

Transport Assessment

**PROPOSED ALDI STORE**

**OLD MILL LANE, BARNSELEY**

September 2016

Aldi Stores Ltd



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## **1. INTRODUCTION**

- 1.1** This Transport Assessment (TA) has been prepared to support a planning application for the erection of an Aldi store (1822sqm GEA / 1108sqm net RFA) on Old Mill Lane, Barnsley.
- 1.2** The development site is currently unoccupied and is a previously developed brownfield site. A location plan is included within the drawings section of this report.
- 1.3** The site fronts a recently constructed road known as Burton Road Bypass, which can be accessed via Old Mill Lane and Burton Road, allowing access into Barnsley City Centre and a number of residential neighbourhoods.
- 1.4** Access to the site will be gained via the existing access from the bypass roundabout junction, which currently serves the adjacent Wickes store.
- 1.5** This TA has been produced in line with the DfT Guidance on Transport Assessment. Although this document has now been superseded, it is considered relevant for the purposes of assessing the transport implications of the development proposals.
- 1.6** A Travel Plan (TP) is also included in the application pack. It is important to encourage non-car use; the Transport Assessment takes account of the effect of TP.
- 1.7** The TA provides a background to the existing highways situation in the area and that connected to the existing site use. The proposed development is then discussed and the impact on the network is demonstrated.

## **2. EXISTING SITUATION**

- 2.1** Old Mill Lane is located less than 1 kilometre to the northeast of Barnsley town centre.
- 2.2** The area falls under the local authority of Barnsley Metropolitan Borough Council.
- 2.3** Within the Barnsley town centre and the surrounding areas there are a mixture of food retailers, ranging from small convenience stores to large supermarket chains.
- 2.4** The area offers retailers such as Morrison's, Asda, Iceland and a Costcutter, all located within 1.5 miles of the proposed site.
- 2.5** The site offers a suitable location for a discount food retailer and would serve many residential areas which are located to the north east of Barnsley Town Centre. Due to the close proximity of existing food superstores, it would be predicted that customers would visit both existing stores and the proposed Aldi store, as each offer a range of different goods.
- 2.6** The site would front a newly constructed unnamed road known as Burton Road Bypass, which has links onto Old Mill Lane and Burton Road. These roads can be access via two roundabout junctions. To the south and east of the proposed site.
- 2.7** The site is currently an unoccupied area of brownfield land with the potential catchment of 3,137 within a 1km, 16,369 within 2km and 103,878 within 5km.

### **Highway Network**

- 2.8** The site is located adjacent to the A61 Old Mill Lane, to the south of the Burton Road junction. A recently constructed highway (Burton Road Bypass) forms the sites southern boundary.
- 2.9** Burton Road Bypass and was constructed in relation to phase 3 of the Wakefield Road A61 Quality Bus Corridor proposals. The purpose of the bypass was to reduce congestion at the Old Mill Lane/Burton Road junction and to improve bus accessibility on the local highway network.
- 2.10** The recently constructed bypass provides a link between Old Mill Lane and Burton Road, and provides access to the adjacent Wickes unit as well as the development site, via a roundabout junction. The Old Mill lane junction is signalised, whilst the junction with Burton Road is a roundabout junction.
- 2.11** Burton Road Bypass is subject to a 30mph speed limit. The carriageway allows two-way traffic flows and footways are present to both sides of the carriageway. Traffic Regulation Orders in the form of double yellow lines limit on-street parking opportunities.
- 2.12** The A61 Old Mill Lane is subject to a 30mph speed limit and provides access from Barnsley Town Centre and beyond to the M1. In the vicinity of the development site, it consists of two lanes travelling northbound from the gyratory and one lane in the southbound direction.

**2.13** Burton Road is a single carriageway road which provides an east-west route to a number of residential areas, including Monk Bretton. Burton Road is subject to a 30mph speed limit and is lit. The B6132 Wakefield Road provides access to the surrounding areas to the north of the site

**2.14** There is a signalised pedestrian crossing located at the A61 Wakefield Road/ Burton Road/ Old Mill Lane junction, to the north of the development site.

**2.15** Traffic associated with the development proposals would use one of these three routes to access the site.

### **Modal Split**

**2.16** The proposed site is located within the Middle Layer Super Output Area (MSOA) of Barnsley 009 MSAO. The population of Barnsley 009 MSAO is 5,987 and is therefore representative of the selected area.

**2.17** The modal split for Barnsley 009 MSAO is shown below in Table 2.1.

**2.18** Table 2.1 omits those 'working from home; and 'unemployed' within the area, denoting a remaining 3,765 people in Barnsley 009 MSAO.

| <b>Location</b>                        | <b>Car</b>      | <b>Walk</b>     | <b>Cycle</b> | <b>Public Transport</b> | <b>Other</b>  | <b>Total</b>      |
|----------------------------------------|-----------------|-----------------|--------------|-------------------------|---------------|-------------------|
| Barnsley 009 MSAO                      | 3,019<br>(82%)  | 305<br>(8%)     | 19<br>(1%)   | 272<br>(7%)             | 60<br>(2%)    | 3,657<br>(100%)   |
| Barnsley Metropolitan Borough District | 78,403<br>(78%) | 10,349<br>(10%) | 720<br>(1%)  | 8,782<br>(9%)           | 1,809<br>(2%) | 100,063<br>(100%) |

**Table 2.1 – Mode of Travel to Work in MSAO 009, in Comparison to Barnsley Metropolitan Borough District**

**2.19** The modal split shown in table 2.1 identifies a clear dominance of the car as a mode of transport to work within the Barnsley 009 MSAO area. The propensity for pass-by trips to the proposed site is high as a consequence of the modal split exhibited above.

**2.20** Aldi employees residing in Barnsley 009 MSAO and surrounding settlements will be encouraged by the supporting Travel Plan to use more sustainable modes of transport to travel to work.

### **Accessibility by Non Car Modes**

#### **Pedestrians**

**2.21** There are footways present on both flanks of the Burton Road Bypass. The footway widths are approximately 2 metres and extend along the full length of the highway.

**2.22** Pedestrian provision in the area is considered to be adequate, with footways present on all of the highway network in the vicinity of the development site.

- 2.23** The signalised junctions on Old Mill Lane to the north and west of the site include controlled pedestrian crossing provision, enabling safe passage across the carriageway.
- 2.24** The site is within walking distance of large residential neighbourhoods in the north east of Barnsley. As can be seen on the isochrones appended to this TA, the residential areas to the northeast and southwest as well as the town centre and numerous employment areas, are within a 2km walking distance of the site.
- 2.25** It would be expected that customers travelling by foot would travel from Old Mill Lane or Burton Road to access the proposed development. These routes give direct access into residential areas that are in close proximity to the development site. Given the accessible location of the site, the development would provide an alternative shopping destination within the area, which could be accessed without the need to travel by car.

### **Cycling**

- 2.26** The proposed site location offers a comparable proportion of cycling trips to Barnsley as a whole. It is therefore expected, with cycling facilities proposed at the development site that there will be a high probability for trips made by cycle.
- 2.27** There are currently no on street cycling facilities present along the unnamed road, or those that connect Old Mill Lane and Burton Road. However a vehicle speed limit of 30mph and available carriageway widths would mean that there is safe opportunity for cyclists to utilise the highway network while travelling to the store. In addition, National Cycle Route 67 is located approximately 1km from the development site.
- 2.28** A 5km catchment would include the whole of Barnsley.

### **Public Transport**

- 2.29** Buses travel along a number of routes within the study area. These include Wakefield Road and Burton Road.
- 2.30** Bus stops are located on Burton Road approximately 350 metres east of the proposed site. On the eastern flank, allowing south bound travel, the bus stop is equipped with a shelter and timetable. On the western flank, a temporary bus stop is present and is equipped with a bus sign.
- 2.31** Additional bus stops are located on Wakefield Road, approximately 450m from the development site. These bus stops are equipped with shelters and timetables, providing travel in north and south bound directions.
- 2.32** A bus stop is also located on Old Mill Lane, providing northbound travel, located approximately 400m from the development site. This bus stop is equipped with a shelter, timetable and bus layby.
- 2.33** The table below provides information on the bus operation times, frequency and major destinations.

| Number<br>Route -                                                                         | Start /Finish    | Weekday<br>Frequency   | Saturday<br>Frequency  | Sunday<br>Frequency |
|-------------------------------------------------------------------------------------------|------------------|------------------------|------------------------|---------------------|
| 1 –<br>Barnsley<br>-<br>New Lodge                                                         | 06:25 –<br>23:37 | 10 mins                | 20 mins                | 30 mins             |
| 11/12 –<br>Barnsley<br>Interchange<br>–<br>Athersley<br>North<br>-<br>Smithies            | 05:20 –<br>23:34 | 10 mins                | 20 mins                | 1 Hour              |
| 31 –<br>Barnsley<br>–<br>Monk Bretton<br>–<br>West Green                                  | 10:15 –<br>16:30 | 1 Hour                 | 1 Hour                 | No Service          |
| 57/59/59A –<br>Barnsley<br>-<br>Carlton,<br>-<br>Wakefield City<br>Centre<br>-<br>Royston | 05:20 –<br>00:04 | 10 mins after<br>09:00 | 10 mins after<br>09:20 | 30 mins             |
| 193/194 –<br>Barnsley<br>-<br>Athersley<br>South<br>-<br>New Crofton<br>-                 | 05:45 –<br>32:51 | 1 Hour                 | 1 Hour                 | 1 Hour              |

|                                                         |                  |              |            |            |
|---------------------------------------------------------|------------------|--------------|------------|------------|
| Wakefield City Centre                                   |                  |              |            |            |
| 488 –<br>Barnsley<br>-<br>Mapplewell<br>-<br>Staincross | 08:10 –<br>08:45 | Fridays Only | No Service | No Service |

**Table 2.2 – Bus Frequency Timetable**

- 2.34** The proposed site is served by a number of bus stops that are in the recommended 400 metres walking distance. It is expected that these bus stops would be utilised by customers travelling to the site. An assessment of existing bus service provision has revealed that the development site is very well served by public transport, with up to 15 services serving the bus stops in the vicinity of the site. The modal split data shown in table 2.1 shown that a reasonable amount of people use public transport within MSOA Barnsley 009.
- 2.35** Public transport accessibility is considered to be further enhanced by the A61 Wakefield Road Quality Bus Corridor scheme.
- 2.36** Barnsley Railway Station is located approximately 1.3km to the south of the site. The Rail Station forms the Barnsley Interchange with the Bus Station, which is adjacent to the Railway Station.
- 2.37** The Railway Station is very well served, with regular train services to Wakefield, Leeds, Huddersfield and the surrounding areas.
- 2.38** Overall, the site is therefore considered to be highly accessible by public transport.

### Summary

- 2.39** The site is in a sustainable location, situated under a mile away from Barnsley Town Centre. The site is also in close proximity to other retailers and the surrounding residential areas. The site is considered to be highly accessible by pedestrians, cyclists and public transport.

### **3. ACCIDENT ANALYSIS**

- 3.1** In accordance with the Transport Assessment guidelines, an accident assessment has been carried out within a 1 kilometre study area of the site.
- 3.2** The national accident data statistics published by the Department for Transport on the data.gov.uk website have been used. The “2015 All STATS19 data (accident, casualties and vehicle tables) for 2010 to 2015” dataset was initially utilised; the dataset details the number of recorded accidents reported to the police during the period of 2010 to 2015 in the UK. The location, time, date, severity, weather conditions and a number of other descriptors are included.
- 3.3** The aforementioned dataset is employed in a GIS based technical analysis. A representative catchment is calculated through the local road network and is determined on a site by site basis; accident data falling within the catchment area is then extracted.
- 3.4** National accident data is represented graphically via a number of variables including severity, weather and date. The accident dataset for 2015 is downloaded directly from the data.gov.uk website and is the most recent version of this data.
- 3.5** The full accident analysis is available at Appendix B.
- 3.6** There have been 18 recorded personal injury accidents since 2010 within the study area. Old Mill Lane (A61) is a busy thoroughfare primarily serving people travelling from north Barnsley into the town centre. Burton Road also allows vehicles to travel from residential areas in the north east, such as Monk Bretton, into Barnsley town centre. Although there is an appropriate speed limit along Old Mill Lane (A61) and Burton Road, the busy nature of the carriageways, makes opportunity for accident apparent.
- 3.7** All accidents have taken place where there are no crossing facilities. Dropped kerbing and tactile paving provides crossing facilities for pedestrians down Old Mill Lane (A61), Burton Road and the newly constructed unnamed roads. A suitable speed limit for vehicles also allows safe crossing opportunities.
- 3.8** Weather conditions at the time of the accidents on the study network show similar trends to the National Accident Data.
- 3.9** The majority of accidents occurred not at a junction, on Old Mill Lane. This accounts for 44% of accidents. Another large percentage of accidents have occurred at the T-stagger on Old Mill Lane. With this said, all accidents are recorded over 100 metres from the proposed site access road, with no accidents been recorded along the frontage.
- 3.10** All of accidents recorded were reported as slight in severity. This means that no emergency services were needed on site and any injuries were very minor in nature. Due to the low severity of accidents in the study area since 2010, the proportions of severe accidents falls below the national averages.
- 3.11** Based on the above, the development proposals are considered unlikely to have a negative impact on the existing accident rates.

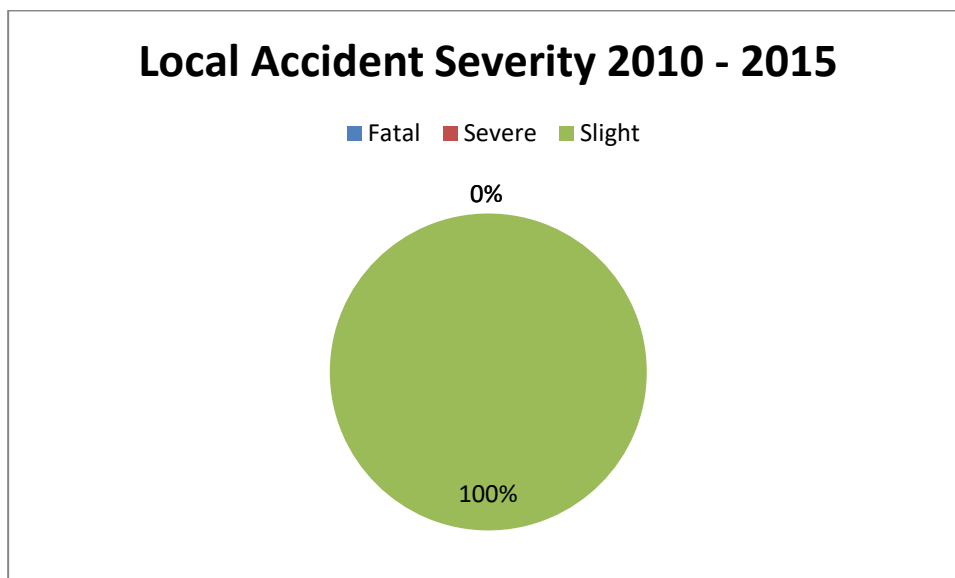


**Figure 3.1 – Local Accidents Severity 2010 – 2015**

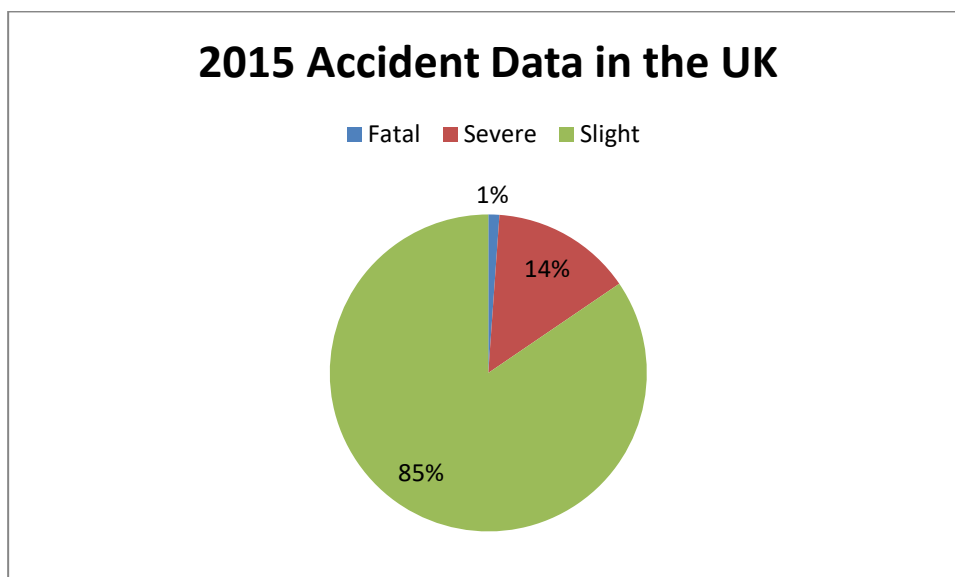
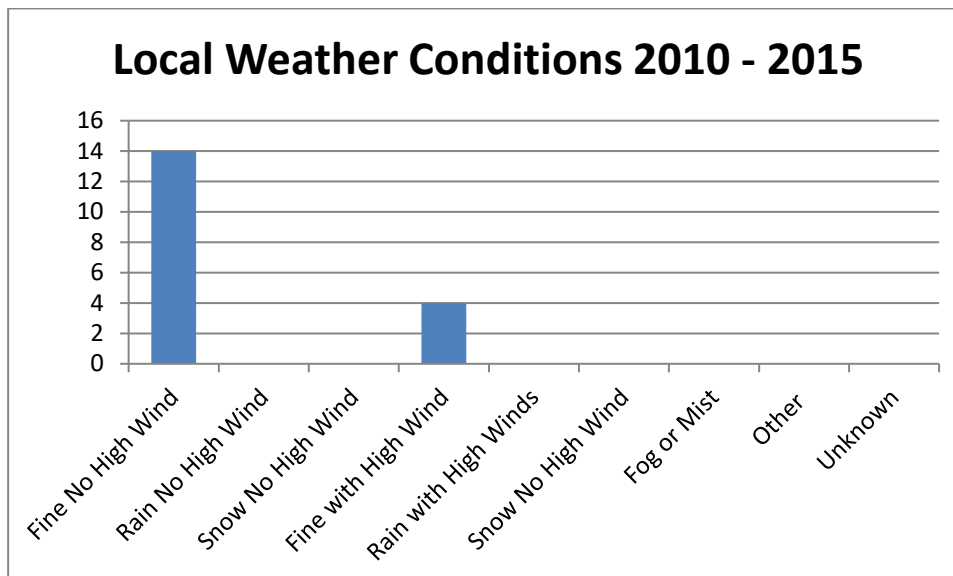
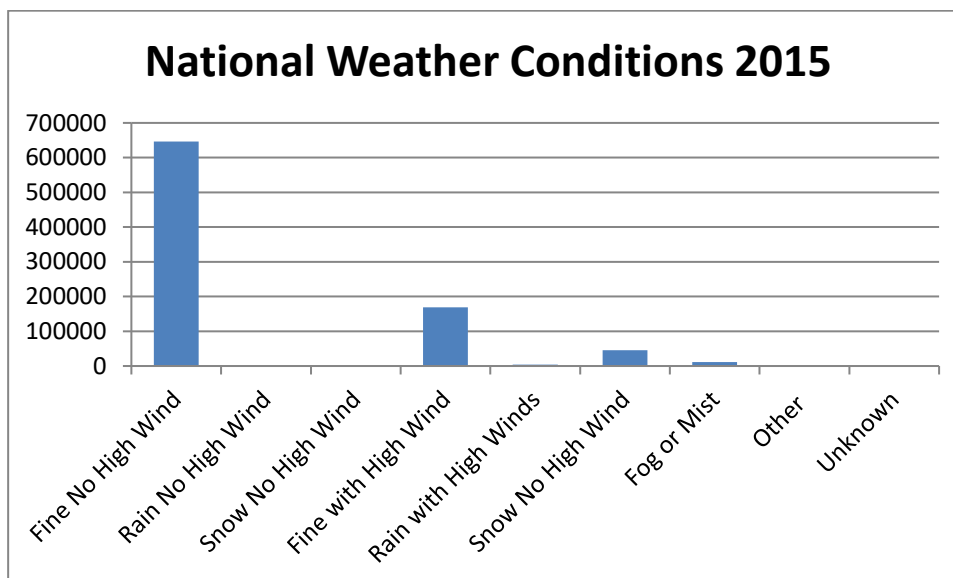


**Figure 3.2 – National Accident Severity 2015**

**Figure 3.3 – Local Weather Conditions 2010 – 2015****Figure 3.4 – National Weather Conditions 2015**

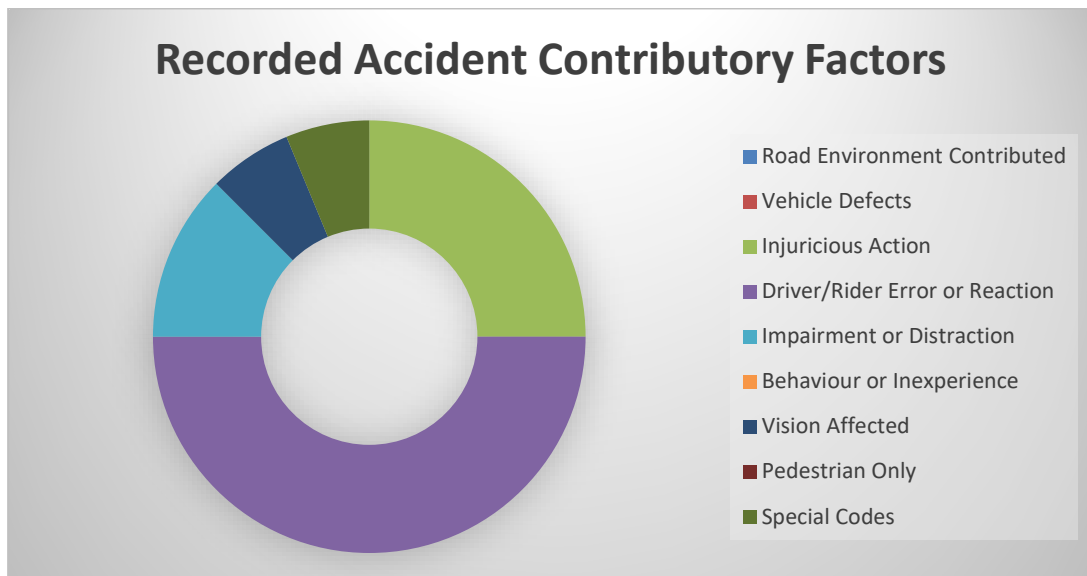


**Figure 3.5 – Causation Factors of Accidents**

#### **4. PROPOSED DEVELOPMENT**

**4.1** This Transport Assessment assess the effect of an Aldi Store on the local highway network within Barnsley.

**4.2** The Aldi Store will offer 1822sqm Gross External Area (GEA), 1108sqm Net Retail Floor Area (RFA) and is supported by 93 car parking spaces.

##### **Access**

**4.3** Access to the development site will be gained via the existing private access which currently serves the adjacent Wickes unit.

**4.4** The private access was designed to provide direct access to the Wickes unit, the development site, and the adjacent site to the east of the development site.

**4.5** The proposed site access would take the form of a priority junction arrangement. Given that the development site would be served from a private road, the geometry would be that of a simple priority junction.

**4.6** The proposed access has been designed to accommodate vehicle and HGV movements, and is acceptable in terms of its geometry and visibility onto the private access road.

##### **Car Parking**

**4.7** The proposal will be supported by a 93 space car park. The car park includes 6 disabled spaces and 6 parent & child spaces.

**4.8** The Barnsley Council parking standards are contained within the Barnsley LDF Parking SPD, adopted March 2012. For A1 shops, the standards permit a maximum of 1 space per 14 – 25 m<sup>2</sup> in the Barnsley Urban area.

**4.9** The parking standards would therefore allow up to 129 spaces, based on a ratio of 1 space per 14 m<sup>2</sup>. The development proposals would provide 93 spaces, which is the equivalent of 1 space per 20 m<sup>2</sup>. As such, the proposed level of car parking meets the Barnsley LDF maximum parking standards.

**4.10** Cycle parking will also be provided in accordance with the standards, at a level to be agreed with the local authority.

##### **Servicing**

**4.11** Servicing is entirely carried out within the site boundary, this is typical for a development of this nature, where service vehicles utilise the car park aisles.

**4.12** Aldi utilise a unique delivery system where typically 2-3 articulated vehicles delivers direct from the distribution centre daily. This vehicle carries fresh, ambient, chilled and frozen goods as well as internal mail.

**4.13** The store also receives one independent milk delivery per day, this is carried out by a local supplier, and this store would be an additional delivery on their existing schedule.

**4.14** The servicing arrangement can be carried out when the development is operating and when it is closed.

- 4.15** The loading bay is level with the rear of the vehicle; this allows the driver to unload the delivery without the use of mechanical aid. The delivery area is equipped with a heavy curtain to each side of the trailer including the top; this contains any noise and light whilst unloading.
- 4.16** Aldi also provide an onsite marshal for when vehicles are servicing the store. The marshal will be a trained member of staff which will ensure the servicing vehicle can manoeuvre safely, especially when customers are present on site. The driver of the servicing vehicle will call the store in advance to prepare the marshal of the arrival of a HGV.

## **5. TRANSPORT PLANNING POLICY**

### **National Planning Policy**

- 5.1** The former Planning Policy Statement (PPS) 13 'Transport' (2011) was replaced by the National Planning Policy Framework (NPPF) on the 27<sup>th</sup> March 2012. This document condenses all previous PPGs and PPSs in to one document.
- 5.2** One of the 'core principles' of the NPPF is 'promoting sustainable transport'. The main objective of the NPPF is to "actively manage patterns of growth to make the fullest possible use of public transport, walking and cycling, and focus significant development in location which are or can be made sustainable" (page 6). Paragraph 37 states that planning policies should aim for "a balance of land uses within their area so that people can be encouraged to minimise journey lengths for employment, shopping, leisure, education and other activities."
- 5.3** Paragraph 32 of the NPPF continues the requirement of Transport Assessments for all developments that generate significant amounts of movement. In addition a Travel Plan is required which will promote the use of sustainable modes of transport (Paragraph 36).
- 5.4** The development meets the aims of the NPPF, by being situated in a location which is accessible by all travel modes, and providing a Travel Plan which would further increase the accessibility of the site.

### **Local Planning Policy**

#### **Barnsley LDF – Core Strategy Adopted September 2011**

- 5.5** The document provides a spatial strategy for future development in Barnsley up to the year 2026. The core strategies are displayed within the document, setting out the key elements of the planning frameworks for Barnsley and the approach to its long term and physical development to achieve the Councils vision of what sort of place Barnsley wants to become.

### **CSP 25 New Development and Sustainable Travel**

'New Development will be expected to:

- Be located and designed to reduce the need to travel, be accessible to public transport and meet the needs of pedestrians and cyclists
- Provide at least the minimum levels of parking for cycles, motorbikes, scooters, mopeds and disabled people and should not provide more than the maximum number of car parking spaces set out in Supplementary Planning Document
- Provide a transport statement or assessment in line with the thresholds and guidance set out in Department for Transport Guidance of Transport Assessments as published March 2007 (or and subsequent version)
- Provide a travel plan statement or a travel plan in accordance with the threshold and guidance set out in Department for transport ; Good Practice Guidelines: Delivering Travel Plans through the Planning

Process' as published April 2009 (or any subsequent version). Travel plans will be secured through a planning obligation or planning condition

Where levels of accessibility through public transport, cycling and walking are unacceptable, we will expect developers to take action or make financial contributions in accordance with policy CSP 42'.

- 5.6** The proposed development will adhere to the policy aims set out above. The site location provides an alternative food retail destination which is easily accessible by sustainable means of transport.
- 5.7** Levels of parking will meet the requirements of Barnsley Council and will accommodate all types of vehicles.
- 5.8** A Travel Plan will be provided alongside this Transport Assessment, and will set aims and objectives for sustainable transport which will be met within a certain period of time.

### **CSP 26 New Development and Highway Improvement**

'New development will be expected to be designed and built to provide safe, secure and convenient access for all road users. If a development is not suitably served by the existing highways, or would create or add to highway safety problems or the efficiency of the highway for all road users, we will expect developers to take mitigating action or to make a financial contribution to make sure the necessary improvements go ahead. Any contributions will be secured through a planning obligation or planning condition'.

- 5.9** The proposed development will be served by the existing highway and the dedicated private access arrangement. The assessment of the traffic impact of the development proposals has demonstrated that the traffic associated with the development can be accommodated within the existing highway infrastructure, with no adverse impact on highway safety.

### **CSP 27 Parking Strategy**

'We will develop a parking strategy that will help to influence people's travel choice in line with the challenges set out in 'Delivering a Sustainable Transport System' (Department of Transport, November 2008).

The Strategy will include:

- A review of the number and location of short and long term car parking spaces, taking account of development proposals in Barnsley town centre
- An action plan to improve the management of new and existing car parks
- Maximum car parking standards
- Variable car parking charges dependant on location
- Parking permits including residential parking schemes
- A programme for monitoring car park usage'

- 5.10** The proposed level of parking has been provided in accordance with the Barnsley Council parking standards. The Travel Plan will manage the

proposed parking strategy and will try to help to reduce travel by single occupancy car trips.

### **CSP 28 Reducing the Impact of Road Travel**

'We will reduce the impact of road travel by:

- Developing and implementing robust, evidence based air quality action plans to improve air quality
- Working with our sub regional partners, fleet and freight operators to improve the efficiency of vehicles and goods delivery, and reduce exhaust emissions
- Implementing measures to ensure the current road system is used efficiently.

**5.11** As mentioned, the supporting Travel Plan document will address the aims and objectives of reducing the impact of single trip car usage. This document will support aims of sustainable transport where suitable.

### **Summary**

**5.12** Overall the proposed development meets the aims of the national and local planning policy. The development provides an ideal proposal, accessible by all, reducing the need for people to leave this area of Barnsley to carry out their local shop and served by frequent public transport services and good pedestrian and cycle links.

## **6. TRIP GENERATION AND EFFECT**

**6.1** This section investigates the new land use, the trip generation, mode and trip type is discussed in detail.

**6.2** The development will cause the largest effect at peak times; this section of the TA investigates the effect of providing an Aldi store in this location.

### **Traffic Surveys**

**6.3** Traffic surveys were undertaken on the local highway network on Friday 20<sup>th</sup> November and Saturday 21<sup>st</sup> November 2015. The surveys were undertaken between 15:00 – 19:00 hrs and 11:00 – 15:00 hrs on Friday and Saturday respectively.

**6.4** The surveys were undertaken at the following locations:

- A61 Old Mill Lane/ Unnamed road (bypass)/ Carphone warehouse – signalised junction
- A61 Old Mill Lane/ Wakefield Road/ Burton Road – signalised junction
- Unnamed Road (bypass)/ Wickes site access – roundabout junction
- Burton Road/ Unnamed road (bypass) – roundabout junction

**6.5** The peak hours were identified as being 16:00 – 17:00 hrs and 14:00 – 15:00 hrs for the weekday PM and Saturday peaks respectively.

### **Trip Generation**

**6.6** The TRICS database has been utilised to determine the trip generation for an Aldi Store with 1108sqm net RFA.

**6.7** The output file has been appended to this TA.

**6.8** Trip type will reflect the propensity for the proposed Aldi to generate trips, alongside diverting trips to alternative locations.

### **TRICS Parameters**

**6.9** Based on the TRICS Good Practice Guide, the following parameters were selected therefore making the sample representative;

#### Aldi Food Store

Main Lane Use – Retail - Discount Food Store

Area – Greater London Excluded

Range – 612sqm – 1350sqm

Weekday and Saturday Surveys Only

Surveys from the year 2000 onwards

Location – Edge of Town Centre, Suburban Area

**6.10** The TRICS output data is included within Appendix C.

**6.11** The TRICS data for the development site is shown within Tables 6.2 and 6.3.

### Linked Trips

- 6.12** These are trips that are already visiting a local destination and whilst carrying out the existing trip visit the Aldi store or vice versa.
- 6.13** Given that visitors are already attracted to the area, it is likely that during peak periods customers may visit two land uses.
- 6.14** A variety of studies have been carried out, predominantly TRICS report 14/1, which provides information in relation to food store trip types.

### Primary Transfer, Diverted and Pass-by Trips

- 6.15** It is found within TRICS report 14/1 that a store's location type can influence both the daily trip rate percentage of secondary trips. A correlation between location type and proximity to the nearest commercial area can be seen and has been shown to be statistically significant.
- 6.16** As a store's proximity to a town centre increases, the potential percentage of pass-by trips also increases.

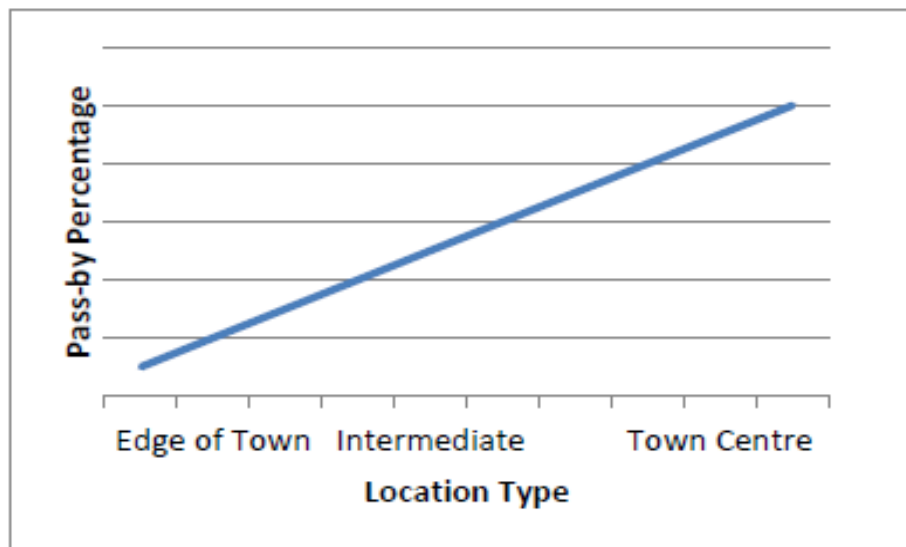


**Figure 6.1 – Secondary Trip Percentage in TRICS Report 14 / 1**

- 6.17** The important fact to note from the above is that there are no new trips included.
- 6.18** Given the flows in the study area and the volume of traffic using the surrounding junction, the propensity to divert from an existing route is considered to be high.
- Primary Transfer            50%
  - Pass-By                      30%
  - Diverted                     20%
- 6.19** Taking into account the above information the following table outlines the trips by type.

|                                                                       | Arrivals      | Departures    |
|-----------------------------------------------------------------------|---------------|---------------|
| Proposed Aldi Store<br>(1108 sqm Net RFA)<br>PM Peak<br>16:00 - 17:00 | 61<br>(5.535) | 62<br>(5.598) |
| Primary Transfer<br>(50% net total)                                   | 31            | 31            |
| Pass-By (30% net<br>total)                                            | 18            | 19            |
| Diverted (20% net<br>total)                                           | 12            | 12            |

**Table 6.2 – Weekday Trip Generation by Trip Type**

|                                                                        | Arrivals      | Departures    |
|------------------------------------------------------------------------|---------------|---------------|
| Proposed Aldi Store<br>(1108 sqm Net RFA)<br>Sat Peak<br>11:00 – 12:00 | 94<br>(8.465) | 91<br>(8.235) |
| Primary Transfer<br>(50% net total)                                    | 48            | 46            |
| Pass-By (30% net<br>total)                                             | 28            | 28            |
| Diverted (20% net<br>total)                                            | 18            | 17            |

**Table 6.3 – Saturday Trip Generation by Trip Type**

**6.20** It should be noted that no allowance has been made for linked trips between the proposed Aldi store and the existing Wickes store. Therefore, the primary transfer trips are likely to be lower than predicted.

### **Trip Distribution**

**6.21** The Aldi trip re-distribution is based upon observed turning patterns. The catchment is based upon the store primarily serving Barnsley.

**6.22** The Primary Transfer Trips have been distributed based on existing turning patterns. Typically these trips would currently be shopping elsewhere and it is highly likely that these trips would already be travelling on the highway network. There is no definitive evidence the primary transfer trips are considered as entirely new to the study network. Therefore, the assumption that 50% of the proposed trips being 'new' provides an extremely robust modelling assessment as it assumes that 50% of the trips connected to the Aldi store do not currently use any part of the study network, which is unlikely.

**6.23** It is considered that there will not be an increase in traffic within Barnsley at peak times, rather an alteration to existing turning patterns, however the

model assumes that the primary transfer trips would be new to provide a consistent assessment.

- 6.24** Primary transfer trips refers to the redistribution of trips made solely for the purpose of food retail. These trips would arrive and depart to/from the same point.
- 6.25** Diverted trips have been taken from the study area. Due to the provision of a food store at this location it may be more convenient to divert from the existing route, proportions from each road have been derived from the turning counts.
- 6.26** Pass-by trips have been distributed based on existing traffic patterns.

### Traffic Growth

- 6.27** Traffic growth factors for Barnsley have been calculated using TEMPRO and NTM. The resultant 2020 growth factors are shown in Table 6.4.

| Time Period     | Growth Factor (2015 – 2016) |
|-----------------|-----------------------------|
| Weekday PM Peak | 1.0152                      |
| Saturday Peak   | 1.0155                      |
| Time Period     | Growth Factor (2015 – 2021) |
| Weekday PM Peak | 1.0876                      |
| Saturday Peak   | 1.0891                      |

**Table 6.4 – Traffic Growth Factors: 2015 – 2016 / 2021**

### Junction Models

- 6.28** The junction models have considered the 2016 and 2021 'Base' and 'With Development' traffic scenarios for the Weekday PM and Saturday peak hour periods. This allows the effect of the development proposals to be assessed.

#### PICADY

#### Site Access

- 6.29** The site access was assessed utilising PICADY 5 modelling software. The results are demonstrated below:

| Arm                   | RFC   | Queue |
|-----------------------|-------|-------|
| 2016 With Development |       |       |
| Site Access           | 0.133 | 0     |
| Unnamed Road North    | 0     | 0     |
| 2021 With Development |       |       |
| Site Access           | 0.134 | 0     |
| Unnamed Road North    | 0     | 0     |

**Table 6.5 – Unnamed Road / Site Access PICADY Summary PM PEAK**

| Arm                   | RFC   | Queue |
|-----------------------|-------|-------|
| 2016 With Development |       |       |
| Site Access           | 0.204 | 0     |
| Unnamed Road North    | 0     | 0     |
| 2021 With Development |       |       |
| Site Access           | 0.205 | 0     |
| Unnamed Road North    | 0     | 0     |

**Table 6.6 – Unnamed Road / Site Access PICADY Summary SAT PEAK**

- 6.30** As shown above in tables 6.5 and 6.6, there is no clear indication of capacity issues at the sites access. RFC's remain well under a theoretical capacity of 0.850, with no queues predicted on all arms.

#### ARCADY

#### Unnamed Road (bypass)/ Site Access West Roundabout Junction

- 6.31** The bypass/ site access roundabout junction was assessed with ARCADY. The results of the modelling assessment are shown within Tables 6.5 and 6.6 for the weekday PM and Saturday peak hours respectively.

| Arm                   | RFC  | Queue |
|-----------------------|------|-------|
| 2016 Base             |      |       |
| Bypass N              | 0.70 | 3     |
| Site Access           | 0.09 | 0     |
| Bypass S              | 0.65 | 2     |
| 2016 With Development |      |       |
| Bypass N              | 0.73 | 3     |
| Site Access           | 0.18 | 0     |
| Bypass S              | 0.68 | 2     |
| 2021 Base             |      |       |
| Bypass N              | 0.75 | 3     |
| Site Access           | 0.10 | 0     |
| Bypass S              | 0.70 | 2     |
| 2021 With Development |      |       |
| Bypass N              | 0.78 | 4     |
| Site Access           | 0.20 | 0     |
| Bypass S              | 0.73 | 3     |

**Table 6.7 – Bypass/ Site Access Roundabout PICADY Results – Weekday PM Peak Hour**

| Arm                   | RFC  | Queue |
|-----------------------|------|-------|
| 2016 Base             |      |       |
| Bypass N              | 0.49 | 1     |
| Site Access           | 0.12 | 0     |
| Bypass S              | 0.63 | 2     |
| 2016 With Development |      |       |
| Bypass N              | 0.54 | 1     |
| Site Access           | 0.23 | 0     |
| Bypass S              | 0.69 | 2     |
| 2021 Base             |      |       |
| Bypass N              | 0.53 | 1     |
| Site Access           | 0.13 | 0     |
| Bypass S              | 0.68 | 2     |
| 2021 With Development |      |       |
| Bypass N              | 0.58 | 2     |
| Site Access           | 0.25 | 0     |
| Bypass S              | 0.74 | 3     |

**Table 6.8 – Bypass/ Site Access Roundabout PICADY Results – Saturday Peak Hour**

- 6.32** As can be seen, the modelling results predict that that the junction would operate with spare capacity for all the tested scenarios for the 2016 and 2021 assessments years during the weekday PM and Saturday peak hour time periods. The proposed development is predicted to have a negligible impact on the operation of the junction.

Burton Road/ Unnamed Road (bypass) East Roundabout Junction

- 6.33** The Burton Road/ bypass roundabout junction was assessed with ARCADY. The results of the modelling assessment are shown within Tables 6.7 and 6.8 for the weekday PM and Saturday peak hours respectively.

| Arm                   | RFC  | Queue |
|-----------------------|------|-------|
| 2016 Base             |      |       |
| Burton Road E         | 0.57 | 1     |
| Bypass                | 0.75 | 3     |
| Burton Road W         | 0.13 | 0     |
| 2016 With Development |      |       |
| Burton Road E         | 0.60 | 2     |
| Bypass                | 0.76 | 3     |
| Burton Road W         | 0.14 | 0     |

| 2021 Base             |      |   |
|-----------------------|------|---|
| Burton Road E         | 0.62 | 2 |
| Bypass                | 0.81 | 4 |
| Burton Road W         | 0.14 | 0 |
| 2021 With Development |      |   |
| Burton Road E         | 0.64 | 2 |
| Bypass                | 0.82 | 4 |
| Burton Road W         | 0.15 | 0 |

**Table 6.9 – Burton Road / Bypass Roundabout PICADY Results – Weekday PM Peak Hour**

| Arm                   | RFC  | Queue |
|-----------------------|------|-------|
| 2016 Base             |      |       |
| Burton Road E         | 0.50 | 1     |
| Bypass                | 0.60 | 2     |
| Burton Road W         | 0.06 | 0     |
| 2016 With Development |      |       |
| Burton Road E         | 0.53 | 1     |
| Bypass                | 0.61 | 2     |
| Burton Road W         | 0.08 | 0     |
| 2021 Base             |      |       |
| Burton Road E         | 0.54 | 1     |
| Bypass                | 0.64 | 2     |
| Burton Road W         | 0.06 | 0     |
| 2021 With Development |      |       |
| Burton Road E         | 0.57 | 1     |
| Bypass                | 0.65 | 2     |
| Burton Road W         | 0.07 | 0     |

**Table 6.10 – Burton Road / Bypass Roundabout PICADY Results – Saturday Peak Hour**

- 6.34** As can be seen, the modelling results predict that that the junction would operate with spare capacity for all the tested scenarios for the 2016 and 2021 assessments years during the weekday PM and Saturday peak hour time periods. The proposed development is predicted to have an imperceptible impact on the operation of the junction.

#### LINSIG

A61 Old Mill Lane/ Unnamed Road (bypass)/ Carphone Warehouse access

**6.35** The A16 signalised junction was assessed using LINSIG. The results of the modelling assessment are shown below for both the PM and Saturday peaks.

| Junction Arm<br>(Cycle Time<br>120 Seconds)                       | Base 2016 | Base 2016 +<br>Proposed<br>Development | Base 2021 | Base 2021 +<br>Development |
|-------------------------------------------------------------------|-----------|----------------------------------------|-----------|----------------------------|
| A61 Old Mill<br>Lane North,<br>Ahead                              | 3         | 3                                      | 3         | 2                          |
| A61 Old Mill<br>Lane North,<br>Left, Ahead                        | 4         | 4                                      | 5         | 5                          |
| A61 Old Mill<br>Lane North,<br>Ahead                              | 5         | 5                                      | 5         | 5                          |
| Unnamed By<br>Pass (West<br>Bound) Right,<br>Left                 | 9         | 10                                     | 11        | 12                         |
| A61 Old Mill<br>Lane South<br>Ahead, Left                         | 9         | 9                                      | 10        | 10                         |
| A61 Old Mill<br>Lane South,<br>Right 1                            | 7         | 7                                      | 8         | 9                          |
| A61 Old Mill<br>Lane South<br>Right 2                             | 6         | 6                                      | 6         | 7                          |
| Carphone<br>Warehouse<br>Egress, U-<br>Turn, Left                 | 0         | 0                                      | 0         | 0                          |
| A61 Old Mill<br>Lane North<br>With Right<br>Turn, Ahead 1         | 0         | 0                                      | 0         | 0                          |
| A61 Old Mill<br>Lane North<br>With Right<br>Turn, Ahead 2         | 0         | 0                                      | 0         | 0                          |
| A61 Old Mill<br>Lane North<br>With Right<br>Turn, Ahead,<br>Right | 0         | 0                                      | 0         | 0                          |
| A61 Old Mill<br>Lane South                                        | 0         | 0                                      | 0         | 0                          |

|                                           |       |       |     |       |
|-------------------------------------------|-------|-------|-----|-------|
| with Give-way, Ahead                      |       |       |     |       |
| Carphone Warehouse Right in Access, Right | 0     | 0     | 0   | 0     |
| PRC (%)                                   | 29.1% | 25.1% | 28% | 11.1% |

**Table 6.11 – A61 Signals LINSIG Output Summary – PM Peak**

| Junction Arm<br>(Cycle Time<br>120 Seconds)      | Base 2016 | Base 2016 +<br>Proposed<br>Development | Base 2021 | Base 2021 +<br>Development |
|--------------------------------------------------|-----------|----------------------------------------|-----------|----------------------------|
| A61 Old Mill Lane North, Ahead                   | 2         | 2                                      | 4         | 4                          |
| A61 Old Mill Lane North, Left, Ahead             | 5         | 6                                      | 8         | 8                          |
| A61 Old Mill Lane North, Ahead                   | 7         | 6                                      | 8         | 8                          |
| Unnamed By Pass (West Bound) Right, Left         | 7         | 8                                      | 9         | 9                          |
| A61 Old Mill Lane South Ahead, Left              | 5         | 7                                      | 8         | 8                          |
| A61 Old Mill Lane South, Right 1                 | 4         | 6                                      | 7         | 7                          |
| A61 Old Mill Lane South Right 2                  | 0         | 5                                      | 6         | 0                          |
| Carphone Warehouse Egress, U-Turn, Left          | 0         | 0                                      | 0         | 0                          |
| A61 Old Mill Lane North With Right Turn, Ahead 1 | 0         | 0                                      | 0         | 0                          |
| A61 Old Mill Lane North With Right Turn, Ahead 2 | 0         | 0                                      | 0         | 0                          |

|                                                       |       |       |      |      |
|-------------------------------------------------------|-------|-------|------|------|
| A61 Old Mill Lane North With Right Turn, Ahead, Right | 0     | 0     | 0    | 0    |
| A61 Old Mill Lane South with Give-way, Ahead          | 0     | 0     | 0    | 0    |
| Carphone Warehouse Right in Access, Right             | 0     | 0     | 0    | 0    |
| PRC (%)                                               | 47.3% | 33.3% | 1.8% | 1.5% |

**Table 6.12 – A61 Signals LINSIG Output Summary – SAT Peak**

- 6.36** The modelling shows that during the PM and Saturday peaks the junction is operating within capacity. With the proposed development added into the situation, junction capacity continues to operate similarly, with minimal increases of 1 to 2 vehicles queuing. PRC's continue to also show spare capacity, with all scenarios remaining above 0% PRC.

#### **Traffic Impact Summary**

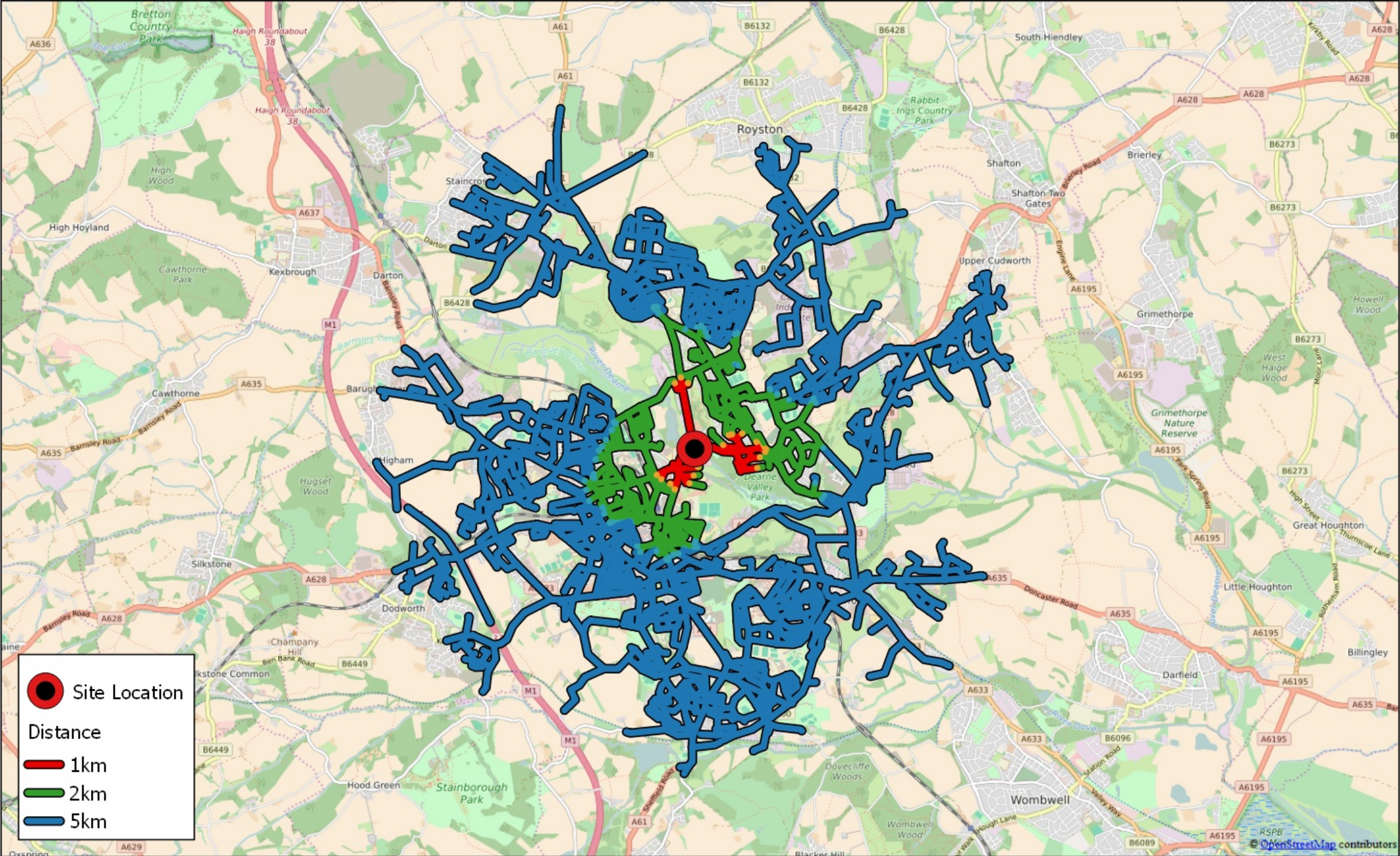
- 6.37** Overall, the proposed development is not predicted to create any significant issues at any of the junctions tested, with a negligible reduction in capacity and increases of small amounts of vehicles queuing on some arms.
- 6.38** On this basis it is considered that traffic associated with the development proposals can be adequately accommodated on the local highway network.

## **7. CONCLUSION**

- 7.1** This Transport Assessment has considered the highways and transportation implications of a proposed Aldi store off Old Mill Lane, Barnsley.
- 7.2** The existing footways are of sufficient standard, the propensity for walking and cycling trips is also seen as being high and the bus frequency is sufficient. On this basis the site is considered to be highly accessible by all non-car modes of travel.
- 7.3** The proposed development achieves the aspiration of national and local policy. The development provides a key destination necessary for all and therefore provides an alternative food retail destination for people to utilise for a food shop.
- 7.4** The car park has been designed to the standards of the local authority and would provide parking for blue badge holders and parents with children.
- 7.5** Servicing would take place on site in the fashion of a typical Aldi Store. The proposals are predicted to result in a minimal increase in service vehicles and are unlikely to result in an adverse impact on the operation of the highway network.
- 7.6** The traffic impact assessment has predicted that traffic associated with the development can be satisfactorily accommodated on the local highway network, with a minimal impact on existing capacity and queuing.
- 7.7** It is therefore concluded that the development proposals are acceptable in highways and transportation terms, and the proposals can be accommodated within the site with no adverse implications on the highway network.

## **APPENDIX A**

### Pedestrian and Cycle Catchment



|                                |                 |          |
|--------------------------------|-----------------|----------|
| DRAWN BY: RF                   | CHECKED BY: JA  | REV: N/A |
| DRAWING REFERENCE: T129/GIS/02 |                 |          |
| DATE: 12/9/2016                | SCALE: 1:75,000 |          |



**EXIGO**  
PROJECT SOLUTIONS

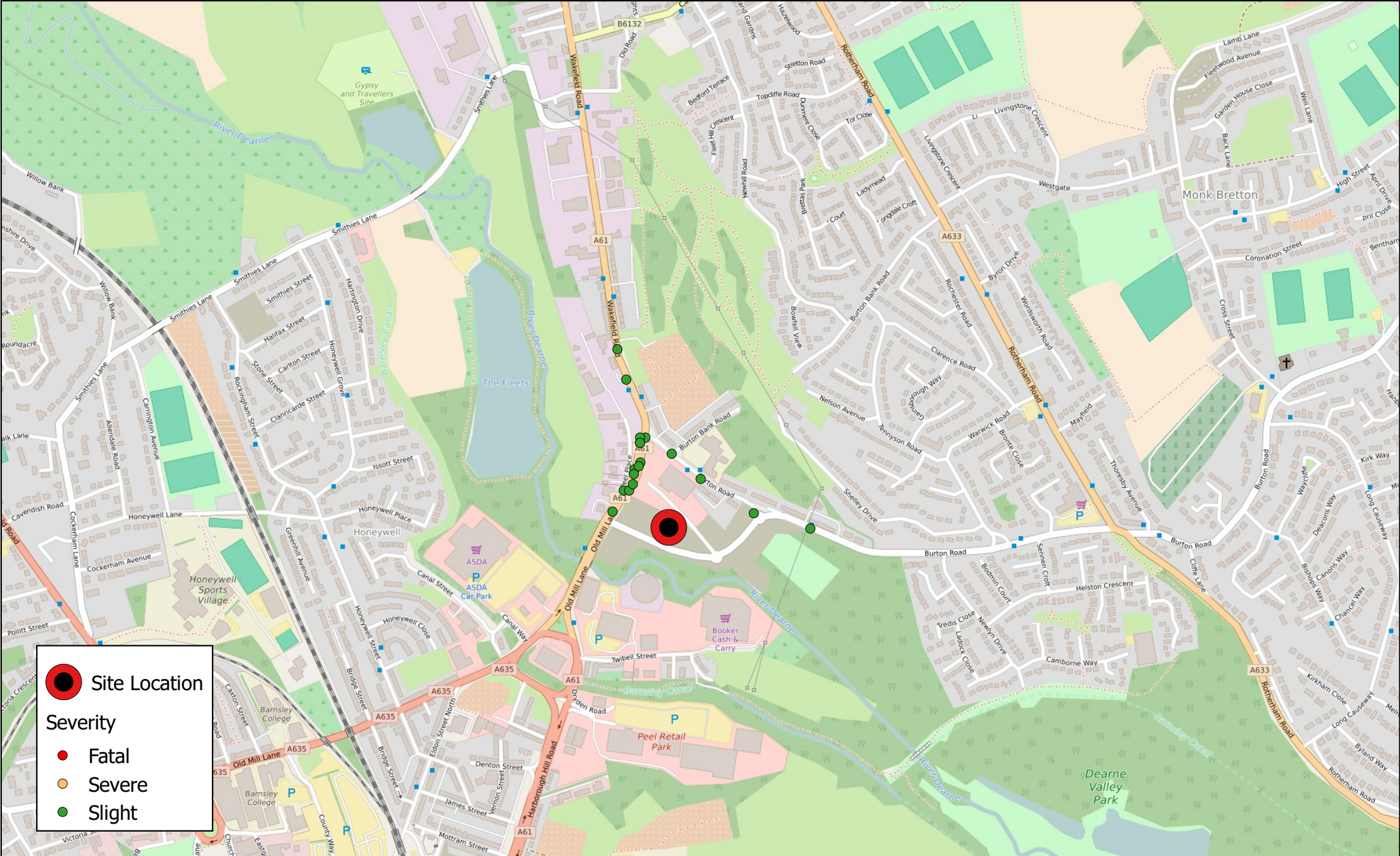
Unit 2c - The Gateway, Silkwood Park, Wakefield, WF5 9TJ

|                                   |
|-----------------------------------|
| SCHEME<br>Old Mill Lane, Barnsley |
| ON BEHALF OF<br>Aldi Stores Ltd   |

|                                          |
|------------------------------------------|
| DRAWING TITLE<br><br>Distance Isochrones |
|------------------------------------------|

## **APPENDIX B**

### Accident Data



**Site Location**

**Severity**

- Fatal
- Severe
- Slight

|                    |                |          |
|--------------------|----------------|----------|
| DRAWN BY: RF       | CHECKED BY: JA | REV: N/A |
| DRAWING REFERENCE: | T115/GIS/03    |          |
| DATE: 12/9/2016    | SCALE:         | 1:15,000 |

**EXIGO**  
 PROJECT SOLUTIONS

Unit 2c - The Gateway, Silkwood Park, Wakefield, WF5 9TJ

|                         |
|-------------------------|
| SCHEME                  |
| Old Mill Lane, Barnsley |
| ON BEHALF OF            |
| Aldi Stores Ltd         |

|               |
|---------------|
| DRAWING TITLE |
| Accident Data |