

**A628 DODWORTH ROAD / BROADWAY
JUNCTION IMPROVEMENT
DESIGN & ACCESS STATEMENT**



BARNSLEY
Metropolitan Borough Council

2018

Introduction

This design and access statement is submitted in support of the application for planning permission to promote better quality and more sustainable design. It is proposed to construct a new signalised gyratory roundabout with improvements to the existing Dodworth Road / Broadway / Pogmoor Road junction.

The site is located to the west of Barnsley Town Centre close to M1 J37.

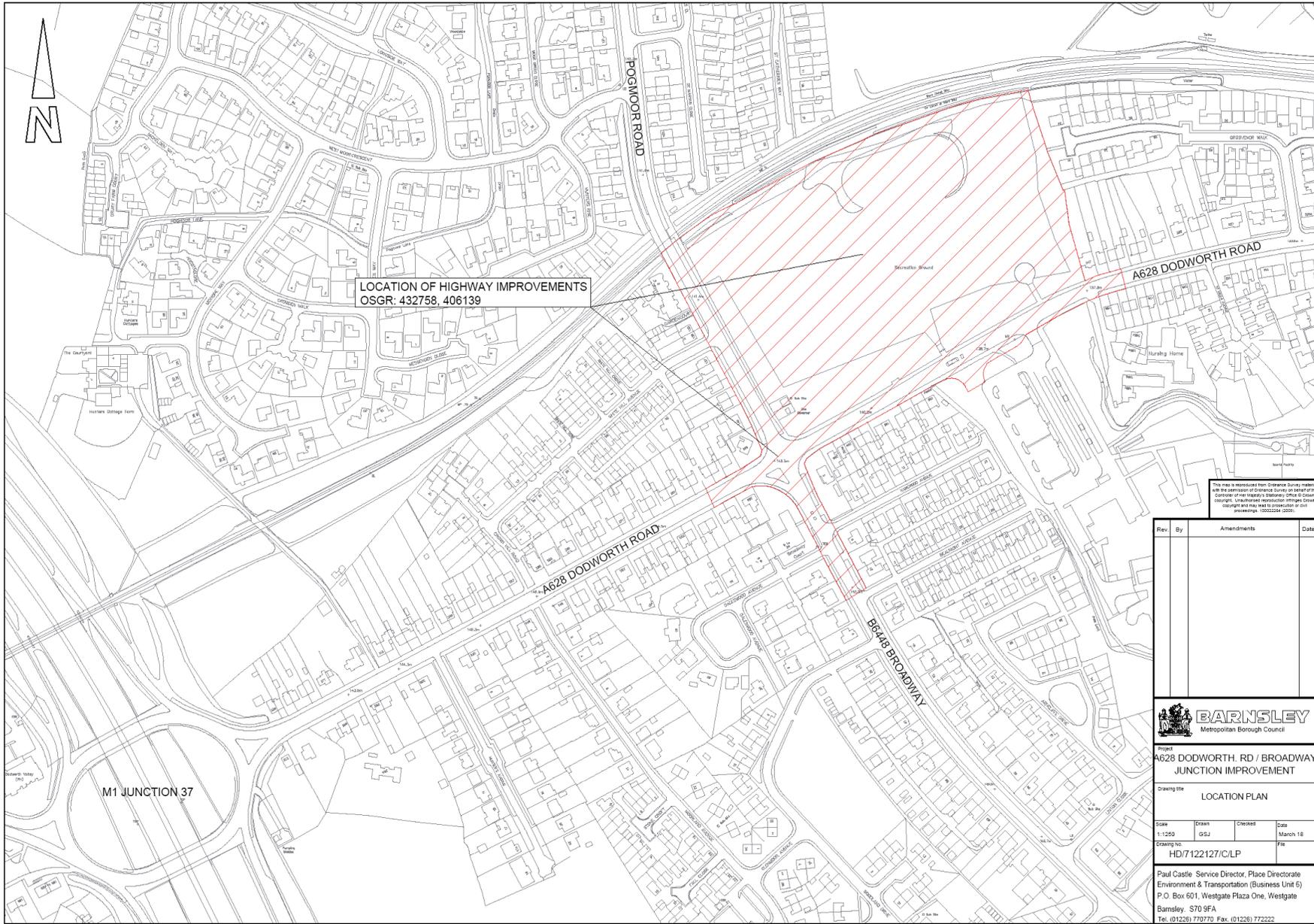
The Planning Application covers an area of 6 hectares.

Context and Site Use

The location of the site is approximately 1.1 miles west of Barnsley Town Centre, M1 J37 lies a further 500m to the west of the application site as drawing Fig.1. The scheme is to be constructed on land situated adjacent to Pogmoor Road and Dodworth Road. The area of land is currently owned by BMBC and is known as Penny Pie Park. The sites past uses have been recorded as Penny Pie Colliery circa 1893. Onwards from this date the site was occupied by a brick works which was located against the northern site boundary. Clay pits were also present. OS maps of 1956 show the beginning of the closure of the brickworks and by 1960 maps show the associated buildings of the brickworks having been removed. The claypits were then understood to have been backfilled with domestic waste and this was confirmed in the mining report from SYMAS. From 1969 an electricity substation is shown near the existing cross roads and in 1978 a model railway is shown towards the north of the site with a few buildings adjacent. On the 1991 map the site has trees located along the boundary to Pogmoor Road & Dodworth Road. The map of 2000 no longer shows the model railway.

A Geotechnical desk top study Report has been produced for the site and has been submitted with this planning application.

The site boundary to the north is demarcated by a Network Rail fence to the Barnsley to Huddersfield railway line and mature planted trees and shrubs. The southern boundary is the A628 Dodworth Road, to the west, the boundary is Pogmoor Road. The eastern boundary is the edge of the properties on Dodworth Road and Grosvenor Walk.



Rev.	By	Amendments	Date

BARNSELEY
Metropolitan Borough Council

Project
**A628 DODWORTH RD / BROADWAY
JUNCTION IMPROVEMENT**

Drawing title
LOCATION PLAN

Scale	Drawn	Checked	Date
1:1250	GSJ		March 16
Drawing No.	File		
HD/7122127/C/LP			

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Fig.1

Ecology

A Preliminary Ecology Appraisal has been carried out and identified a requirement for a Bat survey to be undertaken. The survey has been carried out in accordance with recommendations and findings included with the Ecology report.

The Preliminary Ecology Appraisal is submitted with the Planning Application.

The value and sensitivity of ecological features present on site were determined based on the guidance in 'Guidelines on Ecological Impact assessment' (IEEM, 2006)

The Design of the Scheme

The A628 Dodworth Road leading from Junction 37 of the M1 motorway to the Barnsley town centre is one of the key radial routes within the borough. Overtime, both the population of the borough and levels of car ownership have increased, meaning that capacity of the road, particularly at peak times has declined.

In response to this, there have been a number of incremental measures implemented to accommodate traffic growth within the confines of the existing highway network. In 2006 the Dodworth by-pass was constructed to the west of the M1 motorway and in 2015 improvements were carried out to the M1 Junction 37 gyratory which included the signalisation of the M1 Junction 37 gyratory and the introduction of additional lanes on some of the approaches. These previous improvements have yielded significant benefits including further improvement of the Air Quality Management Area (AQMA) that existed within Dodworth by reducing queuing and improving journey times relative to what they would have been. In turn they have also helped to keep the section of the M1 close to junction 37 free flowing.

The section of Dodworth Road that has proven to be more difficult to address in respect of congestion has been the crossroad junction with Broadway and Pogmoor Road. The focus has been on improving the operation of the traffic signals so that they are able to detect which approaches have the longest queues and increase the amount of green time allocated accordingly. The traffic signals are operating at full capacity, and regrettably, nothing more can be done within the confines of the existing highway to improve the efficiency of this signal controlled junction further, to address current congestion level and capacity constraints within an existing AQMA. Therefore a long term solution is required that will provide sufficient capacity to ensure that the current and future growth aspirations of the borough can be accommodated.

Barnsley Metropolitan Borough Council commissioned AECOM transport consultants to evaluate a number of options to relieve traffic congestion and promote better economic regeneration access and improve air quality. Below is a summary of options evaluated by AECOM

Options evaluated (See AECOM Transport Assessment in Volume 2, Appendix 1:-

Initial options assessed by AECOM in liaison with Barnsley MBC

Option A – roundabout between Broadway and Horizon Community College, diverted Pogmoor Road (16 variants)

Option B – existing crossroads with left turn flares (4 variants)

Option C – roundabout with Horizon Community College diverted Pogmoor Road (8 variants)

Option D – roundabout to replace the existing crossroads

Option E – gyratory with a diverted Pogmoor Road

Option F – Left turn flare from Dodworth Road (West) into Pogmoor

Additional options assessed

Option C Variant 7 = Signalised crossroads with free flow left turn

Option C Variant 8 = Signalised crossroads with alternative alignment for free flow left turn Option C

Variant 9 = Elongated signalised through-about with cut through from Pogmoor to Dodworth Road WB

Option C Variant 10 = Signalised roundabout without at-grade pedestrian facilities (replaced by footbridges)

Option C Variant 11 = Elongated signalised roundabout

Final assessments were based upon the most promising options and additional Option G

Option C V3 (signalised roundabout with at grade pedestrian facilities)

Option 9 removal of peds not considered worthwhile

Option C V6 (signalised crossroads)

Option 7 free flow left no additional benefit

Option C V11 (elongated signalised roundabout)

Improved performance over Option 10 (through about)

Option G (gyratory around the park)

New option developed in liaison with Barnsley MBC

All options were modelled by BMBC's Transport Consultant AECOM and success was determined by the capacity of the new junction to accommodate existing and development generated traffic and also on the modelled journey times and delay data for current and future growth years.

Options G and C v6 have the greatest capacity and journey time benefits

Option G predicted the following compared to Option C V6:

- Lower journey times
- Higher link flows
- Lower delays
- Similar latent demand

Design Principles:

The proposed scheme, which is the subject of this Planning Application will involve the provision of an elongated signalised gyratory roundabout encompassing the existing A628 Dodworth Road / Broadway / Pogmoor Road Junction.

Closing off of the Dodworth Road end of Pogmoor Road with the creation of a new access to serve Whitehill Avenue and Pogmoor Road properties fronting onto the closed section of Pogmoor Road.

The formation of a new access to Horizon Community College under signal control.

A key consideration during the design process was the need to minimise disruption to the existing highway network during the schemes phased construction.

All footways have been designed on the basis of shared usage in order to comply with guidance within Local Transport Note 2/08.

The proposed layout is shown on drawing HD/ 7122127/C/1 submitted as part of the planning application.

The Scheme has been designed in accordance with the D.f.T. Design Manual for Roads and Bridges. It is proposed that the new gyratory will be constructed to current and council standards and will be surfaced with bituminous material. Combined kerb drainage units and road gullies will be incorporated to deal with the surface water run off and will be connected to an attenuated drainage system before discharge to the wider drainage network. New street lighting will be provided in accordance with latest standards with consideration to the sensitivity of the area reducing light pollution along with new traffic signals, traffic signs and road markings.

These proposals form part of a larger traffic strategy to reduce journey times, and reduce traffic congestion at the existing Dodworth Road / Broadway / Pogmoor Road junction and to provide additional capacity in the highway network for future development.

A copy of the Transport Assessment is included in Volume 2, Appendix 1 of the planning application package.

The area of Penny Pie Park, although there will be significant impact to the park area, the proposed scheme provides opportunity to enhance existing facilities, improve access to the park.

A copy of the Green Space Appraisal exercise is included in Volume 2, Appendix 9 of the Planning Submission.

Access

The majority of the site falls within the existing Penny Pie Park which has limited vehicle access points off both A628 Dodworth Road and Pogmoor Road mainly for maintenance purposes. There is also an existing entrance for the air ambulance site currently situated within the park.

The Park is also used as an overspill car park at times along its western boundary.

Pedestrian access can be gained from several access points, although a knee rail fence runs along the A628 Dodworth Road side of the park.

New access to Penny Pie Park will be created as part of the proposed works where required for both vehicles, for grounds maintenance purposes, and pedestrians. The air ambulance point shall also be relocated as part of the proposals.

The scheme will require alteration to the existing junction of White Hill Avenue to accommodate the proposed works.

Localised widening of the existing carriageway from Broadway will also be carried out to provide wider approach lanes to the junction.

A new improved access to Horizon Community College will also be created and controlled by traffic signals.

Conclusion

The proposals which are the subject of the planning application will provide efficient traffic management thereby allowing vehicles travelling to all routes to negotiate the junction with minimum delay and with significant reduction in journey times.