioning to a similar length of raised embankment before it interfaces with Lee Lane. The cutting has heavily vegetated steep banking, to the immediate east and west of the existing track (see Figure 4). The disused railway track width is approximately 6m to 8m for the entire route, with the existing unsurfaced, 2m to 3m width footpath bordered by ground vegetation and trees.



Figure 4: View looking north within the cutting.

There are significant issues with standing water in the cutting area (see Figure 5), caused by a combination of existing drainage routes being cut off by the partial infill of the bridge at Wakefield Road, A61, and run off from adjacent land. Brownfield land to the west of the cutting has been identified as a significant contributor to flooding issues.



Figure 5: Typical boggy conditions, looking north within the cutting.

North of the cutting, the site is atop a raised embankment for approximately 750m. Ground vegetation and trees cover the track adjacent to the existing 2m to 3m width unsurfaced footpath (see Figure 6).



Figure 6: View of the route on top of the raised embankment, looking south.

3 Design Development

The design options have been discussed in principle and signed off by key internal stakeholders, representatives from the Sheffield City Region bid team and, where workable, designs are in keeping with DfT guidance on shared use routes and with Barnsley Metropolitan Borough Council's Standard Details regarding public bridleways.

All of the proposed design principals have combined our findings from site visits, traffic surveys and DfT criteria. The locations identified have been selected on the basis that they satisfy DfT guidance, are in locations that have a strong desire line, will be reasonably well used, will reduce risk of collisions, and encourages walking and cycling as a preferred mode of travel. The length of the scheme from Bar Lane to Lee Lane will also facilitate horse riding.

It is initially forecast that a scheme from Bar Lane to Lee Lane would take approximately 16 to 20 weeks to construct, with restrictions to clearance works around bird nesting season.

3.1 Constraints

3.1.1 Ground conditions

With a likelihood of contamination associated with previous land use of the adjacent brownfield site to the west of the cutting (highlighted in a South Yorkshire Mining Advisory Service report for the site), site investigations were conducted by Abbeydale BEC, with 17 exploratory window sample cores taken to confirm ground conditions across the site.

Sample locations and depths took account of proposed finished ground levels, post-development, and the likely source of potential contamination and receptors. As part of the scope of investigations, samples of surface water from the adjacent brownfield site were also taken for chemical analysis, during the initial ground investigation and again during post-investigation monitoring.

Soil chemical testing indicated that all Generic Quantitative Risk Assessment values are below current threshold values for a public open space land use scenario and are unlikely to pose a significant risk to future receptors. Soil hydrocarbon testing results found all levels are below current Suitable 4 Use Levels for a public open space land use scenario and likewise not of potential concern for future receptors. Water sampling of surface water draining into the cutting from the adjacent brownfield site found that the water posed a very low risk to future receptors. Ground gas investigation works were undertaken and concluded that the nature of the scheme would enable any ground gases to naturally ventilate, with no receptors affected.

Full details of the findings are available in the Phase 2 Ground Investigation Report, which has been included with this application.

3.1.2 Ecology and biodiversity

A Preliminary Ecological Appraisal (PEA), including a site walkover, was undertaken by Brooks Ecological Ltd, in November 2021. The Site was found to support common and widespread habitats, though the large amount of broadleaved woodland present along the disused railway line led to the site overall assessed as being of moderate ecological value.

The site has been assessed as having a Biodiversity Unit score of 28.21 Habitat Units. The proposal will need to consider the NPPF hierarchy of Avoid-Mitigate-Compensate in minimising any loss of biodiversity. In line with the Environment Act, the project should deliver gains in

biodiversity. Due to the nature of the proposal, on-site gain in biodiversity is unlikely to be achieved and off-site contributions will be required.

The planning proposal will be supported by a Construction Environmental Management Plan (Biodiversity) and a Biodiversity Management Plan, included with this application.

In line with the recommendations of the PEA, a bat roost suitability assessment survey will be undertaken on trees identified as being subject to pruning works or removal. A pre-works check for badgers will also be undertaken.

3.1.3 Flood risk

The site area, within the cutting, is generally found to be boggy, with a surface water flow path entering the cutting from an adjacent brownfield site (former William Freeman factory site). A number of surface water drains and ditches have been identified within the site. However, the majority of these appear to be filled or to have been severed during past works to increase ground levels at, and immediately south of, the A61 highway bridge. The existing site drainage therefore no longer functions.

To mitigate on-site flooding issues, the scheme includes the installation of a 325m length swale / detention ditch along the side of the shared surfacing, to store the 1 in 100 year, 6 hour runoff volume from the site and adjacent land and discharge at a suitable rate to a watercourse.

A Flood Risk Assessment report is included with this application.

3.1.4 Arboricultural

The dismantled railway between Bar Lane, A61, and Lee Lane contains an abundance of trees, as can be seen in figures 3 to 6. It was expected that a number of these trees would be affected by the works so an arboricultural survey was commissioned and undertaken by AWA Tree Consultants in January 2022.

It was found that, to date, no trees are protected by a Tree Preservation Order or are located within a Conservation Area. Within and adjacent to the working area, the survey revealed 185 items of woody vegetation, comprised of 162 individual trees and 23 groups of trees or shrubs or hedges. These trees were visually assessed, plotted on an ordnance survey plan and assigned a retention category.

To assess the impact of the proposed works on the identified trees, AWA Tree Consultants subsequently produced an arboricultural impact assessment, detailing trees that will require felling, pruning and coppicing. In addition, an arboricultural method statement was produced, detailing protective fencing specifications and construction methods to be used close to the retained trees.

An Arboricultural Report, Arboricultural Impact Assessment and Arboricultural Method Statement are included with this application.

4 The Design

4.1 Amount, layout and scale

The proposal is to construct a 1600m long bridleway including a 3m wide surface, with adjacent soft verges of up to 1m width. To achieve an inclusive surface geometry and to reduce the risk of flooding, volumes of cut and fill will be required:

- The amount of fill volume required to provide for suitable surface inclines, atop raised embankments, and sustainable drainage features, is estimated to be 2120m³
- The amount of excavation required to form sustainable drainage and surface gradients is estimated to be 760m³.

With as much of the excavated material being reused on site as possible, we are looking at an estimated 1360m³ of material being imported to site.

4.2 Landscaping

Ground vegetation and trees are to be cleared, pruned and/or felled, either side of the proposed shared route, to create up to a 1.0m wide verge, allowing clear sight lines along the route and creating an increased feeling of space. An arboricultural impact assessment, undertaken by AWA Tree Consultants, identified trees that require removal, pruning and coppicing to allow for the works. Arboricultural reporting is included in this application.

There is a considerable amount of fly tipped debris along the length of the cutting, which will be removed as part of the scheme.

The untidy and informal paths/desire lines that currently traverse the cutting embankments are to be cultivated and planted with hawthorn.

4.3 Appearance

The 3m wide surface is to be formed using a compacted 6mm to dust aggregate, founded on a base of recycled road planings. The construction will provide a solid, hardwearing surface, while still maintaining a visually softer appearance to blend in more comfortably with the natural surroundings. An example of a similar surface is shown in Figure 7.



Figure 7: Bridleway construction example on the TPT at Elsecar, surfaced with 6mm to dust aggregate.

5 Access

The intention from the start of this project has been to encourage greater use of the dismantled railway line. To increase accessibility to all legitimate users, the steep gradients at the Wakefield Road end of the route are to be reprofiled. Head room beneath the arch of the A61 highway bridge is to be increased, to allow for horse riding and to introduce more light into the area. Gradients throughout the rest of the route are to be adjusted to allow for inclusive use, with vegetation cleared and sustainable drainage installed to provide suitable widths, site lines and dry conditions.

5.1 Gradients

Ground levels were found to have been raised by over 4m at the southern end of the route, with an additional 2m+ infill beneath the arch of the A61 highway bridge. Local gradients are currently too steep for inclusive access. Embankments are proposed between the existing raised areas to form suitable gradients for the proposed bridleway. Horizontal lengths of 5m to 10m are proposed between inclines to create resting areas, in accordance with current design guidance (see Figure 8). Gradients throughout the rest of the route are to be reprofiled to align with current design guidance.

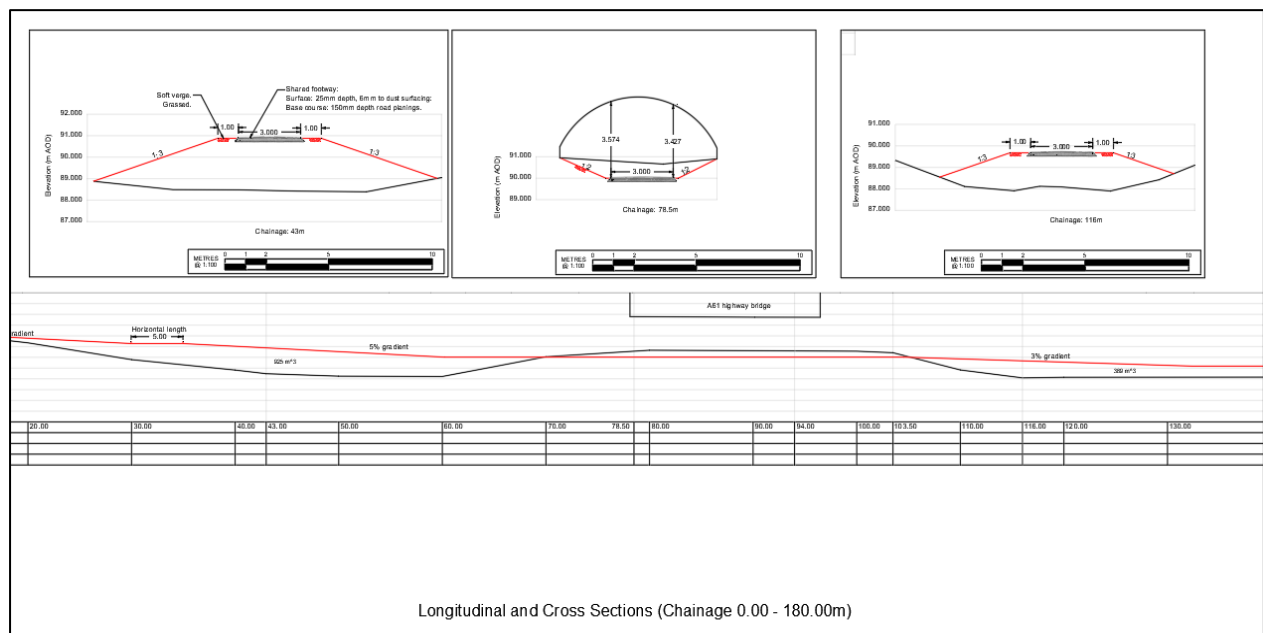


Figure 8: Sections of the southern end design geometry, to allow for inclusive access.

5.2 Shared use

Studies have shown that in most cases a shared surface with no demarcation between pedestrian/cycle/wheelchair users leads to least conflict between different users in all but the most heavily used urban routes. At the specified width of 3.0m this is in line with Sustrans guidance for non-segregated cycleways and provides space for various groups to pass each other. By maintaining up to 1.0m verge either side, adequate space is maintained between the surfaced path and adjacent vegetation and embankment slopes.

5.3 Access restrictions

The Council's Public Right of Way team and the Local Access Forum were consulted to gain better understanding of access control requirements for the route. Both appreciated the concerns of Councillors, regarding restricting illegal access. However, they were aware of the

practicalities of using a route with access controls. A range of public access control options were considered, with the favoured agreed options being:

- A double horse step stile with K frame next to it OR
- Wide staggered barriers accessible by all bridleway user groups.

It was also highlighted that access for maintenance vehicles will be required, preferably at both ends, to allow for vegetation and tree management, swale maintenance and National Grid maintenance operations. There are existing public and vehicle access gates at the southern end of the route, off Bar Lane. Additional vehicle access arrangements, including a new gate, will be incorporated into the design, at the Lee Lane entrance.

The favoured and required access control arrangements, for both public and maintenance vehicles, are to be incorporated into the design at the Lee Lane entrance. Current design guidance and best practice will be followed in regard to the provision of suitable holding areas, surfacing, stile and barrier design for all anticipated users.