

**Proposed Residential Development
321 Hough Lane, Wombwell,
Barnsley**

Transport Statement

September 2017



FAIRHURST

CONTROL SHEET

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1 Introduction

1.1 General

1.1.1 This Transport Statement (TS) has been prepared on behalf of Balmoral Group Holdings Ltd in support of an outline planning application for a change of use of land at 321 Hough Lane, Wombwell from employment to residential development. The site is presently employment land extending to 1.485 hectares providing industrial uses which comprises a range of industrial, workshop and warehouse buildings with ancillary offices and areas of open storage.

1.1.2 Presently, the site comprises three industrial units which extend to approximately 2,753m², with an adjacent office accommodation of 480.85m². The proposal is for the development of circa 45 dwellings on the site.

1.2 Site Location

1.2.1 The site is located to the south of the B6096 Hough Lane, Wombwell, Barnsley. The site's location is shown in Figure 1-1.

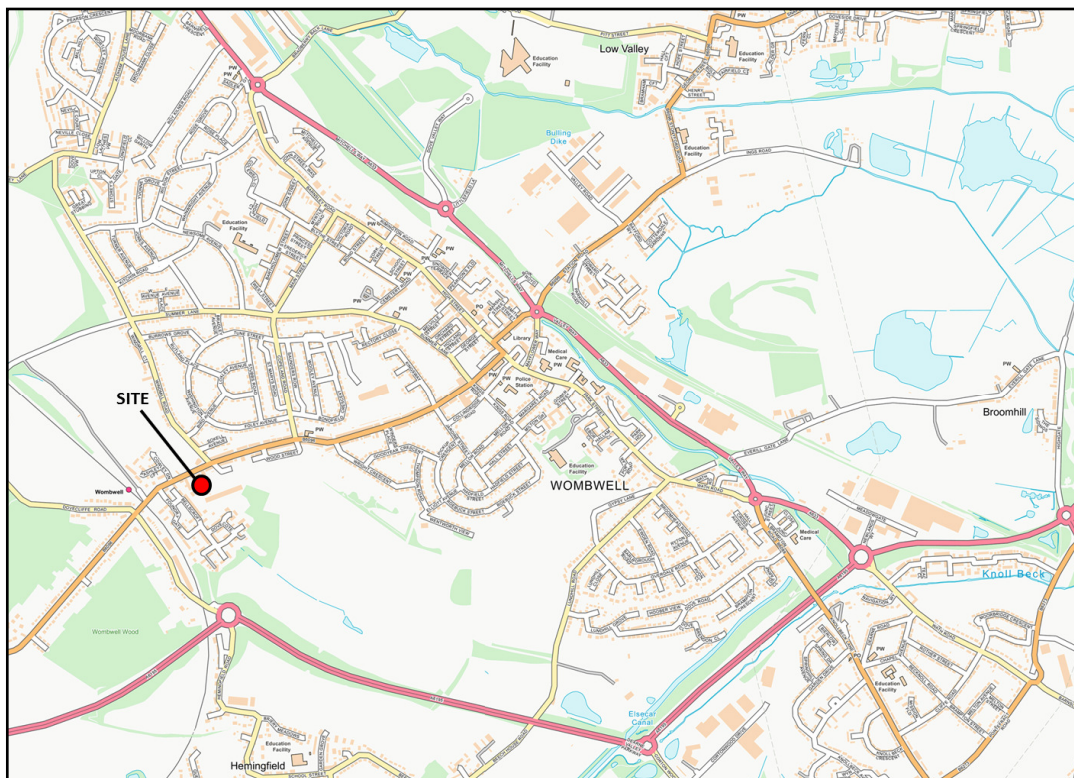


Figure 1-1: Site Location

1.2.2 The site is situated on the western edge of the Wombwell settlement. Presently, the adjoining uses are predominantly residential with recent developments to the south and south-west adding to the existing housing to the north and north-east. The proposal represents a natural expansion of an existing residential neighbourhood.

1.3 Correspondence

1.3.1 The proposal has been subject to pre-application consultation with Barnsley Metropolitan Borough Council (BMBC), reference number 2016/ENQ/00020. In relation to Highway, the following comments were provided:

- *'Visibility splays, having the dimensions 2.4m x 70m, should be safeguarded at the access/egress such that there is no obstruction to visibility and forming part of the adopted highway';*
- *'Forward visibility should be assessed';* and
- *'The centre line hatching should be extended from the Bellscroft development, and may have to incorporate a right turn pocket or fat lane to accommodate right turning traffic into the proposed development'.*

1.3.2 These comments have been considered in this report.

1.3.3 Additionally, a Scoping Proposal was submitted by email to BMBC outlining matters proposed for consideration and trip generation for the existing site uses and proposed development. Scoping correspondence is contained within Appendix A.

2 Planning Policy Context

2.1 National Planning Policy

- 2.1.1 The National Planning Policy Framework (NPPF) set out the Government's planning policies for England and how these are expected to be applied. The NPPF supersedes a number of documents, including Planning Policy Guidance 13: Transport.
- 2.1.2 At paragraph 14 it is stated that: *'At the heart of the National Planning Policy Framework is a presumption in favour of sustainable development, which should be seen as a golden thread running through both plan-making and decision-taking.'*
- 2.1.3 Section 4 of NPPF outlines the Government's planning policies for promoting sustainable transport. The section begins at paragraph 29, which states: *'Transport policies have an important role to play in facilitating sustainable development but also in contributing to wider sustainability and health objectives. Smarter use of technologies can reduce the need to travel. The transport system needs to be balanced in favour of sustainable transport modes, giving people a real choice about how they travel. However, the Government recognises that different policies and measures will be required in different communities and opportunities to maximise sustainable transport solutions will vary from urban to rural areas.'*
- 2.1.4 Paragraph 32 states that; *'All developments that generate significant amounts of movement should be supported by a Transport Statement or Transport Assessment. Plans and decisions should take account of whether:*
- *the opportunities for sustainable transport modes have been taken up depending on the nature and location of the site, to reduce the need for major transport infrastructure;*
 - *safe and suitable access to the site can be achieved for all people; and*
 - *improvements can be undertaken within the transport network that cost effectively limit the significant impacts of the development. Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe'.*
- 2.1.5 In accordance with the Planning Practice Guidance *'Transport evidence bases in plan making and decision taking'* this Transport Statement addresses key issues including:
1. assess the existing situation and likely generation of trips over time by all modes and the impact on the locality in economic, social and environmental terms;
 2. assess the opportunities to support a pattern of development that, where reasonable to do so, facilitates the use of sustainable modes of transport;
 3. highlight and promote opportunities to reduce the need for travel where appropriate;

4. identify opportunities to priorities the use of alternative modes in both existing and new development locations if appropriate;
5. consider the cumulative impacts of existing and proposed development on transport networks; and
6. assess the quality and capacity of transport infrastructure and its ability to meet forecast demands.

2.2 Local Policy

2.2.1 Local Policy that can be used to guide the development is largely defined by:

- The Adopted Barnsley Core Strategy – (September 2011)
- Local Plan Publication Draft 2016 (March 2008)
- Local Development Framework (LDF) Supplementary Planning Document 'Parking' – (March 2012)
- Barnsley Unitary Development Plan (December 2000)
- Sheffield City Region Transport Strategy 2011-2026

2.2.2 The Adopted Barnsley Core Strategy outlines proposals for development and land use to 2026. This will be replaced by the Local Plan once it is adopted, which will:

- Allocate sites for employment land to support our economic needs and aspirations
- Allocate housing sites to support the economy and to provide an appropriate land supply to meet needs
- Set the planning context for Barnsley Town Centre
- Protect and enhance green spaces and green infrastructure that contribute towards improving quality of life
- Contain policies to secure appropriate high quality development and to protect and enhance what is special about Barnsley and its environment

2.2.3 The draft Local Plan (LP) sets out specific policies for ensuring that new developments contribute to delivering sustainable communities. A number of the transport policies identified within the LP have relevance to the development and these include:

- Policy T1 – Accessibility Priorities
- Policy T3 – New Development and Sustainable Travel
- Policy T4 – New Development and Highway Improvement
- Policy T5 – Reducing the Impact of Road Travel

2.2.4 Until the adoption of the emerging Local Plan, some policies for the Unitary Development Plan have been retained including:

- T3 Existing Strategic Highway Network
- T4 Strategic Highways Proposals
- T5 Protected Highway Alignments
- T8 Highways Maintenance

2.2.5 The identified goals within the Sheffield City Region (SCR) Transport Strategy 2011-2026 include:

- *'support the economic growth of SCR'*
- *'enhance social inclusion and health'*
- *'reduce the emissions from vehicles'*
- *'make transport increasingly safe and secure'*

2.2.6 LDF Supplementary Planning Document Parking set out the parking standards that the Council will apply to all new development.

3 Site Accessibility Audit

3.1 General Accessibility

- 3.1.1 To encourage sustainable travel patterns by future residents from the outset it is particularly important that they are made aware of the sustainable transport options that are available and of aspects of the site's transport infrastructure that have been designed to assist and encourage their use. The following sections consider site accessibility giving particular attention to sustainable travel needs.

3.2 Walking Accessibility

- 3.2.1 Walking is the most important mode of transport at the local level and can replace short car trips in journeys under 2km, which contribute to congestion and pollution, as well as the need for car parking. Walking is the most sustainable form of transport and provides an avenue of reducing pressure on the environment.
- 3.2.2 Walking stimulates both personal health and the health of communities and local economies. Government health improvement advice states that just 30 minutes brisk walking 5 times a week can bring about significant reductions in the risk of coronary heart disease, high blood pressure and diabetes.
- 3.2.3 Existing pedestrian facilities comprise footways on both sides of B6096 Hough Lane, which runs past the site to the north. The existing footway network is generally of good standard and well-lit. Dropped kerb crossings are provided at minor road junctions to assist pedestrians and these are commensurate with the local roads and traffic environment.
- 3.2.4 Running in the westerly direction, from the existing site, footways provides access to the Wombwell Railway Station and some residential neighbourhoods on the western boundary of Wombwell. There is a pedestrian refuge island crossing on Hough Lane to the west of the site access.
- 3.2.5 In the easterly direction, the footways on Hough Lane afford access to Wombwell Town Centre and other local facilities to the east of the site. There are connections to footways on Windmill Road, Copeland Road, Kingsway, Jardine Street, Kings Road, Summer Lane, Park Street and High Street. By these links there are further connections to other residential street within Wombwell.
- 3.2.6 Table 3-1 shows The IHT publication "Providing for Journeys on Foot" suggested acceptable walking distances for commuting, school and sight-seeing including times based on a walking speed of (1.4m/s).

	Distance	Time
Desirable	500m	6 minutes
Acceptable	1000m	12 minutes
Preferred maximum	2000m	24 minutes

Table 3-1: IHT's Suggested Walking Distances

- 3.2.7 Furthermore, Manual for Streets offers the following guidance in Section 4.4 "The Walkable Neighbourhood": *"4.4.1 Walkable neighbourhoods are typically characterised by having a range of facilities within 10 minutes' (up to about 800m) walking distance of residential areas which residents may access comfortably on foot. However, this is not an upper limit and PPG 13 states walking offers the greatest potential to replace short car trips, particularly those under 2 km"*.
- 3.2.8 The existing footways provide excellent walking access to local amenities including facilities for health, shopping, leisure/sports and education. Figure 3-1 contained in Appendix B shows 500 metres, 800 metres and 2000 metres walking distances, representing 6, 10, and 24 minutes walking times, to/from the proposed development site. The walking catchments are defined by concentric circles based on direct distance between the site and destination centres. Wombwell Town Centre is within 15 minutes walking distance from the site. Walking routes between the site and town centre will generally follow established pedestrian routes with defined pedestrian facilities. Table 3-2 shows local facilities that are easily accessible, on foot, from the site.

Destination	Walking Distance	Walking Time
Wombwell Railway Station	500m	6 minutes
Wombwell Park	650m	8 minutes
Kings Oak Primary School	750m	9 minutes
Wombwell Town Centre	1200 - 1500m	15 - 20 minutes
Wombwell Recreational Ground	1600m	20 minutes

Table 3-2: Walking Distances/Time to Local Facilities

3.3 Cycling Accessibility

- 3.3.1 Like walking, cycling has an important part to play in reducing congestion, improving accessibility and reducing pollution. A further benefit of cycling is linked to increased general health and fitness which has personal benefits as well as economic benefits for the nation in terms of health service costs. The bicycle is generally more affordable than the car and hence there are social equity benefits to the promotion of cycling. Cycling may also allow people without cars to reach destinations that they may otherwise be unable to reach on foot.

- 3.3.2 The nearest formal cycle route is a section of the National Cycle Network (NCN) Route 62, which runs to the immediate east of the town centre and is accessible via Parkhill Road. It provides links to Barnsley and Worsborough to the north-west and Hoyland to the south-west.
- 3.3.3 There are no formal local routes in the vicinity of the site, therefore it can be concluded that cycling generally occurs on-street. Notwithstanding, there are a number of local amenities and adjacent settlements within the generally accepted cycling distance of 5km (30 minutes) from the proposed development site.
- 3.3.4 Table 3-3 shows facilities / areas outside the 2000m walking catchment but within a 5km (30 minutes) cycling distance from the site.

Destination	Cycling Distance	Cycling Time
Hoyland	3.5km	17 minutes
Darfield	3.5km	17 minutes
Brampton / West Melton	3.7km	18 minutes
Cortonwood Retail Park	3.5km	17 minutes

Table 3-3: Cycling Distances/Time to Local Facilities

- 3.3.5 The entire Wombwell settlement is within 5km from the site and therefore local facilities within the town, including employment and leisure centres, can be accessed on bicycle. The 5km catchment also extends to other neighbouring settlements where there are further employment and leisure opportunities.
- 3.4 **Public Transport**
- 3.4.1 The nearest bus stops are located on Hough Lane, between 160m and 200m, to the east of the existing site access. Both eastbound and westbound bus stops comprise a shelter with timetable information board.
- 3.4.2 Wombwell Railway Station is also located approximately 230m (under 3 minutes on foot) to the west of the existing site access. Wombwell Railway Station is an unstaffed station providing sheltered seating/waiting facilities and cycle parking for up to 12 cycles.
- 3.4.3 Figure 3-2 contained in Appendix B illustrates the location of the nearest bus stops, Wombwell Railway Station and existing bus routes. Frequencies and routes of public transport services in the local area are summarised in Table 3-4.

Bus Services			
Operator	Number / Route	Mon to Fri	Saturday
Stagecoach	Service 67/67A: Wombwell Town Centre – Wombwell Station – Hemingfield – Hoyland – Barnsley Town Centre	Approximately 30 minutes	Approximately 30 minutes
Yorkshire Tiger	Service 200: Wath upon Dearne – Wombwell – Hemingfield - Cortonwood	Hourly	Hourly
Railway Services			
Operator	Route	Mon to Fri	Saturday
Northern Railway	Leeds to Nottingham via Castleford	Approximately 30 minutes	Approximately 30 minutes
	Huddersfield to Sheffield (Penistone Line)	Hourly	Hourly

Table 3-4: Public Transport Services

3.4.4 The existing bus services route to Wombwell Town Centre, where there are interchange opportunities for other regional and local services.

3.5 Local Road Network

3.5.1 Existing vehicular access to the site is from the B6096 Hough Lane, which is approximately 8.1m wide along the site's boundary. Hough Lane is subject to 30mph speed limit in the vicinity of the site.

3.5.2 In the westerly direction Hough Lane facilitates links to the A6195 via Hemingfield Road and further west it connects with the A6195 and Roebuck Hill via a four arm roundabout junction.

3.5.3 The A6195 in the south-westerly direction also provides a link to the M1 Motorway at Junction 36, which is approximately 3 miles from the existing site access. The M1 in turn facilitates links to Leeds and Wakefield to the north and Sheffield and Rotherham to the south.

3.5.4 The main Barnsley settlement is located to the north and can be accessed via Windmill Road and the A633. To the east the A6195 also facilitates links to other settlements within the Council area, including Thurnscoe, Goldthorpe and Bolton upon Dearne.

3.5.5 The site has good access to and from both principal and strategic road networks.

3.6 Safe Routes to School

- 3.6.1 The nearest primary school is the Kings Oak Primary Learning Centre located to the east of the site and to the north of Hough Lane, approximately 700m (8 minutes) walking distance from the site's existing access. The site is situated within a predominantly residential neighbourhood, therefore it is anticipated that there are existing pupils within the locality already utilising the existing pedestrian routes between the site and Kings Oak Primary Learning Centre.
- 3.6.2 The primary school is easily accessible and the walking route from the site is illustrated by Figure 3-3, contained in Appendix B. The proposed development will incorporate new footway provisions connecting the site to the existing footways on the south side of Hough Lane. From the proposed development access junction, pupils will travel east along Hough Lane, crossing its junctions with Wood Street and Wright Crescent, and then continue further east towards the school's entrance which is located on the north side of Hough Lane.
- 3.6.3 On approach to the school's access from the west, a school crossing sign incorporating wig-wag signals is located in front of 138 Hough Lane. The sign is complimented by a 'SLOW' marking on the carriageway, which reinforces approach to a school zone. It is noteworthy that there is a large residential neighbourhood on the south side of Hough Lane, east of its junction with Wright Crescent. In order to access the school pupils from these areas require to cross Hough Road from the south to the north.
- 3.6.4 Pupils from the proposed development would utilise the footway on the south side of Hough Lane, requiring to cross to the north side to access the school.
- 3.6.5 There is a double yellow line on the south side of Hough Lane past the school access junction. On the north side, there is single yellow line with accompanying signage which indicates no parking 'Mon-Sat 8am – 6pm'. Therefore, no parking is permitted anywhere on Hough Lane adjacent to the school's access before and after school.
- 3.6.6 It is noteworthy that the parking restrictions on Hough Lane continue east towards Wombwell Town Centre. East of the Kingsway junction the double yellow lines are present on both sides of Hough Lane.
- 3.6.7 The nearest secondary school is the Netherwood Academy located to the north-east of Wombwell Town Centre, approximately 2200m (26 minutes) walking distance from the proposed development. The distance to the school is marginally over the preferred maximum walking distance as defined by IHT, but experience suggests that secondary school children are often prepared to walk longer distances to school, especially when doing so with peers.
- 3.6.8 For those choosing to walk, the shortest route is via the footways on Hough Lane to the east, then travelling eastwards towards the town centre via Church Lane. Turning left on to High Street, then travelling north to Littlefield Lane which leads to a pedestrian/cyclist bridge linking to the school's access at Dove Valley Way. Figure 3-3 illustrates the pedestrian route between the development and Netherwood Academy.

- 3.6.9 BMBC operates a '*Zero Fare Pass for School*' policy, which entitles a child to travel for free on public transport to school and back. BMBC notes that the policy is '*valid at certain times in the day, from Monday to Friday during term time only, for school age children up to the end of year 11.*'
- 3.6.10 Additionally, there is the '16-18 Travel Pass' which also offers concessionary fares to young people in that age bracket. Presently, it offers anytime travel for just 80p per journey on bus or tram and half fare on Northern trains.
- 3.6.11 Therefore pupils within the proposed development going to the academy would have an alternative option of free public transport access during term time. As noted previously, the nearest bus stops are within 200m (2 minutes) walking distance from the site. Service 67/67A, which routes past the site, service bus stops on High Street which are within 8 minutes walking distance from Netherwood Academy. Figure 3-3 illustrates the pedestrian route between bus stop on the High Street and the school.

3.7 **Accessibility Summary**

- 3.7.1 It is considered that the site has good access by both "active transport" to local amenities and to public transport facilities. The proposed development will have a realistic choice of sustainable travel options.

4 Development Details

4.1 Proposed Development

- 4.1.1 The proposal involves the demolition of the existing buildings and the redevelopment of the site to provide residential development comprising detached, semi-detached and terraced housing with associated areas of landscaping and open space provision. The existing site has potential for circa 45 dwellings.

4.2 Walking and Cycling Accessibility

- 4.2.1 The proposed development forms a natural expansion to the existing residential neighbourhood surrounding the existing site. There are a good standard of pedestrian footways on Hough Lane, which affords access to local facilities including: the Kings Oak Primary Learning Centre, Wombwell Railway Station and Wombwell Town Centre, where there are food and non-food retail, restaurants, library and employment opportunities.
- 4.2.2 The detailed masterplan for the site would be developed in future. However, it is envisaged that the proposal would incorporate a network of footways affording connections to the external network. The layout could also include shared use surfaces incorporating vehicle speed reduction measures to ensure low speed within the development.
- 4.2.3 The development would include cycle parking provision in line with BMBC parking standards set out in Table 4-1.

4.3 Public Transport Accessibility

- 4.3.1 The site is within easy access to and from existing public transport services (bus and rail). The nearest bus stops are within 2 minutes walking distance and Wombwell Railway Station is less than 3 minutes away.
- 4.3.2 The proposed pedestrian links from the development to external provisions on Hough Lane will facilitate access to bus stops and railway station putting the development within easy public transport access to key employment / leisure centres within the Barnsley Council area and the larger South Yorkshire region.

4.4 Site Access

- 4.4.1 The existing private access into the site, from Hough Lane, is shared with the adjacent residential dwelling. It takes the form of a footway crossing, with a dropped kerb access. It is shared use providing access to the industrial units and storage areas within the site as well as a link to the gate which serves the back garden of the adjacent property. The access serves staff parking located within the industrial area. There are also five visitor parking spaces at the front of the office unit with direct access on to Hough Lane. The existing site access is illustrated Photograph 1.



Source: Google Street View

Photograph 1: Existing Site Access

- 4.4.2 The proposed development access will take the form of an adopted T-junction between the site and Hough Lane, in place of the private access over the footway. The development would have a single point of access linking to an internal road network which would give access to the driveways and garages of individual dwellings.
- 4.4.3 Fairhurst Drawing Number 117436/sk1001, contained in Appendix C, illustrates in principle an indicative access junction layout for the proposed development in the same general location as the existing private site access. The indicative access road incorporates a 6.0m wide carriageway with two metre wide footways on both sides.
- 4.4.4 The Highways Department of Barnsley MBD has requested that a visibility splay of '*2.4m x 70m should be safeguarded at the access/egress*'. However, the South Yorkshire Residential Design Guide (SYRDG) which has been adopted by Barnsley MBC and three other local authorities in the region sets out the visibility splay requirements for residential developments. Paragraph B3.3.3 of the SYRDG comments that '*Minimum visibility splays for T- and Y- junctions are set out in Section 7.7 of Manual for Streets.*'
- 4.4.5 Paragraph of 7.7.6 notes that '*An X distance of 2.4m should normally be used in most build-up situations, as this represents a reasonable maximum distance between the front of the car and the driver's eye.*' Paragraph 7.7.10 also comments that '*The Y distance should be based on values for SSD (Table 7.1).*'
- 4.4.6 The B6096 Hough Lane is subject to 30 mph speed limit past the site's northern boundary. Table 7.1 of the MfS stipulates SSD adjusted for bonnet length of 43m for a 30mph speed limit. Fairhurst Drawing Number 117436/Sk1001 shows that visibility splays of 2.4m x 43m would be achieved at the site access, which meets with the requirements set out by MfS, which are adopted by BMBD.
- 4.4.7 The Design Manual for Roads and Bridges (DMRB) Volume 6 (TD42/95) comments on appropriate forms of major / minor priority junctions. Figure 2/2 from TD42/95 is replicated below and provides an indication of appropriate forms of junctions based on traffic volumes.

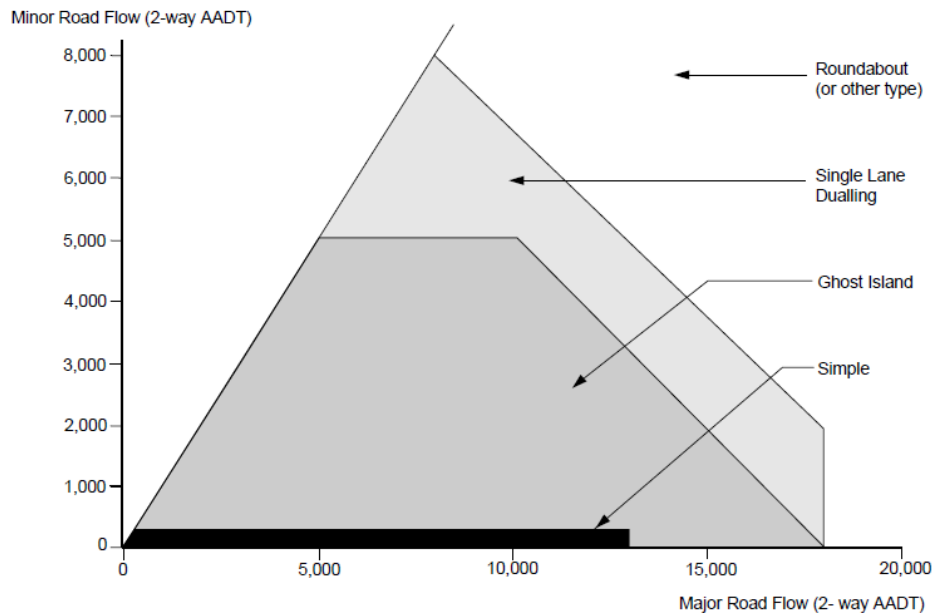


Figure 4-1: DMRB Volume 6 TD42/95 Figure 2/2

- 4.4.8 With regards to simple priority junctions, Paragraph 2.15 of TD42/95 state that *'For new rural junctions they shall only be used when the design flow on the minor road is not expected to exceed about 300 vehicles 2-way AADT, and that the major road is not expected to exceed 13,000 vehicle 2-way AADT.'* Paragraph 2.16 also comments that at existing rural, and at urban junctions, *'upgrading should always be considered where the minor road flow exceeds 500 vehicles 2-way AADT.'*
- 4.4.9 Section 5 of this report summarises the trip generation characteristics of the proposed development, based on trip rates extracted from the TRICS online database. The TRICS output, contained in Appendix A, indicates a daily two-way vehicle trip rate of less than 6 vehicles per dwelling. On that basis, using the upper limit of 45 units, the proposed development would generate less than 270 two-way vehicle trips per day.
- 4.4.10 The DMRB guidance indicates that a simple priority junction is the appropriate form of junction to serve the proposed development. There is no need for a ghost island right turn lane on Hough Lane.

4.5 Parking

- 4.5.1 Barnsley Metropolitan Borough Council's Supplementary Planning Document 'Parking' provides guidance on parking standards for new developments. The applicable standards for the development are summarised in the following table:

Development	Car Parking (maximum)	Cycle Parking (minimum)
Housing and flats	1 space for dwellings with 1 or 2 bedrooms	To be assessed individually
	2 spaces for dwellings with 3 or more bedrooms	To be assessed individually

Table 4-1: BMBC Parking Standards (Borough wide excluding Barnsley Urban)

- 4.5.2 Parking within the development will generally be in the form of in-curtilage parking provided via driveways and garages. Future detailed site design will make allowance for parking in accordance with Council requirements.

5 Trip Generation and Distribution

5.1 Trip Generation – Existing Use

5.1.1 The site is presently employment land extending to 1.485 hectares, comprising a range of industrial, workshop and warehouse buildings with ancillary offices and areas of open storage. There are 3 industrial units which provide 2,753m² GFA and office space extending to 480.85m², which equates to 3233.85m².

5.1.2 The Scoping Proposal contained in Appendix A comprises the detailed trip generation characteristics for the existing site. Table 5.1 summarises the vehicle trip generation estimates for the existing site uses. It should be noted that the PM peak hour for the employment uses is between 16:30 -17:30 whilst for residential developments the peak is identified as 17:00-18:00. In order to provide a like for like comparison of trips for the PM peak hour, the employment trip rates for 17:00 -18:00 has been utilised.

	Weekday AM Peak (08:00 – 09:00)				Weekday PM Peak (17:00 – 18:00)			
	Trip Rates		Trips		Trip Rates		Trips	
	In	Out	In	Out	In	Out	In	Out
3233.85 m ² GFA	0.538	0.147	17	5	0.06	0.374	2	12

Table 5-1: Vehicle Trip Generation per 100m² GFA – Existing Site Use

5.1.3 The results show that the existing site generates 22 and 14 two-ways vehicle trips during the residential Weekday AM and PM peak hours respectively.

5.1.4 It is noteworthy that the existing uses on the site generate some level of heavy goods vehicles (HGVs) from its operations. The proposed development would result in removal of the existing HGV movements associated with the current uses from a predominantly residential neighbourhood, which would benefit both existing and future users of the adjacent transport network.

5.2 Trip Generation – Proposed Residential Development

5.2.1 In order to determine the level of person trips likely to be generated by the proposed residential development, people trip rates have been extracted from the TRICS Online database for 'HOUSES PRIVATELY OWNED' development under the land use type 'RESIDENTIAL'. The detailed TRICS output were attached to the Scoping Proposal contained in Appendix A.

5.2.2 The trip rates and the resulting people trip assessment are summarised in Table 5-2. The upper limit of 45 units has been utilised for the people trip assessment.

45 Dwellings	Weekday AM Peak (08:00 – 09:00)				Weekday PM Peak (17:00 – 18:00)			
	Trip Rates		Trips		Trip Rates		Trips	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT
Pedestrian	0.047	0.137	2	6	0.059	0.029	3	1
Cycling	0.004	0.018	0	1	0.010	0.003	0	0
Public Transport	0.004	0.011	0	0	0.001	0.001	0	0
Car Passenger	0.031	0.237	1	11	0.167	0.087	8	4
Car Driver	0.157	0.450	7	20	0.418	0.230	19	10
Total People Trips	0.243	0.853	10	38	0.655	0.350	30	15

Table 5-2: Development People Trip Generation

5.2.3 Table 5-2 above indicates that the development could potentially generate 48 and 45 two-way people trips in the Weekday AM and PM travel peak hours respectively. There will be 27 and 29 two-way vehicle trips during the Weekday AM and PM peak hours respectively.

5.3 Proposed Development – New Vehicle Trips

5.3.1 Table 5-3 summarises the net development vehicle trip generation for the proposed change of use from employment land to residential development.

	Weekday AM Peak (08:00 – 09:00)			Weekday PM Peak (17:00 – 18:00)		
	IN	OUT	Total	IN	OUT	Total
Existing Employment Uses	17	5	22	2	12	14
Residential Development	7	20	27	19	10	29
Development New Trips	-10	15	5	17	-2	15

Table 5-3: Proposed Development – New Vehicle Trips

5.3.2 Table 5-3 above indicates that the proposed development would generate 5 and 15 two-way 'new' vehicle trips during the Weekday AM and Weekday PM Peak hours on the adjacent network.

5.3.3 The proposed residential development would generate a low level of additional vehicle trips, which would have an immaterial impact on the surrounding network. Consequently there is no need to consider traffic analysis within this report.

6 Residential Travel Plan Framework

6.1 Introduction

- 6.1.1 Travel Plans for Residential Developments require to be tailored to the needs, location and scale of the development. In line with emerging best practice, it is envisaged that the practical implementation of the Travel Plan would require the preparation of a Residential Travel Pack.

6.2 Residential Travel Pack Aims and Objectives

- 6.2.1 The site would be developed in a manner to afford easy access to local facilities within the existing settlement area. The site is suitably located to take advantage of existing sustainable transport links to the town centre, which is within 15 minutes walking distance from the site. The aim of the Residential Travel Pack would be to promote and encourage use of more sustainable travel options rather than single occupier car journeys to and from the development.

- 6.2.2 Objectives of the Residential Travel Pack would be to address the following;

- Increase awareness among residents of travel choices and implications
- Facilitate and promote more active forms of travel
- Increase the share of residents travelling to work by walking, cycling or public transport
- Promote the personal health benefits of active travel
- Reduce single car occupancy trips by promoting car sharing

6.3 Framework for the Preparation of the Residential Travel Pack

- 6.3.1 The Residential Travel Pack would be completed and presented to Barnsley MBC for approval prior to occupation of the first unit. The developer would liaise with the Council during the development of the Residential Travel Pack.

- 6.3.2 The undernoted general headings would form the framework for developing the Residential Travel Pack.

- Clear statement of objectives of the Pack in relation to key features of the development to promote and encourage sustainable travel
- Walking and cycling maps showing existing provisions
- Walking, cycling and public transport travel times
- Site specific public transport information – service times at nearest stops
- Local taxi contact information

- Car sharing / car club scheme information
- Information on reducing the need to travel – for example; use of technology for working from home

6.3.3 The Residential Travel Pack would contain information on the health benefits of active travel, directing residents to websites such as www.sustrans.org.uk and www.healthyliving.gov.uk. Tips for active travel include:

- Think “healthy living” before you travel – every time you use your legs it does you good
- If your trip is less than a mile or so, try walking – or walk some of the way if it is too far
- Start your active lifestyle gently, by walking part of the way, or taking a bus home
- If you are thinking about cycling, try out your route at the weekend first
- Try walking or cycling to work every day and see how much fitter you feel

6.3.4 The Travel Pack would also contain information on the environmental damage of CO2 emissions resulting from car use. Hints for reducing environmental damage created by car use could include:

- Try to avoid using a car for short journeys – use public transport, cycle or walk
- Plan ahead – choose uncongested routes, combine trips or car share
- Drive smoothly and efficiently – harsh acceleration and heavy braking have a very significant effect on fuel consumption, driving more smoothly saves fuel
- Slow down – driving at high speeds significantly increases fuel consumption
- Use higher gears as soon as traffic conditions allow
- Switch off – sitting stationary is zero miles per gallon, switch off the engine whenever it is safe to do so.

7 Summary and Conclusion

7.1 Summary

- 7.1.1 This Transport Statement (TS) has been prepared on behalf of Balmoral Group Holdings Ltd in support of an outline planning application for a change of use of land at 321 Hough Lane, Wombwell from employment to residential development. The site extends to 1.485 hectares and is located on the south of Hough Lane.
- 7.1.2 The proposal involves demolition of the existing industrial/office units and subsequent erection of circa 45 dwellings with associated transport infrastructure on the site.
- 7.1.3 The site is situated within an existing residential neighbourhood and therefore the proposal forms a natural extension to an existing residential area. The existing site has excellent accessibility by sustainable transport modes including; bus, rail, walking and cycling. There are good pedestrian links to the adjacent bus stops, Wombwell Railway Station and Kings Oak Primary Learning Centre.
- 7.1.4 Existing bus stops offer links to Wombwell Town Centre and surrounding settlements including Hemingfield, Hoyland and Barnsley. Additionally, there are services from Wombwell Railway Station to Barnsley, Nottingham, Sheffield, Huddersfield and Leeds.
- 7.1.5 The future internal layout design will take cognisance of the guidance provided in both SYRDG and MfS. Pedestrian and cycle links proposed within the development will connect with existing provision adjacent to the site.
- 7.1.6 Vehicular access to the site will be achieved via a simple priority junction with Hough Lane to be designed in accordance with relevant local and national standards. This report demonstrates that an appropriate access can be formed.
- 7.1.7 Parking within the development will be provided in accordance with Barnsley Metropolitan Borough Council's Supplementary Planning Document 'Parking'.
- 7.1.8 The trip generation assessment confirms that the development would not have any material transport impact on the surrounding highway network.

7.2 Conclusion

- 7.2.1 The proposed development site is very well placed to support travel by sustainable transport modes through the provision of direct links to the existing external infrastructure.
- 7.2.2 With the internal road layout and access designed and constructed to the relevant local and national standards, the proposed development can be accommodated on the existing transport network.
- 7.2.3 The TS concludes that the proposed development is suitably located and can integrate well with the existing transport networks in Wombwell. There will be no detrimental traffic or transport impacts.

Appendix A

Scoping Correspondence

Michael Ayim

From: Michael Ayim
Sent: 24 August 2017 11:29
To: 'barbarawilson@barnsley.gov.uk'
Cc: Ross McDonald
Subject: 117436 - Scoping Proposal for 2016/ENQ/00020 - Proposed residential development at 321 Hough Lane, Wombwell, Barnsley
Attachments: 117436 321 Hough Rod Development - TRICS Output File.pdf

Barbara,

We have been appointed by Balmoral Group to prepare a Transport Statement in support of a planning application for proposed change of use of their Balmoral Tanks site at 321 Hough Lane, Wombwell, Barnsley. The existing site will be vacant following the company's move to a new site at Barrowfield Road, Thurnscoe. The current proposal is for redevelopment of the existing Balmoral Tanks site to provide 40-45 dwellings.

We propose to comment on the following in the emerging Transport Statement:

- Review of relevant national and local planning / transport policies
- Existing site use / infrastructure
- Site Access requirements
- Details of the development
- Sustainable transport opportunities
- Trip generation – existing compared with proposed
- A review of parking requirements / provision relating to maximum standards

Trip Generation

Existing Site Uses

Currently, Balmoral Tanks directly employs around 50 people, half of whom are employed on site at the manufacturing facility with the remainder involved in the installation of manufactured products off-site. The site presently comprises a range of industrial, workshop and warehouse buildings with ancillary offices and areas of open storage. There are 3 industrial units which extend to approximately 2,753 m² and office accommodation of approximately 480.85 m², which equates to 3233.85 m² overall.

In order to assess the trip generation characteristics of the existing site, we have adopted the agreed vehicle trip rates utilised in the Transport Assessment in support of the planning application for their new site at Barrowfield Road, Thurnscoe (reference: 2017/0013).

The vehicle trip rates and the resulting trips for the existing site uses are summarised in Table 1.

3233.85 m ² GFA	Weekday AM Peak (08:00 – 09:00)				Weekday PM Peak (17:00 – 18:00)			
	Trip Rates		Trips		Trip Rates		Trips	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT
Car Driver	0.538	0.147	17	5	0.06	0.374	2	12

Table 1: People Trip Generation – Existing Site Uses

It is anticipated that the vehicle trip rates shown in Table 1 correlates well with the Balmoral staff travel patterns to the existing site.

Proposed Residential Development

In order to derive person trips associated with the proposed residential development, multimodal trip rates have been extracted from the TRICS online database. Mention Privately owned house category. Due to the site's location, only 'Edge of Town' sites have been included in the dataset. Sites within Greater London and South East region have been excluded. The detailed TRICS output file is attached.

The TRICS output trip rates and the resulting person trips assessment for the residential development are summarised in Table 2. For a worst case scenario assessment, the development proposal's upper limit of 45 dwellings has been utilised.

45 dwellings	Weekday AM Peak (08:00 – 09:00)				Weekday PM Peak (17:00 – 18:00)			
	Trip Rates		Trips		Trip Rates		Trips	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT
Pedestrian	0.047	0.137	2	6	0.059	0.029	3	1
Cyclists	0.004	0.018	0	1	0.010	0.003	0	0
Public Transport	0.004	0.011	0	0	0.001	0.001	0	0
Car Passengers	0.031	0.237	1	11	0.167	0.087	8	4
Car Driver	0.157	0.450	7	20	0.418	0.230	19	10
Total Passengers	0.243	0.853	10	38	0.655	0.350	30	15

Table 2: People Trip Generation – Residential Development

Net Development Traffic

Table 3 summarises the net development vehicle trip generation resulting from the proposed change of use of the site from employment to residential.

	Weekday AM Peak (08:00 – 09:00)			Weekday PM Peak (17:00 – 18:00)		
	IN	OUT	TOTAL	IN	OUT	
Existing Employment Uses	17	5	22	2	12	14
Residential Development	7	20	27	19	10	29
New Trips	-10	15	5	17	-2	15

Table 3: Net Vehicle Trip Generation

Table 3 shows the proposed development would generate 5 and 15 two-way 'new' vehicle trips in the Weekday AM and PM Peak hours on the adjacent road network.

The proposed residential development would generate a low level of additional vehicle trips, which would have an immaterial impact on the surrounding network. Therefore there is no need to consider traffic analysis within the report.

I would appreciate your confirmation that the above methodology and parameters are acceptable and suitable for inclusion within the Transport Statement.

Regards

Michael Ayim

Transport Planner

Fairhurst
engineering solutions, delivering results

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Arnhall Business Park
Westhill
Aberdeenshire
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Calculation Reference: AUDIT-109305-170823-0849

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : A - HOUSES PRIVATELY OWNED
 MULTI-MODAL VEHICLES

Selected regions and areas:

03	SOUTH WEST	
	DC DORSET	1 days
	SM SOMERSET	1 days
04	EAST ANGLIA	
	NF NORFOLK	1 days
	SF SUFFOLK	1 days
06	WEST MIDLANDS	
	SH SHROPSHIRE	3 days
	WK WARWICKSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	2 days
08	NORTH WEST	
	CH CHESHIRE	1 days
	GM GREATER MANCHESTER	1 days
09	NORTH	
	CB CUMBRIA	1 days
11	SCOTLAND	
	HI HIGHLAND	1 days
12	CONNAUGHT	
	RO ROSCOMMON	2 days
16	ULSTER (REPUBLIC OF IRELAND)	
	CV CAVAN	1 days
	DN DONEGAL	3 days
17	ULSTER (NORTHERN IRELAND)	
	DO DOWN	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Secondary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Number of dwellings
Actual Range: 7 to 83 (units:)
Range Selected by User: 4 to 100 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/09 to 28/03/17

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	3 days
Tuesday	2 days
Wednesday	5 days
Thursday	8 days
Friday	3 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	21 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.

Selected Locations:

Edge of Town	21
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This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone	15
No Sub Category	6

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

C1	1 days
C3	20 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Secondary Filtering selection (Cont.):

Population within 1 mile:

1,001 to 5,000	6 days
5,001 to 10,000	4 days
10,001 to 15,000	7 days
15,001 to 20,000	1 days
20,001 to 25,000	1 days
25,001 to 50,000	2 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

5,000 or Less	3 days
5,001 to 25,000	4 days
25,001 to 50,000	4 days
50,001 to 75,000	2 days
75,001 to 100,000	6 days
250,001 to 500,000	1 days
500,001 or More	1 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	5 days
1.1 to 1.5	16 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No	21 days
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This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	21 days
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This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	CB-03-A-04	SEMI DETACHED		CUMBRIA
	MOORCLOSE ROAD			
	SALTERBACK			
	WORKINGTON			
	Edge of Town			
	No Sub Category			
	Total Number of dwellings:	82		
	Survey date: FRIDAY	24/04/09		Survey Type: MANUAL
2	CH-03-A-09	TERRACED HOUSES		CHESHIRE
	GREYSTOKE ROAD			
	HURDSFIELD			
	MACCLESFIELD			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	24		
	Survey date: MONDAY	24/11/14		Survey Type: MANUAL
3	CV-03-A-01	DETACHED		CAVAN
	DUBLIN ROAD			
	CAVAN			
	Edge of Town			
	No Sub Category			
	Total Number of dwellings:	37		
	Survey date: TUESDAY	18/12/12		Survey Type: MANUAL
4	DC-03-A-08	BUNGALOWS		DORSET
	HURSTDENE ROAD			
	CASTLE LANE WEST			
	BOURNEMOUTH			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	28		
	Survey date: MONDAY	24/03/14		Survey Type: MANUAL
5	DN-03-A-02	DETACHED		DONEGAL
	GLENFIN ROAD			
	BALLYBOFEY			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	7		
	Survey date: THURSDAY	05/09/13		Survey Type: MANUAL
6	DN-03-A-03	DETACHED / SEMI-DETACHED		DONEGAL
	THE GRANGE			
	GLENCAR IRISH			
	LETTERKENNY			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	50		
	Survey date: MONDAY	01/09/14		Survey Type: MANUAL
7	DN-03-A-04	SEMI-DETACHED		DONEGAL
	GORTLEE ROAD			
	GORTLEE			
	LETTERKENNY			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	83		
	Survey date: FRIDAY	26/09/14		Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

8	DO-03-A-03 OLD MILL HEIGHTS DUNDONALD BELFAST Edge of Town Residential Zone Total Number of dwellings: 79 Survey date: WEDNESDAY 23/10/13	DETACHED / SEMI DETACHED	DOWN	Survey Type: MANUAL GREATER MANCHESTER
9	GM-03-A-10 BUTT HILL DRIVE PRESTWICH MANCHESTER Edge of Town Residential Zone Total Number of dwellings: 29 Survey date: WEDNESDAY 12/10/11	DETACHED / SEMI		Survey Type: MANUAL HIGHLAND
10	HI-03-A-13 KINGSMILLS ROAD INVERNESS Edge of Town Residential Zone Total Number of dwellings: 9 Survey date: THURSDAY 21/05/09	HOUSING		Survey Type: MANUAL NORFOLK
11	NF-03-A-03 HALING WAY THETFORD Edge of Town Residential Zone Total Number of dwellings: 10 Survey date: WEDNESDAY 16/09/15	DETACHED HOUSES		Survey Type: MANUAL NORTH YORKSHIRE
12	NY-03-A-10 BOROUGHBRIDGE ROAD RIPON Edge of Town No Sub Category Total Number of dwellings: 71 Survey date: TUESDAY 17/09/13	HOUSES AND FLATS		Survey Type: MANUAL NORTH YORKSHIRE
13	NY-03-A-11 HORSEFAIR BOROUGHBRIDGE Edge of Town Residential Zone Total Number of dwellings: 23 Survey date: WEDNESDAY 18/09/13	PRIVATE HOUSING		Survey Type: MANUAL ROSCOMMON
14	RO-03-A-01 GALWAY ROAD ROSCOMMON Edge of Town No Sub Category Total Number of dwellings: 80 Survey date: THURSDAY 07/05/09	MIXED HOUSES		Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

15	RO-03-A-03 N61 GREATMEADOW BOYLE Edge of Town No Sub Category	DETACHED HOUSES	ROSCOMMON
	Total Number of dwellings:	23	
	Survey date: THURSDAY	25/09/14	Survey Type: MANUAL
16	SF-03-A-05 VALE LANE	DETACHED HOUSES	SUFFOLK
	BURY ST EDMUNDS Edge of Town Residential Zone		
	Total Number of dwellings:	18	
	Survey date: WEDNESDAY	09/09/15	Survey Type: MANUAL
17	SH-03-A-03 SOMERBY DRIVE BICTON HEATH SHREWSBURY Edge of Town No Sub Category	DETACHED	SHROPSHIRE
	Total Number of dwellings:	10	
	Survey date: FRIDAY	26/06/09	Survey Type: MANUAL
18	SH-03-A-05 SANDCROFT SUTTON HILL TELFORD Edge of Town Residential Zone	SEMI-DETACHED / TERRACED	SHROPSHIRE
	Total Number of dwellings:	54	
	Survey date: THURSDAY	24/10/13	Survey Type: MANUAL
19	SH-03-A-06 ELLESMERE ROAD	BUNGALOWS	SHROPSHIRE
	SHREWSBURY Edge of Town Residential Zone		
	Total Number of dwellings:	16	
	Survey date: THURSDAY	22/05/14	Survey Type: MANUAL
20	SM-03-A-01 WEMBDON ROAD NORTHFIELD BRIDGWATER Edge of Town Residential Zone	DETACHED & SEMI	SOMERSET
	Total Number of dwellings:	33	
	Survey date: THURSDAY	24/09/15	Survey Type: MANUAL
21	WK-03-A-02 NARBERTH WAY POTTERS GREEN COVENTRY Edge of Town Residential Zone	BUNGALOWS	WARWICKSHIRE
	Total Number of dwellings:	17	
	Survey date: THURSDAY	17/10/13	Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	21	37	0.072	21	37	0.221	21	37	0.293
08:00 - 09:00	21	37	0.157	21	37	0.450	21	37	0.607
09:00 - 10:00	21	37	0.190	21	37	0.271	21	37	0.461
10:00 - 11:00	21	37	0.152	21	37	0.149	21	37	0.301
11:00 - 12:00	21	37	0.183	21	37	0.212	21	37	0.395
12:00 - 13:00	21	37	0.223	21	37	0.209	21	37	0.432
13:00 - 14:00	21	37	0.238	21	37	0.249	21	37	0.487
14:00 - 15:00	21	37	0.243	21	37	0.254	21	37	0.497
15:00 - 16:00	21	37	0.299	21	37	0.235	21	37	0.534
16:00 - 17:00	21	37	0.369	21	37	0.223	21	37	0.592
17:00 - 18:00	21	37	0.418	21	37	0.230	21	37	0.648
18:00 - 19:00	21	37	0.324	21	37	0.221	21	37	0.545
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.868			2.924			5.792

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected: 7 - 83 (units:)
 Survey date range: 01/01/09 - 28/03/17
 Number of weekdays (Monday-Friday): 21
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL CYCLISTS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	21	37	0.001	21	37	0.009	21	37	0.010
08:00 - 09:00	21	37	0.004	21	37	0.018	21	37	0.022
09:00 - 10:00	21	37	0.000	21	37	0.004	21	37	0.004
10:00 - 11:00	21	37	0.000	21	37	0.010	21	37	0.010
11:00 - 12:00	21	37	0.005	21	37	0.004	21	37	0.009
12:00 - 13:00	21	37	0.006	21	37	0.004	21	37	0.010
13:00 - 14:00	21	37	0.009	21	37	0.003	21	37	0.012
14:00 - 15:00	21	37	0.004	21	37	0.003	21	37	0.007
15:00 - 16:00	21	37	0.011	21	37	0.005	21	37	0.016
16:00 - 17:00	21	37	0.009	21	37	0.000	21	37	0.009
17:00 - 18:00	21	37	0.010	21	37	0.003	21	37	0.013
18:00 - 19:00	21	37	0.003	21	37	0.000	21	37	0.003
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.062			0.063			0.125

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

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 Surveys manually removed from selection: 0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL VEHICLE OCCUPANTS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	21	37	0.072	21	37	0.276	21	37	0.348
08:00 - 09:00	21	37	0.188	21	37	0.687	21	37	0.875
09:00 - 10:00	21	37	0.220	21	37	0.361	21	37	0.581
10:00 - 11:00	21	37	0.176	21	37	0.194	21	37	0.370
11:00 - 12:00	21	37	0.250	21	37	0.262	21	37	0.512
12:00 - 13:00	21	37	0.285	21	37	0.263	21	37	0.548
13:00 - 14:00	21	37	0.315	21	37	0.340	21	37	0.655
14:00 - 15:00	21	37	0.332	21	37	0.323	21	37	0.655
15:00 - 16:00	21	37	0.467	21	37	0.330	21	37	0.797
16:00 - 17:00	21	37	0.538	21	37	0.301	21	37	0.839
17:00 - 18:00	21	37	0.585	21	37	0.317	21	37	0.902
18:00 - 19:00	21	37	0.436	21	37	0.295	21	37	0.731
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.864			3.949			7.813

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected:	7 - 83 (units:)
Survey date range:	01/01/09 - 28/03/17
Number of weekdays (Monday-Friday):	21
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL PEDESTRIANS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	21	37	0.009	21	37	0.033	21	37	0.042
08:00 - 09:00	21	37	0.047	21	37	0.137	21	37	0.184
09:00 - 10:00	21	37	0.019	21	37	0.059	21	37	0.078
10:00 - 11:00	21	37	0.034	21	37	0.038	21	37	0.072
11:00 - 12:00	21	37	0.024	21	37	0.037	21	37	0.061
12:00 - 13:00	21	37	0.034	21	37	0.037	21	37	0.071
13:00 - 14:00	21	37	0.068	21	37	0.051	21	37	0.119
14:00 - 15:00	21	37	0.057	21	37	0.033	21	37	0.090
15:00 - 16:00	21	37	0.124	21	37	0.072	21	37	0.196
16:00 - 17:00	21	37	0.079	21	37	0.047	21	37	0.126
17:00 - 18:00	21	37	0.059	21	37	0.029	21	37	0.088
18:00 - 19:00	21	37	0.046	21	37	0.029	21	37	0.075
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.600			0.602			1.202

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected: 7 - 83 (units:)
 Survey date range: 01/01/09 - 28/03/17
 Number of weekdays (Monday-Friday): 21
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL PUBLIC TRANSPORT USERS
 Calculation factor: 1 DWELLS
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	21	37	0.000	21	37	0.003	21	37	0.003
08:00 - 09:00	21	37	0.004	21	37	0.011	21	37	0.015
09:00 - 10:00	21	37	0.000	21	37	0.004	21	37	0.004
10:00 - 11:00	21	37	0.000	21	37	0.003	21	37	0.003
11:00 - 12:00	21	37	0.001	21	37	0.001	21	37	0.002
12:00 - 13:00	21	37	0.003	21	37	0.001	21	37	0.004
13:00 - 14:00	21	37	0.000	21	37	0.000	21	37	0.000
14:00 - 15:00	21	37	0.001	21	37	0.001	21	37	0.002
15:00 - 16:00	21	37	0.005	21	37	0.003	21	37	0.008
16:00 - 17:00	21	37	0.006	21	37	0.001	21	37	0.007
17:00 - 18:00	21	37	0.001	21	37	0.001	21	37	0.002
18:00 - 19:00	21	37	0.006	21	37	0.000	21	37	0.006
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.027			0.029			0.056

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected: 7 - 83 (units:)
 Survey date range: 01/01/09 - 28/03/17
 Number of weekdays (Monday-Friday): 21
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	21	37	0.082	21	37	0.321	21	37	0.403
08:00 - 09:00	21	37	0.243	21	37	0.853	21	37	1.096
09:00 - 10:00	21	37	0.239	21	37	0.428	21	37	0.667
10:00 - 11:00	21	37	0.211	21	37	0.245	21	37	0.456
11:00 - 12:00	21	37	0.281	21	37	0.304	21	37	0.585
12:00 - 13:00	21	37	0.328	21	37	0.305	21	37	0.633
13:00 - 14:00	21	37	0.392	21	37	0.393	21	37	0.785
14:00 - 15:00	21	37	0.395	21	37	0.360	21	37	0.755
15:00 - 16:00	21	37	0.608	21	37	0.409	21	37	1.017
16:00 - 17:00	21	37	0.632	21	37	0.350	21	37	0.982
17:00 - 18:00	21	37	0.655	21	37	0.350	21	37	1.005
18:00 - 19:00	21	37	0.490	21	37	0.324	21	37	0.814
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			4.556			4.642			9.198

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected: 7 - 83 (units:)
 Survey date date range: 01/01/09 - 28/03/17
 Number of weekdays (Monday-Friday): 21
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Appendix B

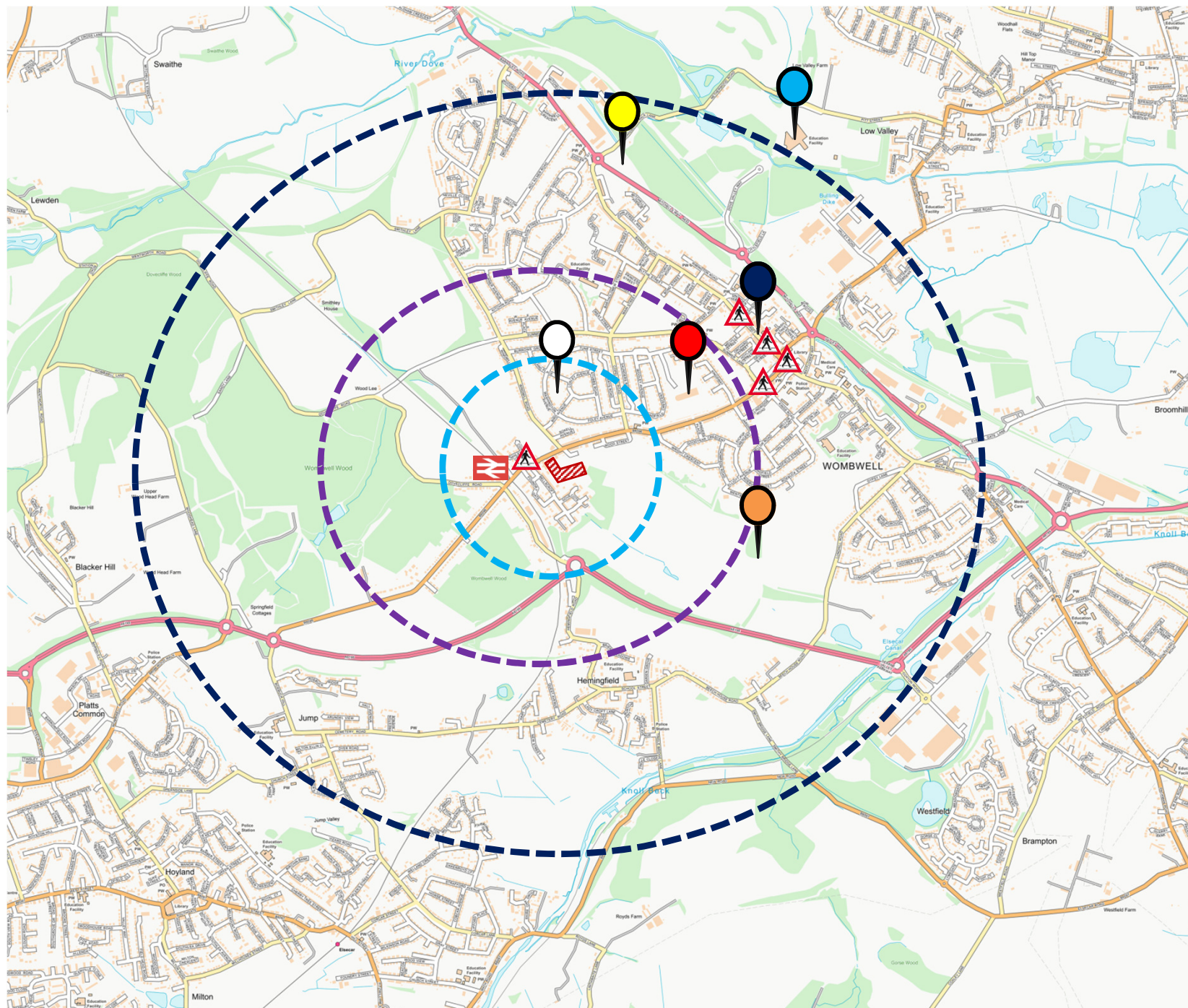
Sustainable Transport Maps

Project Title:
Proposed Residential
Development, 321 Hough Lane,
Wombwell, Barnsley

Drawing Title:
Figure 3-1: Walking Accessibility

KEY:

-  Development Site
-  King Oak Primary Learning Centre
-  Netherwood Academy
-  Supermarket
-  Loxley Community Gardens
-  Hillies Golf Course
-  Town Centre
-  Wombwell Railway Station
-  500m Walking Isochrone
-  800m Walking Isochrone
-  2000m Walking Isochrone



Client: 	Drawn by: LW Date: 24/08/17 Britannia House Endeavour Drive Arncliffe Business Park Westhill AB32 6UF T: 01224 047320 F: 01224 323201
---	---

Project Title:
Proposed Residential
Development, 321 Hough Lane,
Wombwell, Barnsley

Drawing Title:
Figure 3-2: Bus Routes and Bus
Stop Location

KEY:



Development Site



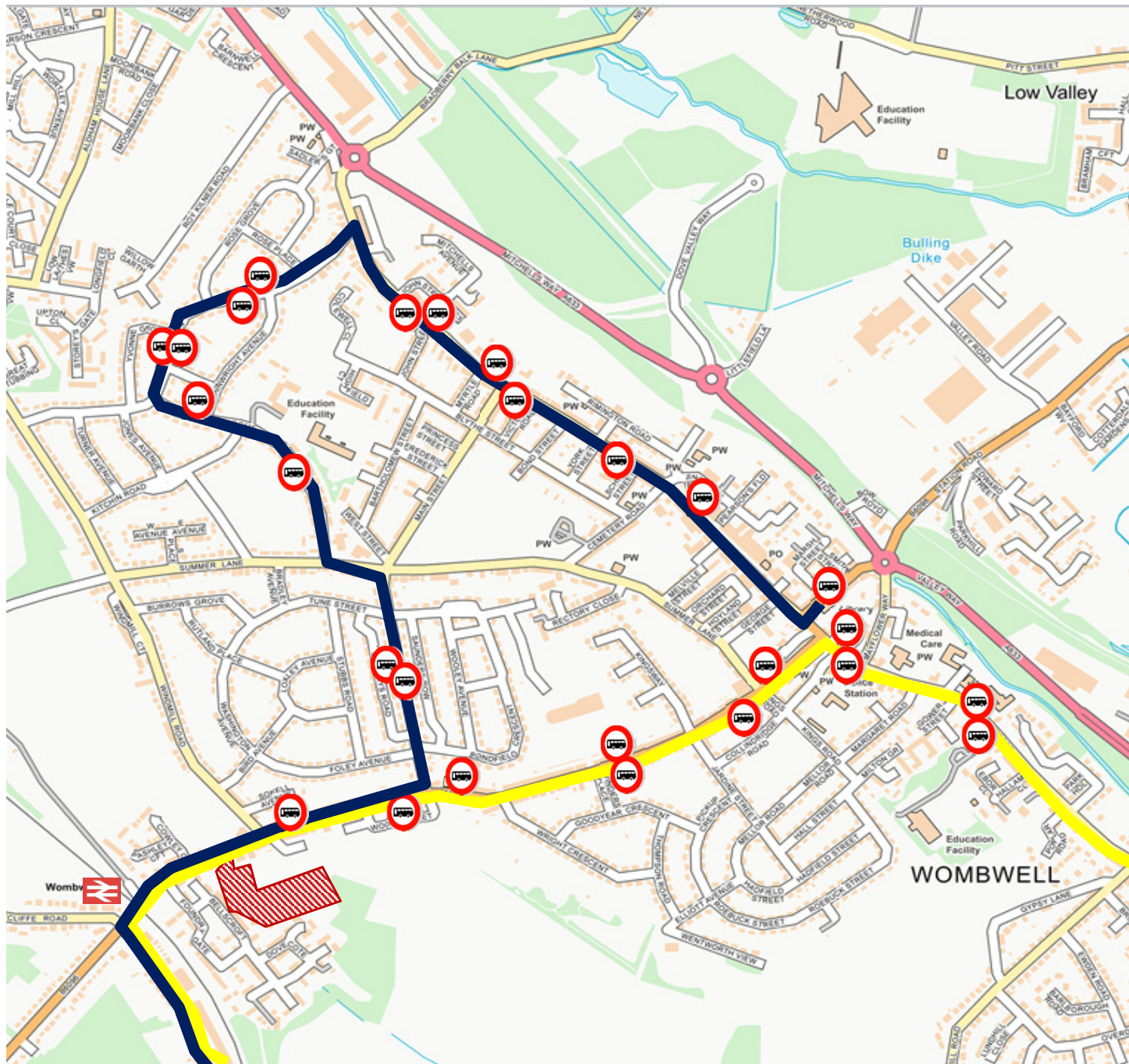
Stagecoach - Service
67/67A: Wombwell
Town Centre to Barnsley
Town Centre



Yorkshire Tiger –
Service 200
Wath upon Dearne to
Cortonwood



Bus Stop



Client:



Drawn by: LW

Date: 24/08/17

Britannia House
Endeavour Drive
Arnhall Business Park
Westhill
AB32 6UF

T: 01224 047320
F: 01224 323201

Project Title:
Proposed Residential
Development, 321 Hough Lane,
Wombwell, Barnsley

Drawing Title:
Figure 3-3: Safe Routes to School

KEY:



Development Site



Kings Oak Primary
Learning Centre



Netherwood Academy



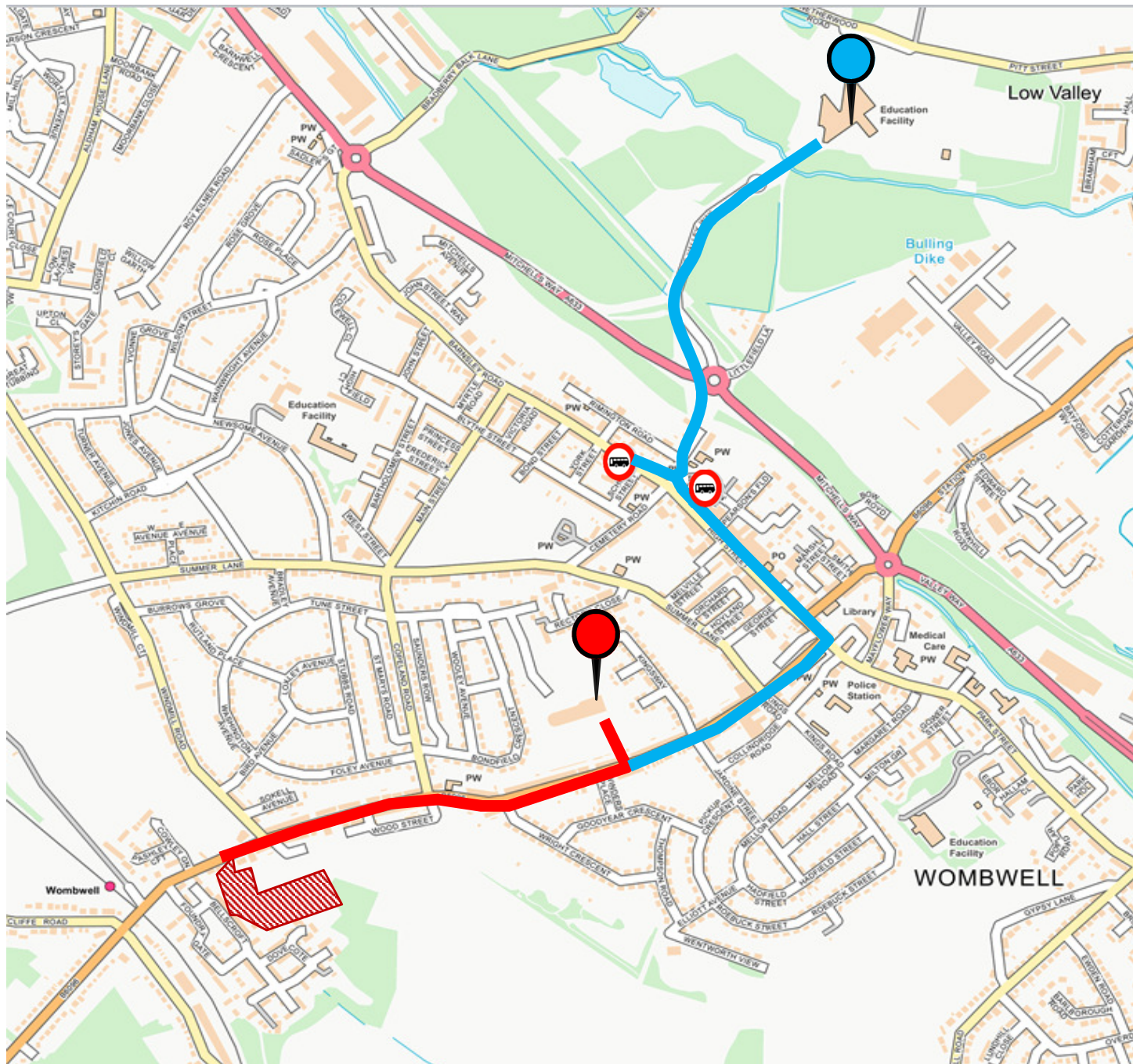
Route to Kings Oak
Primary Learning
Centre



Route to Netherwood
Academy



Nearest High Street
Bus Stops to
Netherwood Academy



Client:



Drawn by: LW

Date: 24/08/17

Britannia House
Endeavour Drive
Arnall Business Park
Westhill
AB32 6UF

T: 01224 047320
F: 01224 323201

Appendix C

Indicative Site Access Junction Layout

CIVIL ENGINEERING • STRUCTURAL ENGINEERING • TRANSPORTATION • ROADS & BRIDGES
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