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Proposed Lidl Foodstore, New Hey Road, Huddersfield.

Transport Assessment

September 2020

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1 Introduction

1.1 Background

Lidl Great Britain Limited have appointed EJS Associates (EJSA) to assess the transport and highway implications of a proposed Lidl Foodstore at New Hey Road, Huddersfield, on the site of the former Spotted Cow public house (now demolished). The site is bounded by New Hey Road (A640) to the south; residential premises to the east and north, and open land to the west (which is allocated or housing).

A planning application is to be submitted for a Lidl Foodstore with a Gross Internal Area (GIA) of 2,061m^2, a Retail Sales Area of 1,377m^2, and 113 car parking spaces (7 of which are for Disabled Users, 8 of which are for "Parent & Child" users, and 2 are for the electric charging points).

A planning application was submitted to Kirklees Metropolitan District Council (KMBC) on this site in April 2019 for the Erection of an A1 foodstore with associated parking, servicing areas and landscaping (planning application reference: 2019/91433). This planning application was refused in February 2020 for 3 reasons, none of which are related to highways or transportation. The 3 reasons for refusal were:

1. “The site comprises housing allocation (HS38) in the Kirklees Local Plan. The proposed retail development is therefore contrary to the provisions of the Development Plan and the loss of the housing land would prejudice the Council’s ability to deliver the housing growth required over the lifetime of the Plan.

2. The development would result in a significant adverse impact on the vitality of existing Local Centres when assessed cumulatively with planning application 2019/91566. This would be contrary to Policy LP13 of the Kirklees Local Plan and guidance in the National Planning Policy Framework.

3. The site lies within a predominantly residential area and the introduction of a large food store with prominent parking area to the frontage and associated signage would be at odds with the prevailing character of the area and would harm visual amenity, contrary to Policy LP24 of the Kirklees Local Plan and guidance in the National Planning Policy Framework.”

KMBC Highways provided a consultation response as part of the former application which is attached at Appendix A. The consultation response concluded that:

“Overall the proposal is considered acceptable from a highway perspective subject to the inclusion of conditions…”.

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The proposed scheme is almost identical to the former scheme with regard to highways and transportation and it is therefore considered that the proposed scheme will be acceptable in this regard.

1.2 Purpose of the Report

This Transport Assessment has been produced in accordance with the guidance provided in "Guidance on Transport Assessment" (GTA), published by the Department for Transport in March 2007, which, although now withdrawn, still remains a source of much useful guidance. Appendix B of that guidance shows that a Transport Assessment is required for a Food Retail use (Use Class A1) of greater than 800m^2 Gross Floor Area (GFA). The proposed new Lidl Foodstore is to have a GIA of 2,061m^2. Hence, this report is in the form of a full Transport Assessment.

This report has been prepared to support the planning application for the proposed Foodstore. The purpose of this report is to comment on the accessibility of the site in terms of public transport, pedestrians and cyclists and to consider the feasibility of the proposals in traffic and highway terms. The report describes the proposed access arrangements and shows that changes to the existing road network, other than the creation of the new access junction, are not required.

1.3 Structure of the Document

This report contains the following sections:

Section 2 – Policy Context - reviews the National and Local policies which are appropriate to this development.

Section 3 – Existing Conditions - describes the existing site and how it operates.

Section 4 – Public Transport Accessibility - reviews the current level of public transport in the vicinity of the development.

Section 5 – Walking / Cycling Accessibility & Inclusive Mobility - reviews the existing walking and cycling routes to the site as well as features designed to make the site available to all users.

Section 6 – Accident Analysis – investigates accidents around the site commenting on frequency, severity, and any causal issues.

Section 7 – Proposed Development - describes how the site will be laid out and operate.

Section 8 – Vehicular Access – looks at the access to the proposed Foodstore from the surrounding road network and details the impact it will have on the surrounding highway network and any mitigation measures required.

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Section 9 – Conclusion - concludes the report and details the findings of the Transport Assessment.

Various Figures and Appendices referred to in this report are included at the end of this document.

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2 Policy Context

2.1 Introduction

This chapter covers the planning policies relevant to the nature and location of the proposed development. It outlines the policies which have defined the design of the site and comments on how the proposed development fits within the guidelines set within the planning policies. The policies actually noted are those which refer to 'highways' and/or 'transportation' matters: those dealing with other issues will be dealt with by others.

2.2 National Planning Policy

2.2.1 National Planning Policy Framework (NPPF).

Published in February 2019 and most recently updated in June 2019, the current version of NPPF superseded the 2018 version. NPPF gives broad outlines of policy guidance and expects local authorities and local people to produce their own policies.

NPPF promotes sustainable transport. It confirms that "all developments that generate significant amounts of movements should be supported by a Transport Statement or Transport Assessment." It notes that 'opportunities for sustainable transport modes should be taken up', and that 'safe and suitable access to the site should be achieved for all people'. Decisions should ensure that 'the need to travel will be minimised and the use of sustainable transport modes maximised'. Developments should 'give priority to pedestrians and cycle movements, and have access to high quality public transport facilities'.

However, NPPF notes that "development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe." This maintains the 2012 guidance – "significant" impacts are no longer to be viewed as fatal to proposed developments, they must be (at least) "severe".

It notes that applications for development should,

a) "give priority first to pedestrian and cycle movements" and "second - so far as possible - to facilitating access to high quality public transport ...

b) "address the needs of people with disabilities" ..

c) "create places that are safe, secure and attractive - which minimise the scope for conflicts between pedestrians, cyclists and vehicles" ...

d) "allow for the efficient delivery of goods" ...

e) "be designed to enable charging of plug-in and other ultra-low emission vehicles" ...

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2.2.2 National Planning Policy Guidance (NPPG).

NPPG was issued to supplement the 2012 version of NPPF, and has not been revised since 2014. It contains 15 paragraphs under the heading "Travel plans, transport assessments and statements in decision making".

Paragraph 002 of NPPG notes that Travel Plans, Transport Assessments and Statements are all ways of assessing and mitigating the negative transport impacts of development in order to promote sustainability, and that they are required for developments which generate significant amounts of movements.

Paragraph 006 of NPPG notes that Travel Plans, Transport Assessments and Statements can positively contribute to:

- encouraging sustainable travel;
- lessening traffic generation and its detrimental impacts;
- reducing carbon emissions and climate impacts;
- creating accessible, connected, inclusive communities;
- improving health outcomes and quality of life;
- improving road safety; and
- reducing the need for new development to increase existing road capacity or provide new roads.

Paragraph 007 of NPPG notes that Travel Plans, Transport Assessments and Statements should be:

- proportionate to the size and scope of the proposed development to which they relate and build on existing information wherever possible;
- established at the earliest practicable possible stage of a development proposal;
- be tailored to particular local circumstances (other locally-determined factors and information beyond those which are set out in this guidance may need to be considered in these studies provided there is robust evidence for doing so locally);
- be brought forward through collaborative ongoing working between the Local Planning Authority/ Transport Authority, transport operators, Rail Network Operators, Highways Agency where there may be implications for the strategic road network and other relevant bodies. Engaging communities and local businesses in Travel Plans, Transport Assessments and Statements can be beneficial in positively supporting higher levels of walking and cycling (which in turn can

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encourage greater social inclusion, community cohesion and healthier communities).

Paragraph 013 of NPPG notes that In determining whether a Transport Assessment or Statement will be needed for a proposed development local planning authorities should take into account the following considerations:

- the Transport Assessment and Statement policies (if any) of the Local Plan;
- the scale of the proposed development and its potential for additional trip generation (smaller applications with limited impacts may not need a Transport Assessment or Statement);
- existing intensity of transport use and the availability of public transport;
- proximity to nearby environmental designations or sensitive areas ;
- impact on other priorities/strategies (such as promoting walking and cycling);
- the cumulative impacts of multiple developments within a particular area; and
- whether there are particular types of impacts around which to focus the Transport Assessment or Statement (e.g. assessing traffic generated at peak times).

Paragraph 014 of NPPG notes that key issues to consider at the start of preparing a Transport Assessment or Statement may include:

- the planning context of the development proposal;
- appropriate study parameters (i.e. area, scope and duration of study);
- assessment of public transport capacity, walking/ cycling capacity and road network capacity;
- road trip generation and trip distribution methodologies and/or assumptions about the development proposal;
- measures to promote sustainable travel;
- safety implications of development; and
- mitigation measures (where applicable) – including scope and implementation strategy.

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Paragraph 015 of NPPG notes that the scope and level of detail in a Transport Assessment or Statement will vary from site to site but the following should be considered when settling the scope of the proposed assessment:

- information about the proposed development, site layout, (particularly proposed transport access and layout across all modes of transport)
- information about neighbouring uses, amenity and character, existing functional classification of the nearby road network;
- data about existing public transport provision, including provision/ frequency of services and proposed public transport changes;
- a qualitative and quantitative description of the travel characteristics of the proposed development, including movements across all modes of transport that would result from the development and in the vicinity of the site;
- an assessment of trips from all directly relevant committed development in the area (i.e. development that there is a reasonable degree of certainty will proceed within the next three years);
- data about current traffic flows on links and at junctions (including by different modes of transport and the volume and type of vehicles) within the study area and identification of critical links and junctions on the highways network;
- an analysis of the injury accident records on the public highway in the vicinity of the site access for the most recent three-year period, or five-year period if the proposed site has been identified as within a high accident area;
- an assessment of the likely associated environmental impacts of transport related to the development, particularly in relation to proximity to environmentally sensitive areas (such as air quality management areas or noise sensitive areas);
- measures to improve the accessibility of the location (such as provision/enhancement of nearby footpath and cycle path linkages) where these are necessary to make the development acceptable in planning terms;
- a description of parking facilities in the area and the parking strategy of the development;
- ways of encouraging environmental sustainability by reducing the need to travel; and
- measures to mitigate the residual impacts of development (such as improvements to the public transport network, introducing walking and cycling facilities, physical improvements to existing roads etc.

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2.3 Local Planning Policy

2.3.1 West Yorkshire Local Transport Plan 3 – MyJourney (LTP3).

This document is intended to run from 2011 to 2026 and replaces the West Yorkshire Local Transport Plan 2.

The plan has 3 objectives:

1. Economy. To improve connectivity to support economic activity and growth in West Yorkshire and the Leeds City Region.
2. Low Carbon. To make substantial progress towards a low carbon, sustainable transport system for West Yorkshire, while recognising transport's contribution to national carbon reduction plans.
3. Quality of life. To enhance the quality of life of people living in, working in and visiting West Yorkshire.

The 15 year MyJourney strategy has four components representing key components of a journey.

1. Transport Assets (roads, traffic lights and bus stops for example that make up the network);
2. Travel Choices (helping customers make the most sustainable choice about when and how they travel);
3. Connectivity (providing an integrated, safe, reliable transport journey); and
4. Enhancement (improving the overall system to make it more ft for journeys in the future).

The strategy has also been shaped by five cross-cutting themes:

1. Equality (assessed through an integrated Sustainability Appraisal);
2. Safety (reflecting relevant safety and security standards);
3. The Environment (improving the natural and built environment):
4. Decision Making at the appropriate level; and
5. seeking to make best use of Alternative Funding and Delivery Mechanisms.

From the Strategy, 6 Big Ideas have been identified that will drive progress towards the Objectives. These are:

1. Enhanced travel information;
2. Fully integrated ticketing;
3. Investment in low carbon modes of transport;
4. A new approach to buses;
5. Phasing in stronger demand management; and
6. New approach to network management.

2.3.2 Kirklees Local Plan

Following an independent examination of the Local Plan by the Planning Inspectorate the council has received the inspector's report relating to the Kirklees Local Plan. The appointed inspectors have concluded that with the recommended main modifications (consulted on between 20th August 2018 and 1st October 2018), the Kirklees Local Plan is sound and compliant with the legal requirements.

The conclusions of the inspector's report mean that the council can proceed towards adoption of the Local Plan. The adoption of the Local Plan was considered and

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adopted by Councillors at an extraordinary Council meeting on Wednesday 27th February 2019.

The Local Plan has 10 Strategic Objectives.

Transport related issues are noted at Chapter 10. The A640 New Hey Road is noted as part of the West Yorkshire Key Route Network (at Picture 1) from its junction with the Huddersfield Ring Road in the east to its junction with the M62 in the west, at Junction 23. The M62, is of course, part of the Strategic Road Network managed by Highways England.

Policy PLP 20 Sustainable Travel, requires that Transport Assessments and Travel Plans be submitted for developments.

Policy PLP 21 Highways safety and access, also requires Transport Assessments, but gives further information on safe access to developments.

Policy PLP 22 Parking, gives advice on parking, although KMBC do not have a formal Parking Standards document.

Policy PLP 23 Core walking and cycling network, notes that these will be maintained and enhanced where possible.

This Transport Assessment (and the accompanying Framework Travel Plan) have been prepared generally in accordance with this advice.

2.4 Travel Planning

The Government wish to raise awareness of the impacts of travel decisions, and to promote the widespread use of Travel Plans. Therefore, as part of this proposed development a bespoke Travel Plan has been developed and is contained in a stand-alone document. It covers in greater detail the issues of accessibility to the site by non-car modes of transport, and considers local, and national, policies with regard to the development of Objectives and the setting of Targets for modal shift for the proposed development.

NPPF notes the importance of Travel Plans at paragraph 111 and NPPG devotes 4 paragraphs to Travel Plans.

The Council's guidance also covers the provision of Travel Plans as noted above.

2.5 Compliance

This Transport Assessment document, and the associated Travel Plan document show that the proposed development fully complies with the current transport related policies of National Government, Kirklees Metropolitan Borough Council (the

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Highway Authority), and the Local Authorities who subscribe to the West Yorkshire Local Transport Plan.

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3 Existing Conditions

3.1 Existing Site and Location

The site is currently open, since the demolition of the former Spotted Cow public house.

The site is currently served by two separate entrances off New Hey Road.

The site is within the urban area known as Salendine Nook: approximately 3.5km to the north west of Huddersfield Town Centre.

The site fronts (to the south) onto New Hey Road (A640), which runs approximately north-west to south-east. To the north and east of the site are residential properties, and there is an extant planning permission for residential development to the west of the site.

Residential properties front onto the opposite side of New Hey Road to the site, with the entrances to Huddersfield New College and Salendine Nook High School Academy campuses less then 100m away .

A plan of the location is shown at Figure 1.

3.2 Surrounding Highway Network

New Hey Road (A640), which runs approximately north-west to south-east at the site. It is a single carriageway road, of an urban nature, with the central area hatched off as it passes the site There is a footway on both sides, and street lighting is in place, as is a 30mph speed limit. It gives access to areas of residential developments, with some side road junctions and direct accesses.

At the north-western end of New Hey Road is the M62 junction 23, Outlane, (which is a partial one with only west facing slip-roads), before it passes further to the west into more rural areas. At its south-eastern end, New Hey Road joins the Huddersfield Ring Road.

There are double yellow lines on both sides of New Hey Road, with Advisory Cycle Lane markings on both sides.

Several central islands provide locations at which pedestrians may cross the road, although not all have dropped kerbs or tactile paving. A Zebra Crossing is situated immediately to the east of the site.

There are bus stops on New Hey Road immediately to the east and west of the site providing access to services in both directions.

Dunsmore Drive is a small residential cul-de-sac which has its junction with New Hey Road within the frontage for the site.

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3.3 Existing Traffic Operations

To ascertain traffic conditions, traffic counts were taken on behalf of Lidl Great Britain Limited in the vicinity of the site as part of the previous application, on Thursday 11 October 2018, Friday 12 October 2018 and Saturday 13 October 2018. Counts of pedestrians crossing New Hey Road, and their location, were also taken at the same time. These surveys were undertaken within the last 2 years and within the appropriate three year timeframe suggested within the Department for Transport's Planning Practice Guidance. These have been used in the assessments discussed later in this report.

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4 Public Transport Accessibility

4.1 Introduction

Public Transport is useful in ensuring that social exclusion is minimised and that a choice of transport modes is available. The following sections give a brief summary of the public transport accessibility of the proposed development.

4.2 Buses

The nearest public bus stops, for both directions of travel, are located on New Hey Road, immediately to the east, and west, of the site. All stops have timetable information and a litter bin. Table 4.1 below, details the bus services which use these bus stops, and their frequencies.

Table 4-1 – Bus Services

Service Number	Services From / To	Frequency Monday to Friday	Frequency Saturdays	Frequency Sundays
370 / 371	Rawthorpe - Lindley service run by First.	Every 20 minutes.	Every 20 minutes.	Every 60 minutes.
370 / 371	Huddersfield - Salendine Nook Circular service run by Streamline.	Every 40 minutes.	-	-
536/537	Halifax - Huddersfield service run by First and Yorkshire Tiger.	Every 60 minutes.	Every 60 minutes.	Every 60 minutes.
900/901/902	Huddesfield - Hebden Bridge and Huddersfield - Rishworth services run by TLC.	Every 180 minutes.	3 buses per day	3 buses per day

These bus services are understood to be accurate at time of writing (September 2020). However, these may be reduced services due to the Covid-19 pandemic and associated lockdown restrictions in England. Hence at a minimum, it can be seen that a minimum of 6 buses per hour pass the site, in each direction, giving access to a wide area, including Huddersfield Town Centre.

There is also a service which terminates at the Huddersfield New College and which will be within easy walking distance of the site, however it is understood this service is not currently in operation due to service reductions as a result of the Covid-19 pandemic. Table 4.2 below provides details of this additional bus service regardless, which may be reinstated in the future.

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Table 4-2 – Bus Services

Service Number	Services From / To	Frequency Monday to Friday	Frequency Saturdays	Frequency Sundays
373	Huddersfield Westgate - Huddersfield New College service run by First.	Every 20 minutes.	-	-

Hence, it can be seen that an additional minimum of 3 buses per hour, in each direction, are likely to be within easy walking distance of the site giving access to a wide area.

Therefore, access by bus is excellent and readily available.

4.3 Railway Network

The nearest railway station is in Huddersfield - approximately 3.5km from the site, as the crow flies, but slightly longer by road. Therefore, given the distance between the station and the site it is considered that rail travel will not be significant for this development.

4.4 Taxi Provision

Taxis operate throughout the area and will be a useful source of transport for most journeys.

4.5 Summary

Existing public transport to the proposed store is located close to the site – for both directions of travel, with a minimum of 9 buses per hour. Hence, excellent public transport facilities are available to serve the site.

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5 Walking / Cycling Accessibility and Inclusive Mobility

5.1 Introduction

The provision of a new Lidl Foodstore provides the opportunity to promote sustainable travel patterns in the local area. The provision of improved accessibility to the site is intended to encourage customers to use sustainable transport modes, and even to alter their current travel patterns. This chapter reviews the proposed site's accessibility by both walking and cycling as well as for those with special needs to ensure inclusive mobility to the proposed development.

5.2 Multi-Modal Assessment

Although now withdrawn, the Department for Transport's "Guidance on Transport Assessments" stated that the initial step of assessing Trip Generation for a proposal is to provide an estimation of how many person trips are likely to be generated. These trips should be derived from industry standard databases such as TRICS, in which multi-modal assessments can be carried out to identify the number of person trips by mode and time period.

In line with this guidance, an interrogation of the TRICS database (version 7.5.3) for all Discount Foodstores has been carried out. (No Irish sites have been included as their characteristics are different from those of Great Britain.) TRICS category 01/C – "Retail – Discount Foodstores" has been used over the full range of store size and date range. The assessment has been carried out based on "Friday" and for "Saturday" only.

The results of this analysis (using only multi-modal counts) are noted below, at Tables 5-1 and 5-2. These are the same rates adopted within the Transport Assessment for the original planning application and which were approved by KMBC. They are therefore considered appropriate.

Table 5.1 – Percentage of Person Trips by Mode – all day Friday.

Time Period 07.00 – 19.00	Car trips		Pedestrians		Cyclists		Public Transport	
	Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep
Lidl store	88%	88%	9%	9%	2%	2%	1%	1%

Table 5.2 – Percentage of Person Trips by Mode – all day Saturday.

Time Period 07.00 – 19.00	Car trips		Pedestrians		Cyclists		Public Transport	
	Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep
Lidl store	72%	72%	24%	24%	1%	1%	3%	3%

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5.3 Access for Pedestrians

The proposed development site is easily accessed by pedestrians. There is a footway on both sides of New Hey Road, and there are also footways on both sides of the other roads in the vicinity.

There is a Zebra Crossing across New Hey Road immediately to the east of the site.

Guidance, offered by the Chartered Institution of Highways and Transportation (CIHT), suggests a maximum acceptable walking distance of 400m (and preferable distance of less than 300m) to access the nearest bus stop *('Planning for Public Transport in Developments 1999'*), as well as general figures as follows:

Table 5.3 – Walking Distances.

	Town Centres (m)	Commuting (m)	Elsewhere (m)
Desirable	200	500	400
Acceptable	400	1000	800
Preferred	800	2000	1200

The bus stops on New Hey Road are both well within 300m of the site and are, therefore, well within the desirable walking distance. Similarly, the bus stops serving Huddersfield New College are well within walking distance.

Transport Statistics Great Britain (TSGB) provides an accurate, comprehensive and meaningful picture of transport patronage within Great Britain. The document includes data relating to the average distances people are prepared to travel by varying modes. TSGB shows that people are prepared to walk on average a distance of 1km. It is normally accepted that walking is the most important mode of travel at the local level and offers the greatest potential to replace short car trips, particularly under 2 kilometers. It is clear that, the 1km walking catchment includes large areas of urban Huddersfield – see Figure 2, which shows the 400m, 800m and 1,200m radii around the site, and the locations of the nearest bus stops.

Hence, it can be seen that pedestrian connectivity is good and walking distances reasonable. This will ensure that pedestrians will be able to use the new development, and that walking will form a substantial proportion of staff and customer trips.

5.4 Access for Cyclists

There are Advisory Cycle Lane markings on both sides of new hey Road in the vicinity of the site.

It is normally accepted that cycling is a feasible alternative mode of transport particularly for journeys of up to 2km length, and that 5km is the normal maximum which might be expected for a cycle journey. Figure 3 shows the 2km and 5km radii from the site, and it can be seen that large proportions of the surrounding urban

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areas of Huddersfield, including the Town Centre, and out to Elland, Greetland, Brackenhall, Blackmoorfoot, Linthwaite, Outlane, and Sowood are within a convenient cycling distance of the site.

Cycle parking will be provided as part of the development. 5 Sheffield-type stands are to be provided, located under the building canopy, and so sheltered from the elements.

5.5 Inclusive Mobility

To conform to national guidance, and local plan policy, the development will provide sufficient and adequate accessibility for all users. Disabled parking will be provided at 7 spaces, and 8 further spaces are to be allocated for "parent & child" use. Pedestrian routes are to be clearly delineated within the site. Dropped kerbs will also be provided throughout the site on key pedestrian desire lines and at the site access.

5.6 Summary

This section has demonstrated that the proposed development will provide excellent accessibility for pedestrians and cyclists. As shown, the site lies within 1,200m walking distance of a large catchment, and the surrounding settlements are within cycling distance. Suitable cycle parking will be provided.

Additionally, the development will provide sufficient and adequate accessibility to all users. Disabled parking will be provided in accordance with both National and Local standards and key pedestrian routes will be clearly delineated and feature dropped kerbs.

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6 Accident Analysis

6.1 Introduction

In order to determine whether the proposed development is likely to have any impact upon accident rates local to the site, an accident analysis has been undertaken. This analysis assesses 'Personal Injury Accidents' (PIAs) in the vicinity of the proposed development. Accident data for reported PIAs within this study area has been extracted from the TA associated with the former planning application, which was provided by KMBC for the latest 5 year period available, from 1/11/2013 to 31/10/2018. PIAs occurring from the intervening period up until 31/12/2019 have been reviewed using data available from the on-line Crashmap database.

This section summarises the results of the accident analysis, before examining in detail the PIAs by location. A number of conclusions are then made. The raw accident data and a plan are located at Appendix B, at the rear of this report.

6.2 Summary of Accident Analysis

Table 6-1 below summarises the accidents in proximity to the site over the period. The table shows that 5 personal injury accidents occurred during the five year period. 3 of the accidents were slight, and 2 were serious. There have been no fatal accidents. It is noted that the data provided by KMBC showed 4 PIAs occurring in proximity to the site and a review of the Crashmap database shows an additional 1 PIA. This additional PIA is slight in severity and occurred at the junction with Winfield Drive. This PIA occurred on 11 March 2016. No further PIAs have been picked up from Crashmap in the intervening period up to 31/12/2019.

Figure 6-1 – Number of accidents per year and severity

Severity	2014	2015	2016	2017	2018	Total
Slight	0	0	1	2	0	3
Serious	0	0	1	0	1	2
Fatal	0	0	0	0	0	0
Total	0	0	2	2	1	5

6.3 Detailed Accident Analysis

The recorded accident details have been collated to identify any specific trends .

Accident reference 3CC0327 occurred at 8.30 am on Monday 12 December 2016. A car travelling straight ahead on New Hey Road towards the M62 knocked down a pedestrian who was attempting to cross the road. The 11 year old male pedestrian was seriously injured. This accident occurred at the pedestrian island that is to be removed as part of the Lidl development, and the question of whether this island should be replaced is dealt with further, below.

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Accident reference 4471539 occurred at 5.00 pm on Friday 7 April 2017. A motorcycle was travelling straight ahead on New Hey Road when a pedestrian crossed without looking. The pedestrian clipped the motorcycle and fell to the floor. The 37 year old male pedestrian was slightly injured.

Accident reference 4AR0745 occurred at 12.35 pm on Friday 27 October 2017. A car entered New Hey Road and collided with a motorcycle already travelling straight ahead. The 64 year old male motorcycle rider was slightly injured.

Accident reference 5480284 occurred at 3.57 am on Sunday 8 April 2018. A taxi travelling straight ahead on New Hey Road towards the M62 knocked down a pedestrian who was attempting to cross the road on the Zebra Crossing. The 35 year old male pedestrian was seriously injured.

The final accident has been reviewed using Crashmap and occurred on Friday 11 March 2016. Limited details are available on this database, but it is confirmed that the PIA involved 1 vehicle and that there was 1 casualty.

6.4 Discussion

Of the 5 accidents which occurred, 3 involved pedestrians. There is a college and a school nearby and large numbers of pedestrians cross New Hey Road - mostly accessing the school and college. There is a Zebra Crossing, but also a number of refuge islands in New Hey Road.

Lidl proposed not to re-locate one of these islands as part of the former planning application. It is generally accepted that alternative, less safe pedestrian crossings should not be provided in close proximity to safer crossings, such as a Zebra Crossing. This island is less than 50m from the Zebra Crossing, and by providing it, the Highway Authority would appear to be encouraging pedestrians to cross at a less safe location, rather than encouraging pedestrians to cross at the safer location, the Zebra Crossing. Therefore, the removal of the island should improve Road Safety generally.

Moreover, reference to the accident data shows that an 11 year old boy was knocked down when using this island, at 8.30 in the morning on a weekday. It is assumed this boy was on his way to school, and his serious injury is a classic example of why this sort of crossing feature should not be located here.

However, KMBC required the island to be re-located as part of the former planning application, so Lidl will do so.

6.5 Discussion

The proposed development will not have a detrimental impact on the number or severity of accidents in the area.

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7 Proposed Development

7.1 Proposed site layout

The development proposals are to construct a new Lidl Foodstore with a Gross Internal Area (GIA) of 2,061m^2, a Retail Sales Area of 1,377m^2, and 113 car parking spaces (7 of which are for Disabled Users, 8 of which are for "Parent & Child" users, and 2 are for the electric charging points).

Cycle parking is to be provided. 5 Sheffield-type stands are to be provided, located under the building canopy, and so sheltered from the elements.

The proposed layout of the site is shown attached, which includes indicatively the landscaping within and around the site which is to be incorporated in to the development.

7.2 Site Access

It is proposed that access to the Foodstore will be via a new junction off New Hey Road by modifying the existing easterly access. The westerly access will be closed off - as shown on the attached plan.

The existing pedestrian island is to be removed (to allow for Lidl's HGV manoeuvre) A new pedestrian crossing, via a new refuge island, will be installed to the west of the Dunsmoor Drive junction as shown on the attached plan. The proposed access arrangement is identical to the arrangement proposed as part of the former planning application, which was found to be acceptable.

A Stage 1 Road Safety Audit (RSA) has been undertaken of the proposed access arrangement by Traffic Management Consultants Ltd. All items raised within the Stage 1 RSA have been addressed within a Designer's Response. Both the Stage 1 RSA and Designers Response are attached at Appendix C.

7.3 Car Parking

KMBC does not have defined parking standards, but Lidl believe the proposed provision is appropriate based on experience at other stores. Car parking provision has not changed to that agreed as part of the original application, therefore it is considered appropriate.

7.4 Deliveries

It is anticipated that deliveries would be able to occur at any time during the store operating hours.

The store will have normally have 1 delivery per day (although this may rise to 2 per day at busy periods such as Christmas, when additional deliveries are required). The HGV brings goods to the store in "cages". The driver reverses the HGV up to the docking bay so that the trailer is level with it. The driver pulls a "hood" over the

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docked vehicle trailer. The driver then unlocks the warehouse door and rolls the cages off the trailer into the warehouse. He then removes cages of waste and packaging etc from the warehouse onto the trailer. He then locks the warehouse door and removes the hood, and rives away. Thus, there are no refuse vehicle movements, no deliveries from any other supplier, and there are no commercial bins required outside of the store building.

Lidl will service this site from the M62. HGV's will not turn left out of the site.

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8 Vehicular Access

8.1 Vehicular Accessibility to the Development

As detailed within Section 7 above, access to the Foodstore will be made via a new access off New Hey Road. This will be a new, high standard access with radiused kerbs.

8.2 Traffic Flows and Peak Hours

To assess the levels of traffic currently on the road network, Lidl commissioned a traffic survey as part of the original application. This took place on Thursday 11 October 2018, Friday 12 October 2018 and Saturday 13 October 2018, between the hours of 07.00 and 19.00, as discussed in Chapter 3.

To ensure that the numerical assessment considers the worst case, the current traffic flow levels were added to those predicted to be generated by the Foodstore to ascertain the combined peak hours.

Table 8.1 – Friday Evening flows.

	Friday				
	14.00-15.00	15.00-16.00	16.00-17.00	17.00-18.00	18.00-19.00
Flows on New Hey Road (w)	528	581	614	559	508
Flows on New Hey Road (e)	593	735	833	728	556
Total	1121	1316	1447	1287	1064
Lidl Generated Flows (2 way)	262	252	213	206	161
Grand Total	1383	1568	1660	1493	1225

It can be seen that the maximum flow on the road network is between 16.00 and 17.00, but the maximum flow generated by the proposed Lidl development is between 14.00 and 15.00. However, the maximum combined flow is between 16.00 and 17.00, and so that hour is the one assessed further below.

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Table 8.2 – Saturday flows.

	Saturday				
	10.00-11.00	11.00-12.00	12.00-13.00	13.00-14.00	14.00-15.00
Flows on New Hey Road (w)	503	555	522	499	448
Flows on New Hey Road (e)	590	531	591	563	481
Total	1093	1086	1113	1062	929
Lidl Generated Flows (2 way)	191	245	246	230	219
Grand Total	1284	1331	1359	1292	1148

It can be seen that the maximum flow on the road network is between 12.00 and 13.00, and the maximum flow generated by the proposed Lidl development is also between 12.00 and 13.00. Therefore, the maximum combined flow is between 12.00 and 13.00, and so that hour is the one assessed further below.

8.3 Trip Types

The Department for Transport's Guidance on Transport Assessment identifies five different categories of trip:

8.3.1 New Trips

These are trips that do not appear anywhere on the road network prior to the opening of the development. For a new Foodstore, this element of generated trips is minimal (food shopping trips are all already on the network) as most additional trips will be generated by better/newer facilities than at existing sites. Most are more likely to be considered as Transferred Trips (see below).

8.3.2 Transferred Trips

These are trips that are already present on the local road network, accessing similar existing sites in the locality of the proposed development and will have the potential to transfer their destination to the proposed development. Slightly different to Diverted Trips, these wholly transfer from using an existing development, to a new development; e.g. users switching to a new supermarket from an existing one.

8.3.3 Linked Trips

These are trips that will have multiple destinations either within the proposed development site, (examples include trips to food and non-food retail); between both the development site and existing adjacent sites: or between the development site and an established town centre. Where there is a high probability that there will be a proportion of linked trips between two uses on a development, it is customary to only

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'count' those trips once for the development as a whole, and not effectively double-count them by attributing two visits and departures affecting the sections of highway network being assessed. The proposed Foodstore site at Stannington Road is within easy walking distance of other, local, retail facilities, therefore, some Linked Trips are expected. However, it is not possible to quantify these, and so no advantage has been taken of this by, for example, reducing the number of vehicle trips in the assessments.

8.3.4 *Pass-by Trips*

These are trips that are already present on the road network directly adjacent to the point(s) of access to the site, which will turn into the site.

8.3.5 *Diverted Trips*

These are trips that are already present on the local road network, but not the road(s) from which site access is taken, and will divert from their existing route to access the site. These are similar to Pass-by Trips, but they have to deviate to make use of the development under consideration. Diverted Trips will tend to return to their original route after visiting the development under consideration.

8.3.6 *Existing Trips*

In this particular case, the site is not currently used, as the former Spotted Cow public house has been demolished.

8.3.7 *Conclusion on Trips*

Guidance from TRICS suggests that only 10% of trips at a new food store are "new" to the network, with the remainder being one of the other types. In this particular case, most (or perhaps, all) trips are already on the network, Transferred Trips are likely, and there will be a proportion of Linked Trips. But, to ensure a highly robust assessment, all the predicted trips generated by the proposed Foodstore will be considered to be "New" to the network surrounding the site in the assessment below.

8.4 Trip Generation

The Lidl foodstore has been searched in TRICS (version 7.5.3) category 01/C – "Retail – Discount Foodstores" for the full range of store size (quoted as being from 500m^2 to 1,550m^2 Retail Sales Area). All multi-modal surveys have been used between 1 January 2010 and 28 October 2017. These trip rates were agreed as part of the original application and it is considered appropriate to adopt the same rates.

The total number of vehicle trips generated by the proposed development at the Friday evening peak hour and the Saturday peak hour are as follows:

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Table 8.3 – Vehicle Trips for Proposed Lidl Foodstore 16.00-17.00 Friday

Development	Arrivals	Departures
Lidl Foodstore 2,061m^2 GFA	109	104

Table 8.4 – Vehicle Trips for Proposed Lidl Foodstore 12.00-13.00 Saturday

Development	Arrivals	Departures
Lidl Foodstore 2,061m^2 GFA	117	129

The outputs from TRICS are attached at Appendix D.

8.5 Committed Development

There is only one committed development which needed to be included in this assessment, and that is the residential development of 22 dwellings on the adjacent land.

The proposed residential development has been searched in TRICS (version 7.5.4) category 03/A – "Residential – Houses Privately Owned" for the full range of site size (quoted as being from 4 to 300 units). All multi-modal surveys have been used between 1 January 2010 and 20 November 2018.

The total number of vehicle trips generated by the proposed development at the Friday evening peak hour and the Saturday peak hour are as follows:

Table 8.5 – Vehicle Trips for Proposed 223 Dwellings 16.00-17.00 Friday

Development	Arrivals	Departures
22 Dwellings	5	3

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Table 8.6 – Vehicle Trips for Proposed 22 Dwellings 12.00-13.00 Saturday

Development	Arrivals	Departures
22 Dwellings	3	5

The outputs from TRICS are attached at Appendix D.

Once again, to ensure a highly robust assessment, all the predicted trips generated by the proposed Foodstore will be considered to be "New" to the network surrounding the site in the assessment below.

8.6 Traffic Growth

The flows from the traffic counts were growthed to the proposed Opening Year (2020), and the Design Year (2025) using TEMPRO growth figures for the location.

8.7 Trip Distribution

The Distribution of the trips predicted to be generated by the proposed Foodstore, have been allocated to the network in the same proportions as the current traffic flows. These are shown at Appendix E.

8.8 Capacity Assessment

The numerical assessment of the capacity of the proposed access junction was undertaken using the computer programme PICADY. (To ensure that the assessment is as accurate as possible, the programme was set to assume that even a single car waiting to turn right into the Lidl access would block through traffic.) The results are as follows:

Table 8.5 –New Hey Road/Lidl Access junction. Friday pm peak (16.00-17.00)

Arm	2025 Base + Development	
	Max RFC	Max Queue
New Hey Road (e)	0.157	0.25
Dunsmore Drive	0.085	0.09
New Hey Road (w)	0.039	0.04
Lidl Access	0.422	0.72

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It can be clearly seen that the RFC's are low and no queuing is created.

Table 8.6 – New Hey Road/Lidl Access junction. Saturday peak (12.00-13.00)

Arm	2025 Base + Development	
	Max RFC	Max Queue
New Hey Road (e)	0.149	0.21
Dunsmore Drive	0.057	0.06
New Hey Road (w)	0.018	0.02
Lidl Access	0.428	0.73

Again, it can be clearly seen that the RFC's are low and virtually no queuing is created.

The numerical assessment shows that the junction operates well within its capacity with no queues created. The PICADY printouts are attached at Appendix F.

It is concluded that "the proposed Lidl food store would not have a material impact on the operation of the local highway network."

It can be clearly seen that the effects of the proposed development are not "severe" in NPPF terms.

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9 Conclusions

9.1 Conclusions

This report has assessed the impact of a new Lidl Foodstore off New Hey Road, Huddersfield.

The site is well served by public transport, and walking and cycling are attractive alternative modes to the private car.

The local road network has experienced few accidents in recent years, and the development will not increase them in terms of numbers or severity.

A detailed, and robust, numerical analysis of future traffic conditions with the development in place, has been undertaken using the PICADY computer programme, and it has demonstrated that a new junction can be created to access the Foodstore off New Hey Road, and that the proposed Lidl Foodstore would not have a material impact on the operation of the local highway network.

There are no "severe" effects in terms of NPPF.

The Travel Plan supplied under separate cover will assist in providing advice to staff and customers on how to access the site in a more sustainable manner, therefore, reducing the carbon footprint of the development.

The proposals are virtually identical to the original planning application on this site which was found to be acceptable with regard to Highways and Transportation planning matters.

There are no Highways or Transportation grounds for refusing the planning application.

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Figures

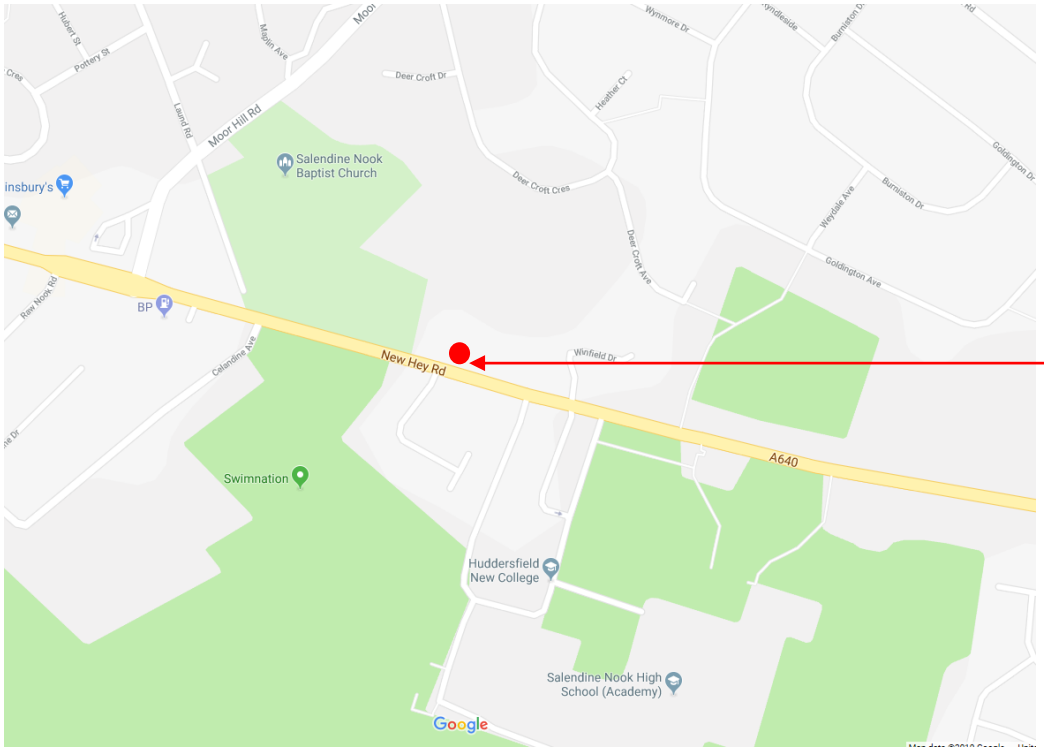
Figure 1- Location Plan.

Figure 2 – 400m, 800m and 1,200m walking radius.

Figure 3 – 2km and 5km cycling radius.

Site layout plan - 1814-P400 Rev AD by HTC Architects

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Notes:

Project:

Proposed Lidl Foodstore at New Hey Road, Huddersfield.

Client:

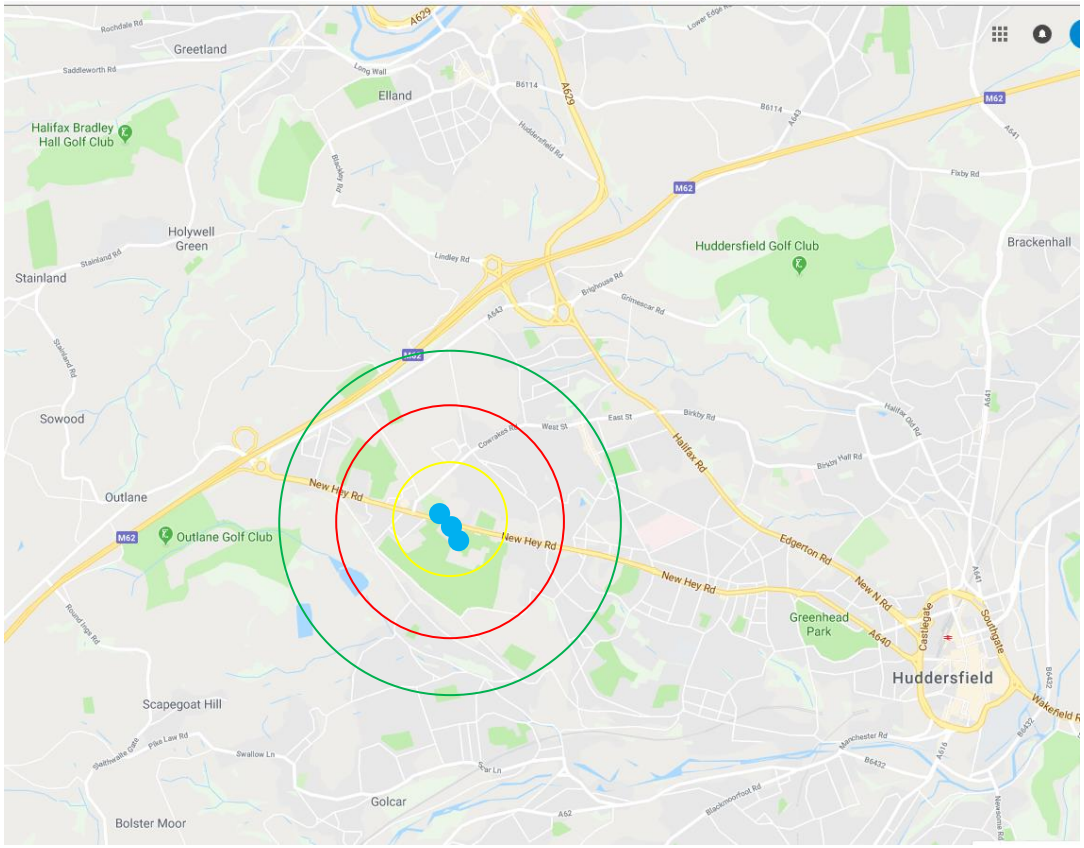
Lidl UK GmbH.

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Consulting Engineers

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Brighouse
HD6 4HN

Tel: 07841 870477
Email: spivey.edward@gmail.com

Figure 1 – Location Plan



Notes:

400m
800m
1,200m

Bus Stop

Project:

Proposed Lidl Foodstore at New Hey Road, Huddersfield.

Client:

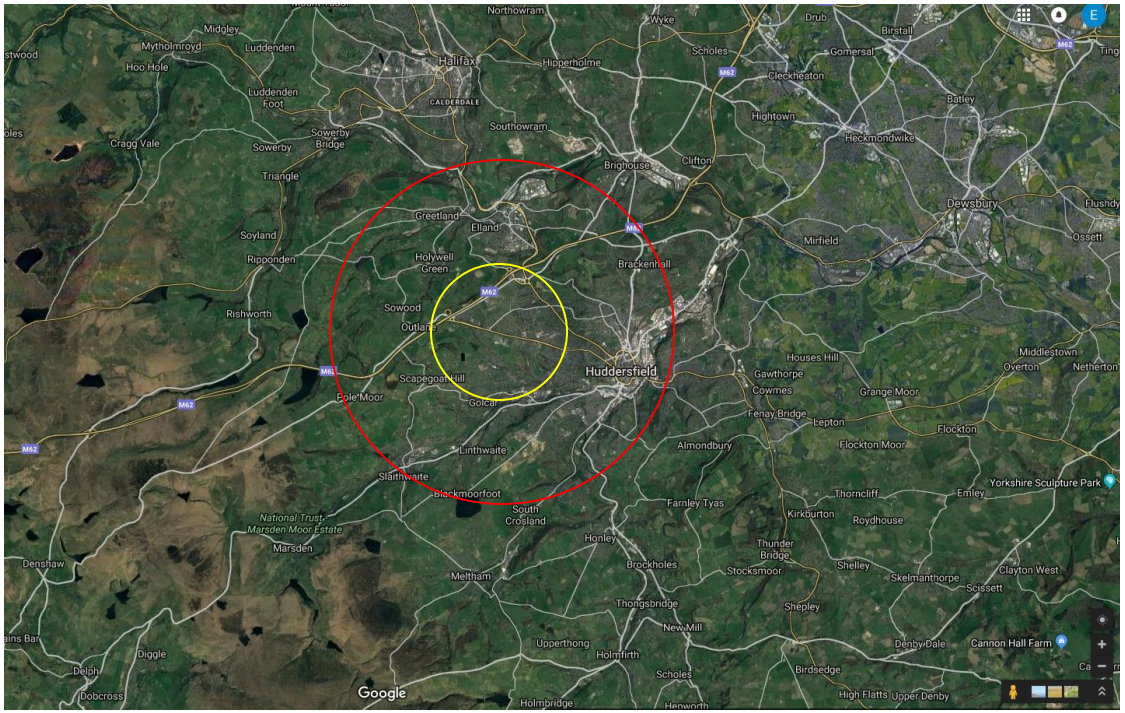
Lidl UK GmbH.

EJS Associates
Consulting Engineers

Leathley House
New Street
Clifton
Brighouse
HD6 4HN

Tel: 07841 870477
Email: spivey.edward@gmail.com

Figure 2 – Walking Distances



Notes:

2km
5km

Project:

Proposed Lidl Foodstore at New Hey Road, Huddersfield.

Client:

Lidl UK GmbH.

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HD6 4HN

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Email: spivey.edward@gmail.com

Figure 3 – Cycling Distances

KEY:

(1) NEW 6m HIGH LIDL FLAGPOLE
(2) NEW ENTRANCE IN ACCORDANCE WITH HIGHWAYS CONSULTANT DESIGN/ DETAILS
(3) NEW SHEFFIELD CYCLE STAND
(4) RED LINE BOUNDARY LOCATION
(5) 1 X BIN
(6) PROPOSED HIGHWAYS WORKS IN ACCORDANCE WITH HIGHWAYS CONSULTANT DRAWING
(7) RETAINING WALLS - SEE BOUNDARY TREATMENT PLAN FOR MORE INFORMATION
(8) EXISTING BUILDINGS TO BE DEMOLISHED
(9) EXISTING GHOST ISLAND TO BE REMOVED AND REPOSITIONED
(10) 1 FEEDER UNIT AND 2 SPACES (RAPID CHARGERS)
(11) 2.4m x 43m VISIBILITY SPLAY
(12) REPURPOSED STONE WALL, REPAIRED WHERE NECESSARY AND AND IRON RAILING INFILL PANELS
(13) NEW ENTRANCE FEATURE PAVING

SOFT LANDSCAPING KEY:

PROPOSED NEW TREE

EXISTING TREE

EXISTING TREE TO BE REMOVED

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DO NOT SCALE!
ALL DIMENSIONS SHOULD BE CHECKED ON SITE BEFORE WORK COMMENCES

TITLE PLAN; YY110619

ARBORICULTURAL SURVEY:12484 SR Arboricultural Report at the former Spotted Cow, New Hey Road, Huddersfield

IN LINE WITH MODIFIED 2018.1 SPECIFICATION

SURVEY INFORMATION:
D224-001 June 2018 Landform Surveys
001/002 November 2014 Landform Surveys

N

CROFT CRESCENT

26

SUBSTATION

El Sub Sta

SALES AREA = 1,377 sq m
GIA = 2061 sq m
GEA (Ex. canopy) = 2,142 sq m
GEA (Inc. canopy) = 2310 sq m

Utility
Chiller
Bakery
Freezer
IT Room
Welfare
Cloak room
WC
WC
Manager's Office
Storage
Entrance Lobby
Cust WC

113 CAR PARKING SPACES INC. 7 DISABLED, 2 ECC AND 8 P&C

rough grass

Track

398a
398c
398
396
400
402
394
386
357
351
353

DRIVE

0m 5m 10m 15m 20m 30m 40m 50m

Rev.	Date	Description	Drawn
AD	04.09.20	Site Plan updated inline with PS411 Site Plan Overlay	MJP
AC	30.10.19	1. Additional steps to plant area 2. Plant area updated to update door access, new route via delivery bay and new route via back of store 3. Gravel at rear added 4. Update engineer drawing incorporated 5. ECC Station added 5. Sight Lines added 6. Root Protection Area Trees to delivery bay area considered, solutions incorporated to divert from Root Protection Areas	LS
AB	22.07.19	Pedestrian walkway bollards removed and plant updated / visibility splay added Updated engineer's drawings added	AB/JBH LS

client
Lidl GB Ltd

project
New Hey Road, Huddersfield

drawing title
Proposed Site Plan

date October 2018
status Planning Issue
scale 1:500 @ A3
drawn AB checked LS
job no. 1814 dwg no. P400 rev. AD

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Appendix A – Kirklees Council Highways Consultation Response

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Consultation Response from KC Highways		
2019/91433 former Spotted Cow Pub, New Hey Road, Oakes, Huddersfield, HD3 4BU		
Erection of an A1 foodstore with associated parking, servicing areas and landscaping		
Date Responded: 29/08/2019	**Responding Officer:** Ryan Kinder	**Responding Ref:** K2-12NE/10

2019/91433 Former Spotted Cow New Hey Road, Salendine Nook.

Highway Development Management's (HDM) comments for the above application as follows:

Planning application for erection of A1 foodstore with associated parking provision. Access to the site is via the former spotted cow public house entrance taken directly onto the A640 New Hey Road. The site is designated within the Councils Local Plan for housing.

The proposal is to provide a commercial development for A1 use with a retail floor area of 1377m2 and 2016m2 Gross internal area. A total of 113 car parking spaces is associated with the development.

As of the adoption of the Local Plan Kirklees Council no longer has car parking standards. Policy LP22 sets out the criteria for establishing parking requirements for new developments, which should be evidence based within the planning application submission. It is considered the level of parking provided with this application is sufficient to accommodate a store of this size. Overall the proposed car parking would be considered acceptable, with the sustainable travel measures provided on site in the form of Cycle stands and also the good link to public transport and accessibility for pedestrians. It is considered by implementing a travel plan with a full commitment to creating a modal shift to sustainable travel modes, the need to relay on the car will be significantly reduced.

A Transport Assessment and frame work Travel Plan have been prepared and submitted by EJSA consulting engineers dated March 2019.

The trip generation has been assessed using the TRICS data base, the submitted TA assesses the traffic impact of 'retail-discount food stores' in trip generation terms. Tables 8.3 and 8.4 indicate the peak periods with the following traffic generation.

16.00 – 17.00 Friday generating 213 two way vehicle movements.

12.00 – 13.00 Saturday generating 246 two way vehicle movements.

The site access is to incorporate a right turn lane and existing traffic island relocated to accommodate the proposal, a stage 1 safety audit and designers response has been completed with the amendments identified included in the proposal.

Travel Plan monitoring

Kirklees Council requires developers to contribute to the cost of monitoring Travel Plan progress. The Council charges an annual fee for five years for this service, with two rates based on the size of the development.

- Large Scale Major Development defined as 200 or more residential units or 10,000 m2 GFA or more for other types of development:

Cost: £3000 per annum for the first five years after opening

- Small Scale Major Development defined as between 50-199 residential units or at or above the thresholds defined in the table at Appendix A up to 9,999 m2 GFA for other types of development

Cost: £2000 per annum for the first five years after opening

It should be noted that, as per the criteria set out above, the New Hey Road proposal would require £2,000 per annum for the first five years from the development being brought into use.
This fee will cover assistance with the development of the Framework Travel Plan into a Full Travel Plan in discharging the Travel Plan condition directly with the developer Thereafter, the fee which equates into approximately £50/hr x 40hrs = £2,000 for the officer time, will be used to assist the Proposed Lidl foodstore Travel Plan Co-Ordinator in implementing, maintaining, and monitoring the Full Travel Plan.

The site is located within the recommended 400m from the nearest bus routes that operate on New Hey Road. We generally take a pragmatic approach to walk distances to take the size and location of development sites into account. When doing so, we also have to consider the development type and the level and quality of service (frequency and destinations served) at the destination bus stop.

Bus services which operate on New Hey Road include the 371 which operates between Kirkheaton and Lindley, at a 20 minute frequency, along with the 537 which operates between Huddersfield and Halifax at a 60 minute frequency. The bus availability for the site is therefore considered to be acceptable. The size of the development is unlikely to change the bus route of frequency.

The closest bus stops on this corridor 22485 and 22498 do not have a shelter. As part of this scheme, a bus shelter could be provided at the above named stops at a cost of £13,000 each to the developer to improve the public transport offer.

Overall the proposal is considered acceptable from a highway prospective subject to the inclusion of the following conditions.

Areas to be surfaced and drained

The buildings shall not be occupied until the proposed car park hereby approved shall be laid out surfaced, marked out into bays and drained in accordance with details that have previously been approved in writing by the Local Planning Authority.

Reason: In the interests of highway safety and to achieve a satisfactory layout.

Access Sightlines to be provided

The buildings shall not be occupied until sightlines of 2.4m x 43m on the site frontage have been cleared of all obstructions to visibility exceeding 1 m in height and these shall be retained free of any such obstruction.

Reason: To ensure adequate visibility in the interests of highway safety.

Closure of existing access

No part of the development shall be brought into use until the existing access from New Hey Road has been permanently closed [and any redundant footway crossings removed and the footway reinstated] and the new access has been constructed and brought into use in accordance with details that have previously been approved in writing by the Local Planning Authority.

To avoid danger and inconvenience to highway users.

Right turn lane

Unless otherwise agreed in writing, prior to development commencing, a detailed scheme for the provision of a right turn lane from New Hey Road into the site with associated signing and white lining shall be submitted to and approved in writing by the LPA. The scheme shall include construction specifications, white lining, signing, surface finishes together with an independent Safety Audit covering all aspects of the work. Unless otherwise agreed in writing by the LPA, all of the agreed works shall be implemented before any part of the development is first brought into use.

Reason: In the interests of highway safety and to achieve a satisfactory layout.

Retaining walls.

Before the development commences a scheme detailing the location and cross sectional information together with the proposed design and construction for all new retaining walls/ building walls adjacent to the existing/ proposed adoptable highways including any modifications to the existing retaining wall supporting the A640 New Hey Road and or PROW 367 shall be submitted to and approved by the Highway Authority in writing. The approved scheme shall be implemented prior to the commencement of the proposed development and thereafter retained during the life of the development.

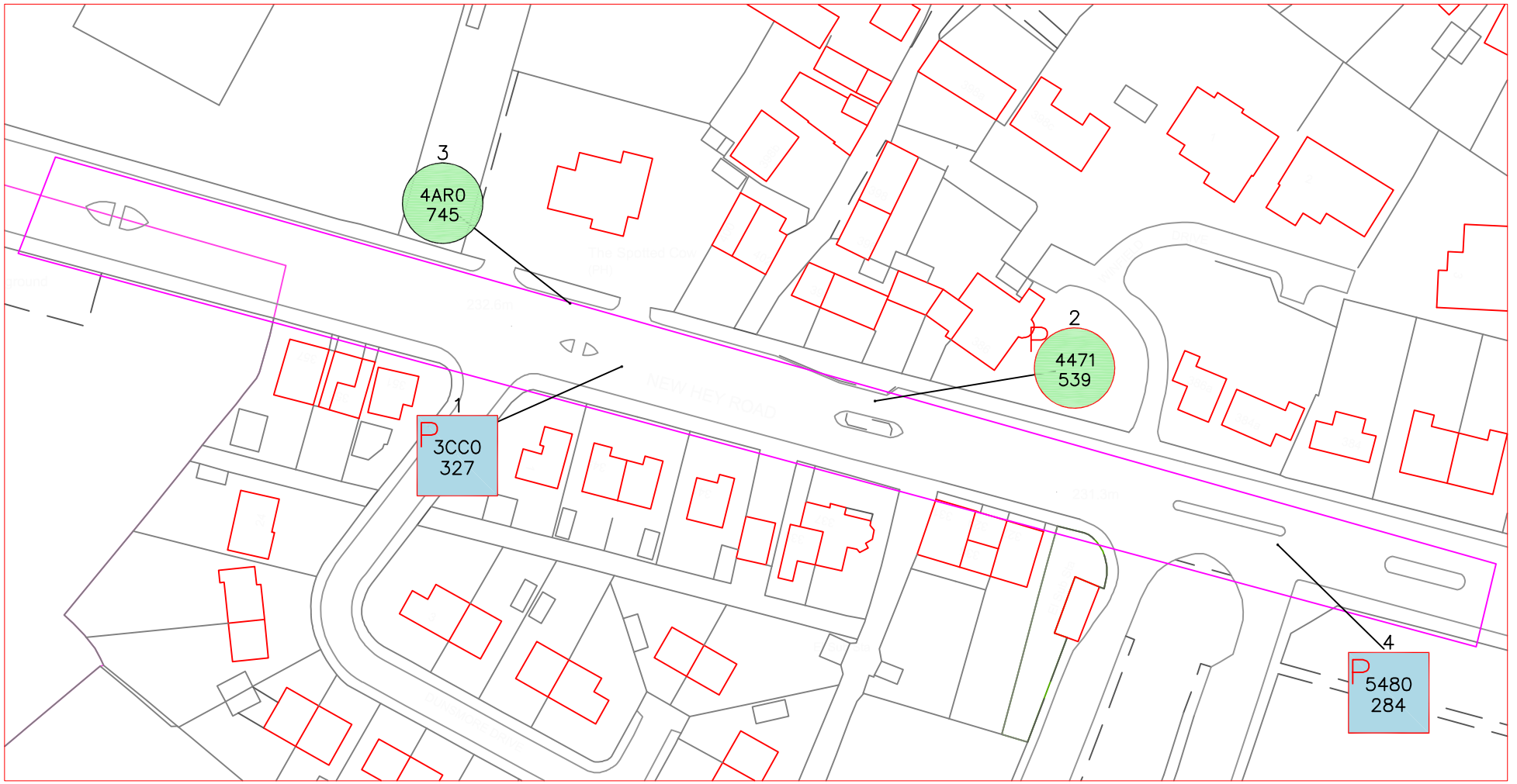
FOOTNOTE
The granting of planning permission does not authorise the carrying out of works within the highway, for which the written permission of the Council as Highway Authority is required. You are required to consult the Design Engineer, Flint Street, Fartown, Huddersfield (Kirklees Street Care: 0800 7318765) with regard to obtaining this permission and approval of the construction specification. Please also note that the construction of vehicle crossings within the highway is deemed to be major works for the purposes of the New Roads and Street Works Act 1991 (Section 84 and 85). Interference with the highway without such permission is an offence which could lead to prosecution.

FOOTNOTE Public footpath Huddersfield 367 is adjacent to the development site and must not be interfered with or obstructed, prior to, during or after development works.

Filename: Consultation Request 21_4538.docx
Directory: G:\HDCGRP\Ryan Kinder\Full apps\2019-91433 New Hey Road, salendine nook
Template: C:\Users\RyanKinder\AppData\Roaming\Microsoft\Templates\Normal.dotm
Title: APAS Test Letter
Subject:
Author: KMC
Keywords:
Comments:
Creation Date: 12/06/2019 13:05:00
Change Number: 1
Last Saved On: 12/06/2019 13:05:00
Last Saved By: Adam Walker
Total Editing Time: 1 Minute
Last Printed On: 29/08/2019 09:40:00
As of Last Complete Printing
Number of Pages: 4
Number of Words: 1,463 (approx.)
Number of Characters: 8,340 (approx.)

Appendix B – Accident Data

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Ordnance Survey 100019241

Kirklees COUNCIL

Streetscene & Housing
Flint Street, Fartown
Huddersfield, HD1 6LG

Project

Stats 19 Records
1.11.13 – 31.10.18

Title

A640 New Hey Road
Salendine Nook

Scale	
NTS	
Drawn: RH	Checked:
Section: Safety	Date: 7.12.18
Drawing No.: 1	

3CC0327 SERIOUS 410736/417715 12/12/2016 08:30

LOCATION A640 New Hey Road Huddersfield

DESCRIPTION THIS COLLISION INVOLVES ONE VEHICLE , SERIOUS INJURY TO

VEHICLES		DRIVER		CASUALTIES			VEH	SEX	AGE
1	Car	Female	41	1	Pedestrian	SERIOUS	1	Male	11

4471539 SLIGHT 410780/417709 07/04/2017 17:00

LOCATION A640 Hew Hey Road, Huddersfield

DESCRIPTION V1 IS DRIVING ON NEW HEY ROAD WHEN A MALE RUNS ACROSS THE ROAD NEAR A CROSSING NOT LOOKING AT THE TRAFFIC FIRST. MALE CLIPS THE BIKE AND FALLS TO THE FLOOR. RIDER OF V1 AND VICTIM EXCHANGE DETAILS.

VEHICLES		DRIVER		CASUALTIES			VEH	SEX	AGE
1	M/cycle 50 - 125cc	Male	36	1	Pedestrian	SLIGHT	1	Male	37

4AR0745 SLIGHT 410727/417726 27/10/2017 12:35

LOCATION New Hey Road, Huddersfield

DESCRIPTION V1 HAS ENTERED NEW HEY ROAD FROM A GIVE WAY SLIP AND FAILED TO SEE V2 ALREADY TRAVELLING ALONG NEW HEY ROAD. V1 HAS CLIPPED V2 AS IT HAS TRIED TO AVOID V1. FURTHER ALONG THE ROAD THE RIDER OF V2 HAS TRIED TO INDICATE TO THE DRIVER OF V1 THAT HE HAS COLLIDED WITH HIM, AS HE DROVE ALONG THE DRIVER OF V1 AGAIN COLLIDED WITH V2, THIS TIME CAUSING HIM TO FALL FROM HIS BIKE.

VEHICLES		DRIVER		CASUALTIES			VEH	SEX	AGE
1	Car	Male	72	1	Driver/Rider	SLIGHT	2	Male	64
2	M/cycle > 500cc	Male	64						

5480284 SERIOUS 410850/417684 08/04/2018 03:57

LOCATION A640 New Hey Road

DESCRIPTION V1 was travelling along the A640 New Hey Road, away from Huddersfield. V1 is a private hire vehicle carrying a passenger when it collides into pedestrian who was walking in the carriageway, on a zebra crossing. C1 receives serious injuries.

VEHICLES		DRIVER		CASUALTIES			VEH	SEX	AGE
1	Taxi	Male	39	1	Pedestrian	SERIOUS	1	Male	35

Appendix C – Stage 1 Road Safety Audit and Designers Response

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trafficmanagementconsultants@hotmail.co.uk

Ltd

Unit 2
71A Hamilton Road
READING
RG1 5RA
07771 557382

14 Aintree Lane
Liverpool L10 2JL

Road Safety Audit Stage 1/2

Location: Lidl A640 New Hey Road , Huddersfield
Section 278 Highway Works
Produced for EJS

Date 22nd November 2018



Prepared by

Peter Ronald, I.Eng, AMICE, MCIHT, MSoRSA, (HA .RSA Cert of Comp)



Wing Lee, B.Eng(hons). PGCert, MCIHT, MIHE

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1 Executive Summary

2 Introduction

3 Historical Summary: Details, approval, programme

4 Existing Environment

5 Accident History

6 Survey Information Summary

7 Project

8 Safety Audit Assessment

9 Nil Response/Comments

10 Non-Motorised User Report

11 Auditors' Statement

Appendix Safety Audit Exception Response Auditors' Comments

Drawing Details

Other documents

DOCUMENT CONTROL SHEET

Project Name: **Lidl, New Hey Road Huddersfield**

Report Title: **Stage 1/2 Road Safety Audit**
Section 278 Highway Works

Date: **22nd November 2018**

Client: **EJS**

Audit Team			
	Name	**Position**	**Date**
Audit Team Leader:	Peter Ronald	Director	22/11/2018
Audit Team Member:	Wing Lee	Road Safety Auditor	22/11/2018
Approved By:	Peter Ronald	Director	22/11/2018

Revision History					
Revision	**Date**	**Description**	**Audit Team Leader**	**Audit Team Member**	**Approved**
A	22/11/2018	Final	PR	WL	PR

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1. Executive Summary

This scheme is promoted by Lidl Foodstores. This Road Safety Audit is provided under the provisions of the Road Safety Audit request dated 13th November 2018.

2. Introduction

This report results from a Stage 1/2 Road Safety Audit request for a proposal to construct a new Lidl Foodstore, with vehicle access onto New Hey Road, Huddersfield. Including a ghost right turn facility. The audit is only of the Section 278 proposals.

The Audit Team consisted of:

Peter Ronald, I.Eng., AMICE, MCIHT, MSoRSA. HA. RSA(C of C)
Wing Lee, B.Eng(hons), PGCert, MCIHT, MIHE

A site visit was undertaken on Sunday 18th November 2018, between 11.30am and 12.00pm. Weather conditions were cloudy, surface dry, and low traffic flows were observed. Minimal pedestrian movements were observed. Vehicle speeds were perceived to be within the 30mph speed limit.

The Audit comprised an examination of the drawings provided by HTC Architects and any additional support documents completed by the Audit Team as listed in the Appendices.

The terms of reference of the audit are based on “Guidelines For the Safety Audit of Highway Schemes” published by the Institution of Highways and Transportation, other guidance references include the Traffic Signs Regulations and General Directions 2016, and HD 19/15 Design Manual for Roads & Bridges & GG119

The Auditors have examined and reported only on the road safety implications of the detailed design, as presented in the supplied drawings. The Audit Team has not verified that the proposed scheme complies with any technical standards, advice or design guidance.

All safety issues are with reference to the specific design details shown on the drawings.

Each of the auditors’ responses is classified as either a ‘Problem’ or a ‘Nil Response/Comment’. Items classified as a 'Problem' denote matters likely to result in significant road safety hazards. Items marked as ‘Nil Response/Comment’ are less serious, but worthy of consideration by the designer and/or by the overseeing organisation.

Although all of the problems identified are considered to be of sufficient importance to require action, the table below shows their relative urgency based on the risk perceived by the Safety Auditors. The level of risk assigned to each problem is largely subjective and is only intended as a guide, to assist the client in determining the priority of the issues raised.

Severity / Risk Level	Probability				
	Frequent	Probable	Occasional	Remote	Improbable
Catastrophic	**** Problem**** (Urgent)				
Critical		*** Problem*** (High Risk)			
Major			**Problem** (Medium Risk)		
Minor				*Problem* (Low Risk)	
Negligible					Comment

3. Historical Summary

The site is currently a piece of vacant land located off the north side of A640 New Hey Road adjacent to number 400 and opposite the side road junction with Dunsmore Drive.

4. Existing Environment

A640 New Hey Road is a wide single carriageway classified road that links through from the west of Huddersfield centre to the M62

It has a wide carriageway of approx. 15m with central hatching and advisory cycle lanes in both directions, footways are present along both sides fronting residential properties

There is a system of street lighting along the road that introduces a 30mph speed limit, and double yellow lines on both sides of the road

The road is a two way bus route

The road is relatively flat with a fall from west to east across the access and is straight

5. Accident / Collision History

No information provided.

6. Survey Information

Pedestrian crossing survey 11-13 October 2018

7. Project

The project is to provide a new Lidl Foodstore with vehicle accesses onto New Hey Road including a ghost right turn facility.

8. Stage 1/2 - Audit Assessment

The table below summarises the findings from this audit, which are described in detail on following pages.

Problem locations are detailed on the RSA problem location plans in appendix.

No.	Item	Comments	Notes
B1	**General**		
B1.1	Departures from Standards		None Reported
B1.2	Drainage	Problem	(8.1) No new drainage detailed
B1.3	Climatic Conditions		
B1.4	Landscaping		
B1.5	Public Utilities/Services Apparatus	Problem	(8.2) Manholes in line of new access
B1.6	Lay-bys		
B1.7	Access		
B1.8	Skid Resistance		
B1.9	Agriculture		
B1.10	Fences and Road Restraint Systems		
B1.11	Adjacent Developments and Roads		
B1.12	Basic Design Principles	Comment	(9.1) Existing pedestrian refuge island being removed
B2	**Local Alignment**		
B2.1	Visibility		
B2.2	New/Existing Road Interface		
B3	**Junctions**		
B3.1	Layout	Comment	(9.2) Bus stop on approach to new access does not appear to cause a problem
B3.2	Visibility	Problem	(8.3) No visibility splays detailed on plans for new access
B3.3	Signing		
B3.4	Road Markings	Problems	(8.4) Proposed centre line needs to extend into access for a minimum of 5 modules (8.5) Existing double yellow lines need to be adjusted to accommodate new access (8.6) Install cycle symbols on cycle lane across new access
B3.5	T, X and Y junctions		
B3.6	All roundabouts		
B3.7	Mini Roundabouts		
B3.8	Traffic Signals		
B4	**Non-Motorised User Provision**		
B4.1	Adjacent Land		
B4.2	Pedestrians	Problems	(8.7) Redundant dropped kerb /tactile paving

			needs to be removed on southern side of road (8.8) No dropped kerb/tactile paving crossing point detailed across new access
B4.3	Cyclists		See 8.6
B4.4	Equestrians		
B5	**Road Signs, Carriageway Markings and Lighting**		
B5.1	ADS and Local Traffic Signs	Problem	(8.9) Existing school sign needs relocating at new access
B5.2	Variable Message Signs		
B5.3	Lighting	Problem	(8.10) Existing lamp column in middle of new access needs to be relocated
B5.4	Road Markings		
B5.5	Poles and Columns		

8.1 *Problem* (item B 1.2)

Location: New side road junction

Summary: No new drainage detailed at new access

Description: A new junction is detailed without any new drainage. Check levels to ensure no standing water or water flowing across new junction and provide drainage if necessary.

Type of conflict/collision: Surface water causing problems for road users

Recommendation: Provide new drainage if necessary

8.2 *Problem* (item B 1.5)

Location: New access



Summary: Manhole/utility box in middle of new access needs relocating

Description: A new side road junction is detailed that affects a utility manhole currently within the existing footway. This will require relocation at enable the new kerbline to be constructed where detailed.

Type of conflict/collision: Utility boxes in line of new kerbline

Recommendation: Relocate stats box as appropriate

8.3 *Problem* (item B 3.2)

Location: New access

Summary: No visibility splays detailed on new access

Description: A new side road junction is detailed without any visibility splays. Appropriate clear visibility splays need to be shown to be achievable for vehicles exiting the development. Ensure adequate clear visibility splays are obtainable at new access

Type of conflict/collision: Collisions due to reduced visibility

Recommendation: Ensure adequate visibility splays are provided for new access

8.4 *Problem* (item B 3.4)

Location: New development access road

Summary: Insufficient centre line marking on side road approach to new junction

Description: A new access is detailed with only one centre line module on the approach to the give way line from the development. This marking needs to be extended to a minimum of 5 modules to ensure vehicles keep to the left when approaching the give way line so avoiding head on collisions

Type of conflict/collision: Head on collisions on approach to access

Recommendation: Extend centre line marking into development

8.5 *Problem* (item B 3.4)

Location: New access



Summary: Existing double yellow lines affected by new access

Description: There are existing double yellow lines that are affected by the new access. These lines need to be amended to accommodate the new access

Type of conflict/collision: Lines do not match new access kerbline

Recommendation: Amend double yellow lines to suit new access

8.6 *Problem* (item B 3.4)

Location: Cycle lane across new access

Summary: Install cycle symbols in cycle lane across new access

Description: A new access is detailed where there is an existing advisory cycle lane on the carriageway. Additional cycle symbol markings need to be provided where the lane crosses the new access to highlight it for vehicles exiting the development

Type of conflict/collision: Vehicle collisions with cyclists crossing new access

Recommendation: Provide cycle symbol markings within cycle lane across access

8.7 *Problem* (item B 4.2)

Location: New Hey Road. Redundant pedestrian crossing point southern side

Summary: Redundant crossing point needs to be removed

Description: There is an existing pedestrian crossing point being removed. The dropped kerb /tactile paving on the southern side of the road needs to be removed as it is no longer required and will only confuse pedestrians

Type of conflict/collision: Visually impaired pedestrians using redundant crossing point

Recommendation: Remove dropped kerb /tactile paving from southern side of road

8.8 *Problem* (item B 4.2)

Location: New access

Summary: No pedestrian crossing point detailed across new access

Description: A new access is detailed without a pedestrian crossing point to enable pedestrians to cross between footways on either side. Provide appropriate pedestrian crossing point with tactile and reduction of adjacent wall to ensure adequate intervisibility between vehicles exiting the development and pedestrians waiting to cross

Type of conflict/collision: Pedestrians falling in carriageway negotiating across full height kerbs crossing access

Recommendation: Provide appropriate pedestrian crossing point across access

8.9 *Problem* (item B 5.1)

Location: New access



Summary: Existing school sign affected by new access

Description: A new access is detailed close to the existing school sign. This sign will need relocating to ensure it does not obstruct new access

Type of conflict/collision: Sign obstructs new access

Recommendation: Relocate school sign

8.10 *Problem* (item B 5.3)

Location: New access



Summary: Existing lamp column in middle of new access

Description: A new access is detailed which affects an existing lamp column. This lamp column needs to be replaced to ensure adequate lighting is provided. Carry out lighting assessment to ensure that adequate lighting is provided for the new junction.

Type of conflict/collision: Reduced levels of lighting on new access

Recommendation: Carry out lighting assessment and provide appropriate street lighting for new access

9. Nil response/Comments

9.1 The auditors have been informed that the council are concerned by the removal of the existing crossing facility by the new development. The auditors have been given a pedestrian crossing survey and this shows limited numbers of pedestrians actually using the crossing with only approx. 25 pedestrians using it per day over 12 hours 7am – 7pm.

However, the new development will actually generate pedestrians wanting to cross the road to visit the new store.

There are currently two other crossings located nearby 50m east and 70m west of the site. However, pedestrians will continue to cross where they have always crossed using the central hatched area as a refuge. Consideration needs to be given to the possible reintroduction of the refuge close to the west of Dunsmore Drive. This would also actually help separate opposing right turn traffic for the new adjacent development (It may be appropriate to wait for the store to open to establish if pedestrians will continue to cross near the store access, and

only then consider a new crossing or install crossing as part of section 278 works for adjacent new development to protect right turn lanes)

9.2 There is an existing bus stop to the west of the new access that does not appear to cause problems for the new access

10. Non-Motorised User Report

The report raises problems that need to be resolved affecting NMU's

11. Auditors' Statement

Auditors Statement

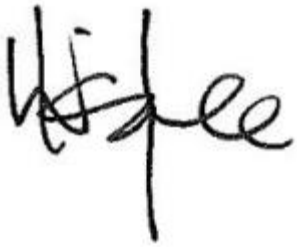
We certify that we have examined the drawings listed in Appendix A and that the site has been inspected. The examination has been carried out with the sole purpose of identifying those features the design that can be modified in order to improve the safety of the scheme.

The problems identified have been noted in the report together with associated safety improvement suggestions that we recommend should be studied for implementation.

We can confirm that we have not been involved with the scheme design.



Peter Ronald Date 22nd November 2018
Senior Safety Auditor (Team Leader)



Wing Lee
Safety Auditor (Team Member)

Stage Road Safety Audit
SAFETY AUDIT EXCEPTION RESPONSE

Scheme Name: **Lidl New Hey Road**

The issues categorised in the safety audit as 'Problem' matters are those causing serious concern and are summarised below. The purpose of this form is for the scheme designer or Overseeing Organisation to respond to the 'Problem' matters. Responses should be returned to Traffic Management Consultants. 'Comments' in the report are made for the benefit of the designer, and are not referred to below.

Paragraph	**Summary of Problem**	**Designer's response**
8.1	No new drainage detailed at new access	
8.2	Manhole/utility box in middle of new access needs relocating	
8.3	No visibility splays detailed on new access	
8.4	Insufficient centre line marking on side road approach to new junction	
8.5	Existing double yellow lines affected by new access	
8.6	Install cycle symbols in cycle lane across new access	
8.7	Redundant crossing point needs to be removed	
8.8	No pedestrian crossing point detailed across new access	
8.9	Existing school sign affected by new access	
8.10	Existing lamp column in middle of new access	

Please complete Designer's response and return to Traffic Management Consultants Ltd.

Audit Team Comments

8.1

8.2

8.3

8.4

8.5

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8.7

8.8

8.9

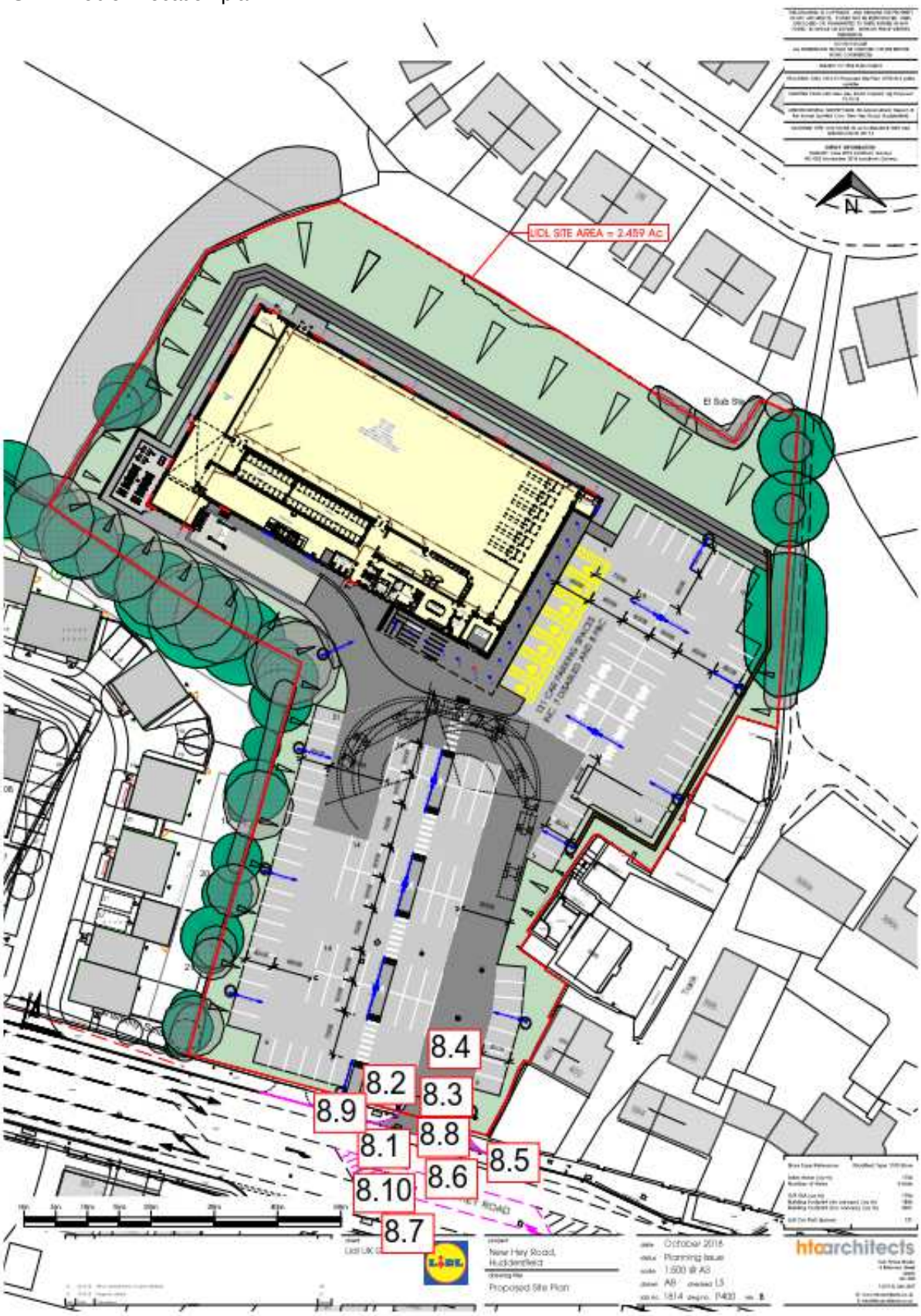
8.10

Appendix A

Drawing Numbers

1814 P400 Rev B Proposed site plan

RSA 2 Problem location plan



EJSAssociates

Consulting Engineers



Proposed Lidl Foodstore, New Hey Road, Huddersfield.

Designer's Response to the Stage 1 and 2

Road Safety Audit

March 2019

Ref: 2014–1–7 re03

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Document Control Sheet

Project Title	*Lidl Foodstore, New Hey Road, Huddersfield.*
Report Title	*Designer's Response to the Stage 1 and 2 Road Safety Audit*
Status	*Final*
Control Date	*12 March 2019*

Disclaimer:

This report is provided in good faith by the Consultant (EJS Associates) to the Client (Lidl Great Britain Limited) solely as a Designer's Response to the Stage 1 and 2 Road Safety Audit for the Lidl Foodstore, at New Hey Road, Huddersfield and the Client may use it for that purpose only. Use by anyone else, or by the Client for any other purpose, is strictly prohibited. Copyright remains with the Consultant, but the Client may reproduce this report for the purpose it was intended. No third party may rely on anything contained in this document.

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1 Introduction

1.1 Background

EJSAssociates (EJSA) have been assisting Lidl Great Britain Limited with the design of highway works they needed to undertake to develop a new Lidl Foodstore at New Hey Road, Huddersfield.

Lidl Great Britain Limited requested that a Stage 1 and 2 Road Safety Audit be undertaken of the proposed works.

1.2 Purpose of the Report

This report provides the Designer's Response to the 10 "Problems" identified in the Stage 2 Road Safety Audit.

The 2 matters raised outside the remit of the Audit are also noted

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2 Identified "problems" and the Designer's Response.

2.1 Introduction

The Stage 1 and 2 Road Safety Audit noted 10 "Problems". Each of them is repeated in italics in full below, followed by the appropriate Designer's Response.

2.2 Problem Number 1 - item B1.2 (Minor Risk)

Location: New side road junction

Summary: No new drainage detailed at new access

Description: A new junction is detailed without any new drainage. Check levels to ensure no standing water or water flowing across new junction and provide drainage if necessary.

Type of conflict/collision: Surface water causing problems for road users

Recommendation: Provide new drainage if necessary

Designer's Response. The Designer accepts the Recommendation. Drainage issues will be addressed at the detailed design stage.

2.3 Problem Number 2 - item B1.5 (Minor Risk)

Location: New access

Summary: Manhole/utility box in middle of new access needs relocating

Description: A new side road junction is detailed that affects a utility manhole currently within the existing footway. This will require relocation at enable the new kerbline to be constructed where detailed.

Type of conflict/collision: Utility boxes in line of new kerbline

Recommendation: Relocate stats box as appropriate

Designer's Response. The Designer accepts the Recommendation. The effects on Utility apparatus will be identified during the detailed design stage, and appropriate actions taken.

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2.4 Problem Number 3 - item B3.2 (Minor Risk)

Location: New access

Summary: No visibility splays detailed on new access

Description: A new side road junction is detailed without any visibility splays. Appropriate clear visibility splays need to be shown to be achievable for vehicles exiting the development. Ensure adequate clear visibility splays are obtainable at new access

Type of conflict/collision: Collisions due to reduced visibility

Recommendation: Ensure adequate visibility splays are provided for new access

Designer's Response. The Designer accepts the Recommendation. Visibility splays of 2.4m x 43m are provided.

2.5 Problem Number 4 - item B3.4 (Minor Risk)

Location: New development access road

Summary: Insufficient centre line marking on side road approach to new junction

Description: A new access is detailed with only one centre line module on the approach to the give way line from the development. This marking needs to be extended to a minimum of 5 modules to ensure vehicles keep to the left when approaching the give way line so avoiding head on collisions

Type of conflict/collision: Head on collisions on approach to access

Recommendation: Extend centre line marking into development

Designer's Response. The Designer accepts the Recommendation. The correct number of white line marks will be added at the detailed design stage.

2.6 Problem Number 5 - item B3.4 (Minor Risk)

Location: New access

Summary: Existing double yellow lines affected by new access

Description: There are existing double yellow lines that are affected by the new access. These lines need to be amended to accommodate the new access

Type of conflict/collision: Lines do not match new access kerbline

Recommendation: Amend double yellow lines to suit new access

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Designer's Response. The Designer accepts the Recommendation. The re-provision of the yellow lines will be addressed at the detailed design stage.

2.7 Problem Number 6 - item B3.4 (Minor Risk)

Location: Cycle lane across new access

Summary: Install cycle symbols in cycle lane across new access

Description: A new access is detailed where there is an existing advisory cycle lane on the carriageway. Additional cycle symbol markings need to be provided where the lane crosses the new access to highlight it for vehicles exiting the development

Type of conflict/collision: Vehicle collisions with cyclists crossing new access

Recommendation: Provide cycle symbol markings within cycle lane across access

Designer's Response. The Designer accepts the Recommendation. The provision of cycle symbol white lines will be addressed at the detailed design stage.

2.8 Problem Number 7 - item B4.2 (Minor Risk)

Location: New Hey Road. Redundant pedestrian crossing point southern side

Summary: Redundant crossing point needs to be removed

Description: There is an existing pedestrian crossing point being removed. The dropped kerb /tactile paving on the southern side of the road needs to be removed as it is no longer required and will only confuse pedestrians

Type of conflict/collision: Visually impaired pedestrians using redundant crossing point

Recommendation: Remove dropped kerb /tactile paving from southern side of road

Designer's Response. The Designer accepts the Recommendation. The redundant crossing and paving will be removed, and this will be shown at the detailed design stage.

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2.9 Problem Number 8 - item B4.2 (Minor Risk)

Summary: No pedestrian crossing point detailed across new access

Description: A new access is detailed without a pedestrian crossing point to enable pedestrians to cross between footways on either side. Provide appropriate pedestrian crossing point with tactile and reduction of adjacent wall to ensure adequate intervisibility between vehicles exiting the development and pedestrians waiting to cross

Type of conflict/collision: Pedestrians falling in carriageway negotiating across full height kerbs crossing access

Recommendation: Provide appropriate pedestrian crossing point across access

Designer's Response. The Designer accepts the Recommendation. Dropped crossings and tactile paving will be provided across the new access, on the pedestrian desire line (subject to highway authority approval) and this will be shown at the detailed design stage.

2.10 Problem Number 9 - item B5.1 (Minor Risk)

Location: New access

Summary: Existing school sign affected by new access

Description: A new access is detailed close to the existing school sign. This sign will need relocating to ensure it does not obstruct new access

Type of conflict/collision: Sign obstructs new access

Recommendation: Relocate school sign

Designer's Response. The Designer accepts the Recommendation. Signage will be addressed at the detailed design stage.

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2.11 Problem Number 10 - item B5.3 (Minor Risk)

Location: New access

Summary: Existing lamp column in middle of new access

Description: A new access is detailed which affects an existing lamp column. This lamp column needs to be replaced to ensure adequate lighting is provided. Carry out lighting assessment to ensure that adequate lighting is provided for the new junction.

Type of conflict/collision: Reduced levels of lighting on new access

Recommendation: Carry out lighting assessment and provide appropriate street lighting for new access

Designer's Response. The Designer accepts the Recommendation. Street Lighting issues will be addressed at the detailed design stage.

2.12 Nil Response/Comment 9.1

*Consideration needs to be given to the possible reintroduction of the refuge close to the west of Dunsmore Drive***.**

Designer's Response. Noted. The Designer has raised this issue with the highway authority, and a new pedestrian island has been added to the design.

2.13 Nil Response/Comment 9.2

There is an existing bus stop to the west of the new access that does not appear to cause problems for the new access**.**

Designer's Response. Noted.

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3 Conclusions

3.1 Conclusions

The Stage 1 and 2 Road Safety Audit identified 10 "Problems", all of which were "minor risk", and made two additional comments.

The Designer accepts the Audit Recommendations in all cases.

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Appendix D – TRICS Data

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TRICS 7.5.3
Trip Rate Parameter: **Gross Floor area**

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use **01 - RETAIL**
Category **C - DISCOUNT FOOD STORES**
MULTI-MODAL VEHICLES

Selected regions and areas:

4	EAST ANGLIA		
	CA	CAMBRIDGESHIRE	1 days
5	EAST MIDLANDS		
	NT	NOTTINGHAMSHIRE	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:	Retail floor area
Actual Range:	500 to 1424 (units: sqm)
Range Selected by User:	500 to 1550 (units: sqm)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/10 to 28/10/17

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:

Friday	2 days

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

Selected survey types:

Manual count	2 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 undertaking using machines.

Proposed Lidl Store, New Hey Road, Huddersfield
TRICS Sites (v 7.5.3) - Lidl based on Gross Floor Area (GFA) - Fridays.

Selected Locations:

Town Centre	0
Edge of Town Centre	0
Suburban Area (PPS6 Out of Centre)	0
Edge of Town	2
Neighbourhood Centre (PPS6 Local Centre)	0
Free Standing (PPS6 Out of Town)	0
Not Known	0

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:

Industrial Zone	1
Commercial Zone	0
Development Zone	0
Residential Zone	0
Retail Zone	1
Built-Up Zone	0
Village	0
Out of Town	0
High Street	0
No Sub Category	0

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:

A1	2 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®.

Population within 1 mile:

1,001 to 5,000	1 days
5,001 to 10,000	1 days

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

Population within 5 miles:

25,001 to 50,000	1 days
50,001 to 75,000	1 days

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

Car ownership within 5 miles:

1.1 to 1.5	2 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.

Petrol filling station:

Included in the survey count	0 days
Excluded from count or no filling station	2 days

This data displays the number of surveys within the selected set that include petrol filling station activity and the number of surveys that do not.

Travel Plan:

Yes	1 days
No	1 days

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	2 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1 CA-01-C-01 LIDL CAMBRIDGESHIRE
CROMWELL ROAD
WISBECH
Edge of Town
Retail Zone
Total Retail floor area: 500 sqm
Survey date: FRIDAY 21/10/2016 Survey Type: MANUAL

2 NT-01-C-01 LIDL NOTTINGHAMSHIRE
CHAPEL LANE
BINGHAM
Edge of Town
Industrial Zone
Total Retail floor area: 1424 sqm
Survey date: FRIDAY 15/07/2016 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.

Manually Deselected Sites

Site Ref	Reason for Deselection
DO-01-C-01	Irish

TRICS 7.5.3
Trip Rate Parameter: Gross floor area

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use 01 - RETAIL
Category C - DISCOUNT FOOD STORES
MULTI-MODAL VEHICLES Friday

Calculation Factor: 100 sqm

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	2	1595	0.47	2	1595	0.282	2	1595	0.752
08:00-09:00	2	1595	3.009	2	1595	1.944	2	1595	4.953
09:00-10:00	2	1595	4.545	2	1595	4.075	2	1595	8.62
10:00-11:00	2	1595	5.329	2	1595	5.298	2	1595	10.627
11:00-12:00	2	1595	5.486	2	1595	5.329	2	1595	10.815
12:00-13:00	2	1595	5.737	2	1595	5.172	2	1595	10.909
13:00-14:00	2	1595	5.862	2	1595	6.426	2	1595	12.288
14:00-15:00	2	1595	6.27	2	1595	6.458	2	1595	12.728
15:00-16:00	2	1595	5.893	2	1595	6.395	2	1595	12.288
16:00-17:00	2	1595	5.266	2	1595	5.047	2	1595	10.313
17:00-18:00	2	1595	5.172	2	1595	4.796	2	1595	9.968
18:00-19:00	2	1595	3.668	2	1595	4.138	2	1595	7.806
19:00-20:00	2	1595	3.417	2	1595	3.448	2	1595	6.865
20:00-21:00	2	1595	2.288	2	1595	2.602	2	1595	4.89
21:00-22:00	2	1595	0.376	2	1595	1.317	2	1595	1.693
22:00-23:00	2	1595	0.125	2	1595	0.376	2	1595	0.501
23:00-24:00									
Daily Trip Rates:			62.913			63.103			126.016

TRICS 7.5.3
Trip Rate Parameter: Gross floor area

TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES
Calculation Factor: 100 sqm
Count Type: PEDESTRIANS Friday

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	2	1595	0.031	2	1595	0	2	1595	0.031
08:00-09:00	2	1595	0.313	2	1595	0.282	2	1595	0.595
09:00-10:00	2	1595	0.658	2	1595	0.564	2	1595	1.222
10:00-11:00	2	1595	0.69	2	1595	0.564	2	1595	1.254
11:00-12:00	2	1595	0.846	2	1595	0.815	2	1595	1.661
12:00-13:00	2	1595	0.502	2	1595	0.627	2	1595	1.129
13:00-14:00	2	1595	0.784	2	1595	0.658	2	1595	1.442
14:00-15:00	2	1595	0.376	2	1595	0.47	2	1595	0.846
15:00-16:00	2	1595	0.345	2	1595	0.376	2	1595	0.721
16:00-17:00	2	1595	0.502	2	1595	0.376	2	1595	0.878
17:00-18:00	2	1595	0.533	2	1595	0.502	2	1595	1.035
18:00-19:00	2	1595	0.219	2	1595	0.313	2	1595	0.532
19:00-20:00	2	1595	0.345	2	1595	0.313	2	1595	0.658
20:00-21:00	2	1595	0.251	2	1595	0.282	2	1595	0.533
21:00-22:00	2	1595	0.031	2	1595	0.157	2	1595	0.188
22:00-23:00	2	1595	0	2	1595	0.031	2	1595	0.031
23:00-24:00									
Daily Trip Rates:			6.426			6.33			12.756

TRICS 7.5.3
Trip Rate Parameter: Gross floor area

TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES
Calculation Factor: 100 sqm
Count Type: CYCLISTS Friday

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	2	1595	0.031	2	1595	0	2	1595	0.031
08:00-09:00	2	1595	0.063	2	1595	0.031	2	1595	0.094
09:00-10:00	2	1595	0.251	2	1595	0.031	2	1595	0.282
10:00-11:00	2	1595	0.282	2	1595	0.282	2	1595	0.564
11:00-12:00	2	1595	0.125	2	1595	0.345	2	1595	0.47
12:00-13:00	2	1595	0.063	2	1595	0.188	2	1595	0.251
13:00-14:00	2	1595	0.157	2	1595	0.125	2	1595	0.282
14:00-15:00	2	1595	0.157	2	1595	0.157	2	1595	0.314
15:00-16:00	2	1595	0.094	2	1595	0.094	2	1595	0.188
16:00-17:00	2	1595	0.063	2	1595	0.031	2	1595	0.094
17:00-18:00	2	1595	0.094	2	1595	0.094	2	1595	0.188
18:00-19:00	2	1595	0.063	2	1595	0.094	2	1595	0.157
19:00-20:00	2	1595	0	2	1595	0	2	1595	0
20:00-21:00	2	1595	0	2	1595	0	2	1595	0
21:00-22:00	2	1595	0	2	1595	0	2	1595	0
22:00-23:00	2	1595	0	2	1595	0	2	1595	0
23:00-24:00									
Daily Trip Rates:			1.443			1.472			2.915

TRICS 7.5.3
Trip Rate Parameter: Gross floor area

TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES
Calculation Factor: 100 sqm
Count Type: PUBLIC TRANSPORT USERS **Friday**

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	2	1595	0	2	1595	0	2	1595	0
08:00-09:00	2	1595	0.063	2	1595	0	2	1595	0.063
09:00-10:00	2	1595	0.094	2	1595	0.063	2	1595	0.157
10:00-11:00	2	1595	0.188	2	1595	0.094	2	1595	0.282
11:00-12:00	2	1595	0.125	2	1595	0.157	2	1595	0.282
12:00-13:00	2	1595	0.031	2	1595	0.094	2	1595	0.125
13:00-14:00	2	1595	0.031	2	1595	0.063	2	1595	0.094
14:00-15:00	2	1595	0.063	2	1595	0.094	2	1595	0.157
15:00-16:00	2	1595	0.031	2	1595	0	2	1595	0.031
16:00-17:00	2	1595	0.063	2	1595	0.063	2	1595	0.126
17:00-18:00	2	1595	0.031	2	1595	0.094	2	1595	0.125
18:00-19:00	2	1595	0.063	2	1595	0.031	2	1595	0.094
19:00-20:00	2	1595	0.031	2	1595	0.063	2	1595	0.094
20:00-21:00	2	1595	0.188	2	1595	0.094	2	1595	0.282
21:00-22:00	2	1595	0	2	1595	0.094	2	1595	0.094
22:00-23:00	2	1595	0	2	1595	0	2	1595	0
23:00-24:00									
Daily Trip Rates:			1.002			1.004			2.006

TRICS 7.5.3
Trip Rate Parameter: **Gross floor area**

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use **01 - RETAIL**
Category **C - DISCOUNT FOOD STORES**
MULTI-MODAL VEHICLES

Selected regions and areas:

3	SOUTH WEST		
	SM	SOMERSET	1 days
5	EAST MIDLANDS		
	LN	LINCOLNSHIRE	3 days
	NR	NORTHAMPTONSHIRE	1 days
	NT	NOTTINGHAMSHIRE	1 days
6	WEST MIDLANDS		
	WM	WEST MIDLANDS	2 days
	WO	WORCESTERSHIRE	1 days
9	NORTH		
	NB	NORTHUMBERLAND	1 days
10	WALES		
	CF	CARDIFF	1 days
11	SCOTLAND		
	SR	STIRLING	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: Gross floor area
Actual Range: 1485 to 2624 (units: sqm)
Range Selected by User: 750 to 2635 (units: sqm)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/10 to 28/10/17

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:
Saturday 12 days

Proposed Lidl Store, New Hey Road, Huddersfield.
TRICS Sites (v 7.5.3) - Lidl based on Gross Floor Area (GFA) - Saturdays.

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

Selected survey types:

Manual count	12 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 undertaking using machines.

Selected Locations:

Town Centre	0
Edge of Town Centre	4
Suburban Area (PPS6 Out of Centre)	3
Edge of Town	3
Neighbourhood Centre (PPS6 Local Centre)	2
Free Standing (PPS6 Out of Town)	0
Not Known	0

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:

Industrial Zone	1
Commercial Zone	0
Development Zone	1
Residential Zone	1
Retail Zone	1
Built-Up Zone	2
Village	0
Out of Town	0
High Street	2
No Sub Category	4

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:

A1	12 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®.

Population within 1 mile:

5,001 to 10,000	2 days
10,001 to 15,000	3 days
15,001 to 20,000	3 days
20,001 to 25,000	1 days
25,001 to 50,000	2 days
50,001 to 100,000	1 days

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

Population within 5 miles:

5,001 to 25,000	1 days
25,001 to 50,000	1 days
50,001 to 75,000	1 days
75,001 to 100,000	2 days
125,001 to 250,000	3 days
250,001 to 500,000	2 days
500,001 or More	2 days

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

Car ownership within 5 miles:

0.5 or Less	2 days
0.6 to 1.0	2 days
1.1 to 1.5	8 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.

Petrol filling station:

Included in the survey count	0 days
Excluded from count or no filling station	12 days

This data displays the number of surveys within the selected set that include petrol filling station activity and the number of surveys that do not.

Travel Plan:

Not Known	1 days
Yes	2 days
No	9 days

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	12 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1 CF-01-C-01 LIDL CARDIFF
EAST TYNDALL STREET
CARDIFF
Suburban Area (PPS6 Out of Centre)
Development Zone
Total Gross floor area: 2568 sqm
Survey date: SATURDAY 01/07/2017 Survey Type: MANUAL

2 LN-01-C-01 LIDL LINCOLNSHIRE
RICHMOND DRIVE
SKEGNESS
Edge of Town Centre
Built-Up Zone
Total Gross floor area: 2398 sqm
Survey date: SATURDAY 16/07/2016 Survey Type: MANUAL

3 LN-01-C-02 LIDL LINCOLNSHIRE
DIXON STREET
NEW BOULTHAM
LINCOLN
Suburban Area (PPS6 Out of Centre)
No Sub Category
Total Gross floor area: 2233 sqm
Survey date: SATURDAY 28/10/2017 Survey Type: MANUAL

4	LN-01-C-03	ALDI	LINCOLNSHIRE			
	NEWARK ROAD					
	BRACEBRIDGE					
	LINCOLN					
	Suburban Area (PPS6 Out of Centre)					
	High Street					
	Total Gross floor area:		1485	sqm		
	Survey date:	SATURDAY	28/10/2017	Survey Type:	MANUAL	
5	NB-01-C-01	LIDL	NORTHUMBERLAND			
	SCHALKSMUHLE ROAD					
	BEDLINGTON					
	Edge of Town Centre					
	No Sub Category					
	Total Gross floor area:		2450	sqm		
	Survey date:	SATURDAY	10/06/2017	Survey Type:	MANUAL	
6	NR-01-C-02	LIDL	NORTHAMPTONSHIRE			
	NEWTON ROAD					
	RUSHDEN					
	Edge of Town Centre					
	Residential Zone					
	Total Gross floor area:		2624	sqm		
	Survey date:	SATURDAY	16/07/2016	Survey Type:	MANUAL	
7	NT-01-C-01	LIDL	NOTTINGHAMSHIRE			
	CHAPEL LANE					
	BINGHAM					
	Edge of Town					
	Industrial Zone					
	Total Gross floor area:		2440	sqm		
	Survey date:	SATURDAY	16/07/2016	Survey Type:	MANUAL	
8	SM-01-C-01	LIDL	SOMERSET			
	SEAWARD WAY					
	MINEHEAD					
	Edge of Town					
	No Sub Category					
	Total Gross floor area:		2247	sqm		
	Survey date:	SATURDAY	24/06/2017	Survey Type:	MANUAL	

9 SR-01-C-01 LIDL STIRLING
PLAYERS ROAD
STIRLING
Edge of Town Centre
Built-Up Zone
Total Gross floor area: 2442 sqm
Survey date: SATURDAY 03/06/2017 Survey Type: MANUAL

10 WM-01-C-01 LIDL WEST MIDLANDS
MACKADOWN LANE
KITT'S GREEN
BIRMINGHAM
Neighbourhood Centre (PPS6 Local Centre)
No Sub Category
Total Gross floor area: 2085 sqm
Survey date: SATURDAY 09/07/2016 Survey Type: MANUAL

11 WM-01-C-02 LIDL WEST MIDLANDS
HIGH STREET
GUNS VILLAGE
WEST BROMWICH
Neighbourhood Centre (PPS6 Local Centre)
High Street
Total Gross floor area: 2085 sqm
Survey date: SATURDAY 09/07/2016 Survey Type: MANUAL

12 WO-01-C-01 LIDL WORCESTERSHIRE
BLACKPOLE ROAD
BRICKFIELDS
WORCESTER
Edge of Town
Retail Zone
Total Gross floor area: 2417 sqm
Survey date: SATURDAY 16/07/2016 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.

Manually Deselected Sites

Site Ref	Reason for Deselection
HG-01-C-01	Greater London

TRICS 7.5.3
Trip Rate Parameter: Gross floor area

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use 01 - RETAIL
Category C - DISCOUNT FOOD STORES
MULTI-MODAL VEHICLES
Calculation Factor: 100 sqm Saturday

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	2	2511	0.219	2	2511	0.08	2	2511	0.299
07:00-08:00	12	2290	0.499	12	2290	0.113	12	2290	0.612
08:00-09:00	12	2290	2.559	12	2290	1.809	12	2290	4.368
09:00-10:00	12	2290	3.56	12	2290	3.108	12	2290	6.668
10:00-11:00	12	2290	4.936	12	2290	4.32	12	2290	9.256
11:00-12:00	12	2290	6.18	12	2290	5.711	12	2290	11.891
12:00-13:00	12	2290	5.674	12	2290	6.282	12	2290	11.956
13:00-14:00	12	2290	5.714	12	2290	5.452	12	2290	11.166
14:00-15:00	12	2290	5.307	12	2290	5.314	12	2290	10.621
15:00-16:00	12	2290	5.278	12	2290	5.565	12	2290	10.843
16:00-17:00	12	2290	4.874	12	2290	5.118	12	2290	9.992
17:00-18:00	12	2290	4.124	12	2290	4.135	12	2290	8.259
18:00-19:00	12	2290	2.697	12	2290	3.327	12	2290	6.024
19:00-20:00	12	2290	2.002	12	2290	2.515	12	2290	4.517
20:00-21:00	12	2290	1.161	12	2290	1.35	12	2290	2.511
21:00-22:00	12	2290	0.597	12	2290	0.877	12	2290	1.474
22:00-23:00	12	2290	0.062	12	2290	0.229	12	2290	0.291
23:00-24:00									
Daily Trip Rates:			55.443			55.305			110.748

TRICS 7.5.3
Trip Rate Parameter: Gross floor area

TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES
Calculation Factor: 100 sqm
Count Type: PEDESTRIANS Saturday

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	2	2511	0.319	2	2511	0	2	2511	0.319
07:00-08:00	12	2290	0.153	12	2290	0.058	12	2290	0.211
08:00-09:00	12	2290	0.517	12	2290	0.455	12	2290	0.972
09:00-10:00	12	2290	0.619	12	2290	0.659	12	2290	1.278
10:00-11:00	12	2290	1.114	12	2290	0.888	12	2290	2.002
11:00-12:00	12	2290	1.365	12	2290	1.427	12	2290	2.792
12:00-13:00	12	2290	1.824	12	2290	1.703	12	2290	3.527
13:00-14:00	12	2290	1.907	12	2290	1.751	12	2290	3.658
14:00-15:00	12	2290	1.922	12	2290	1.976	12	2290	3.898
15:00-16:00	12	2290	1.656	12	2290	1.991	12	2290	3.647
16:00-17:00	12	2290	1.769	12	2290	1.689	12	2290	3.458
17:00-18:00	12	2290	1.663	12	2290	1.54	12	2290	3.203
18:00-19:00	12	2290	1.532	12	2290	1.281	12	2290	2.813
19:00-20:00	12	2290	0.834	12	2290	1.059	12	2290	1.893
20:00-21:00	12	2290	0.826	12	2290	0.95	12	2290	1.776
21:00-22:00	12	2290	0.386	12	2290	0.517	12	2290	0.903
22:00-23:00	12	2290	0.047	12	2290	0.153	12	2290	0.2
23:00-24:00									
Daily Trip Rates:			18.453			18.097			36.55

TRICS 7.5.3
Trip Rate Parameter: Gross floor area

TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES
Calculation Factor: 100 sqm
Count Type: CYCLISTS Saturday

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	2	2511	0.02	2	2511	0	2	2511	0.02
07:00-08:00	12	2290	0.022	12	2290	0.004	12	2290	0.026
08:00-09:00	12	2290	0.047	12	2290	0.04	12	2290	0.087
09:00-10:00	12	2290	0.047	12	2290	0.055	12	2290	0.102
10:00-11:00	12	2290	0.08	12	2290	0.051	12	2290	0.131
11:00-12:00	12	2290	0.091	12	2290	0.076	12	2290	0.167
12:00-13:00	12	2290	0.062	12	2290	0.051	12	2290	0.113
13:00-14:00	12	2290	0.095	12	2290	0.062	12	2290	0.157
14:00-15:00	12	2290	0.066	12	2290	0.084	12	2290	0.15
15:00-16:00	12	2290	0.062	12	2290	0.04	12	2290	0.102
16:00-17:00	12	2290	0.062	12	2290	0.084	12	2290	0.146
17:00-18:00	12	2290	0.066	12	2290	0.102	12	2290	0.168
18:00-19:00	12	2290	0.073	12	2290	0.073	12	2290	0.146
19:00-20:00	12	2290	0.069	12	2290	0.062	12	2290	0.131
20:00-21:00	12	2290	0.062	12	2290	0.066	12	2290	0.128
21:00-22:00	12	2290	0.022	12	2290	0.055	12	2290	0.077
22:00-23:00	12	2290	0	12	2290	0.007	12	2290	0.007
23:00-24:00									
Daily Trip Rates:			0.946			0.912			1.858

TRICS 7.5.3
Trip Rate Parameter: Gross floor area

TRIP RATE for Land Use 01 - RETAIL/C - DISCOUNT FOOD STORES
Calculation Factor: 100 sqm
Count Type: PUBLIC TRANSPORT USERS Saturday

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	2	2511	0.06	2	2511	0.02	2	2511	0.08
07:00-08:00	12	2290	0.044	12	2290	0.029	12	2290	0.073
08:00-09:00	12	2290	0.149	12	2290	0.091	12	2290	0.24
09:00-10:00	12	2290	0.2	12	2290	0.182	12	2290	0.382
10:00-11:00	12	2290	0.207	12	2290	0.182	12	2290	0.389
11:00-12:00	12	2290	0.207	12	2290	0.164	12	2290	0.371
12:00-13:00	12	2290	0.193	12	2290	0.157	12	2290	0.35
13:00-14:00	12	2290	0.211	12	2290	0.164	12	2290	0.375
14:00-15:00	12	2290	0.211	12	2290	0.178	12	2290	0.389
15:00-16:00	12	2290	0.167	12	2290	0.178	12	2290	0.345
16:00-17:00	12	2290	0.142	12	2290	0.182	12	2290	0.324
17:00-18:00	12	2290	0.113	12	2290	0.167	12	2290	0.28
18:00-19:00	12	2290	0.135	12	2290	0.131	12	2290	0.266
19:00-20:00	12	2290	0.076	12	2290	0.146	12	2290	0.222
20:00-21:00	12	2290	0.051	12	2290	0.091	12	2290	0.142
21:00-22:00	12	2290	0.025	12	2290	0.04	12	2290	0.065
22:00-23:00	12	2290	0.004	12	2290	0.018	12	2290	0.022
23:00-24:00									
Daily Trip Rates:			2.195			2.12			4.315

Appendix E – Traffic Flow Diagrams

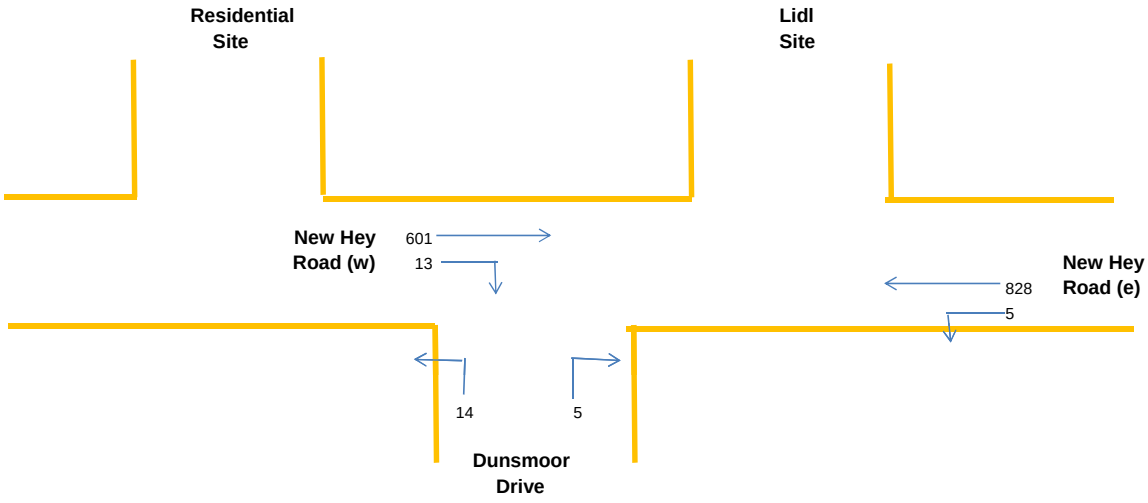
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Proposed Lidl Foodstore, New Hey Road, Huddersfield

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Consulting Engineers

Traffic Count Friday 12 October 2018

16.00-17.00



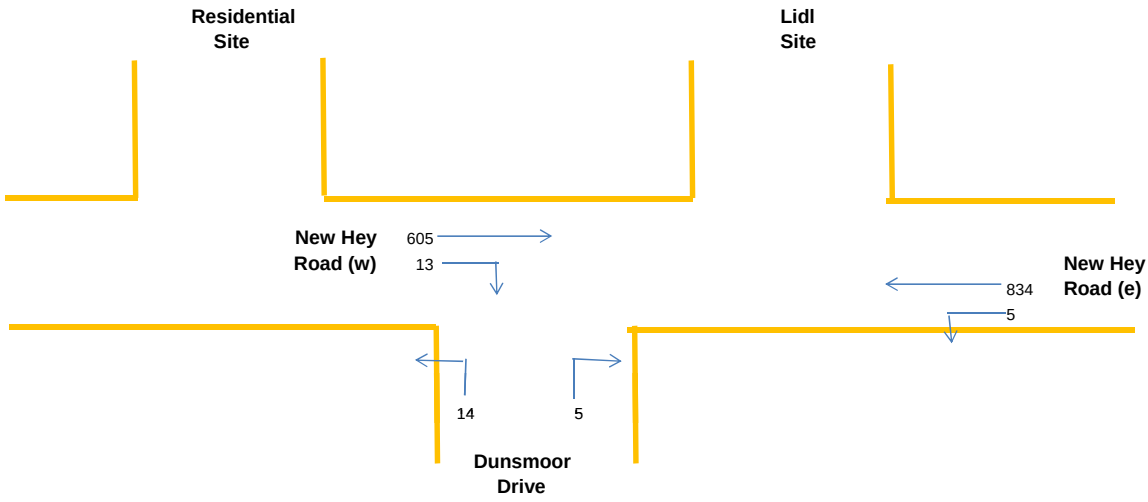
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Consulting Engineers

Traffic Count Friday 12 October 2018 growthed to 2020 (x 1.00725)

16.00-17.00



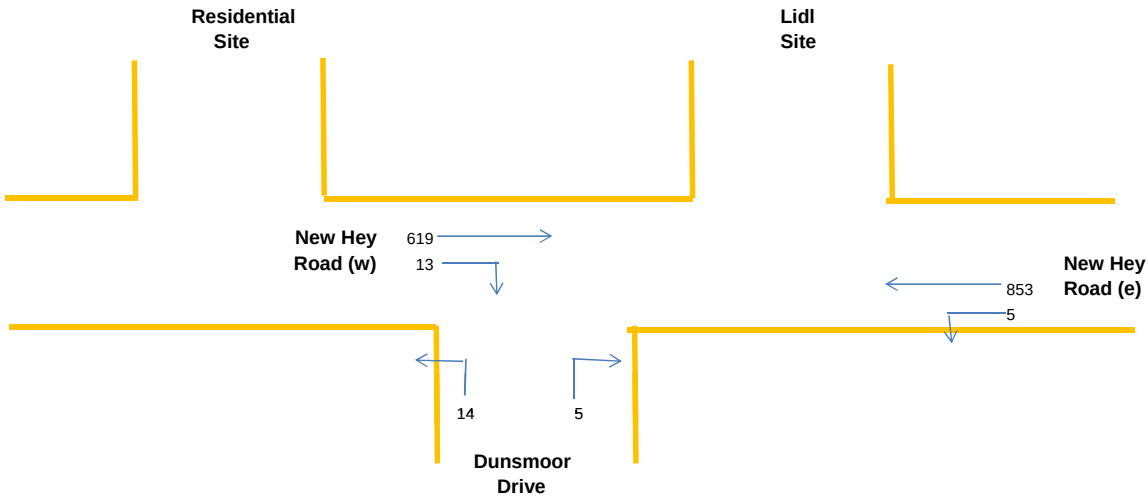
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Proposed Lidl Foodstore, New Hey Road, Huddersfield

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Traffic Count Friday 12 October 2018 growthed to 2025 (x 1.0298)

16.00-17.00



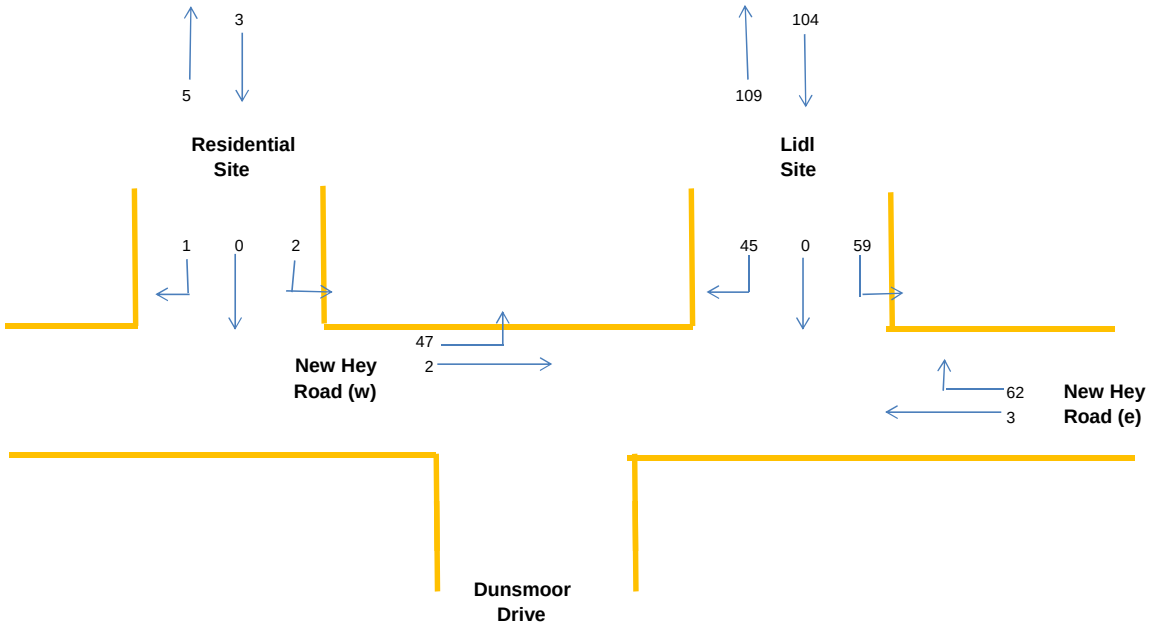
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Proposed Lidl Foodstore, New Hey Road, Huddersfield

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Traffic Generated by the Proposed Lidl Foodstore and the Residential Development

16.00-17.00 **Friday**



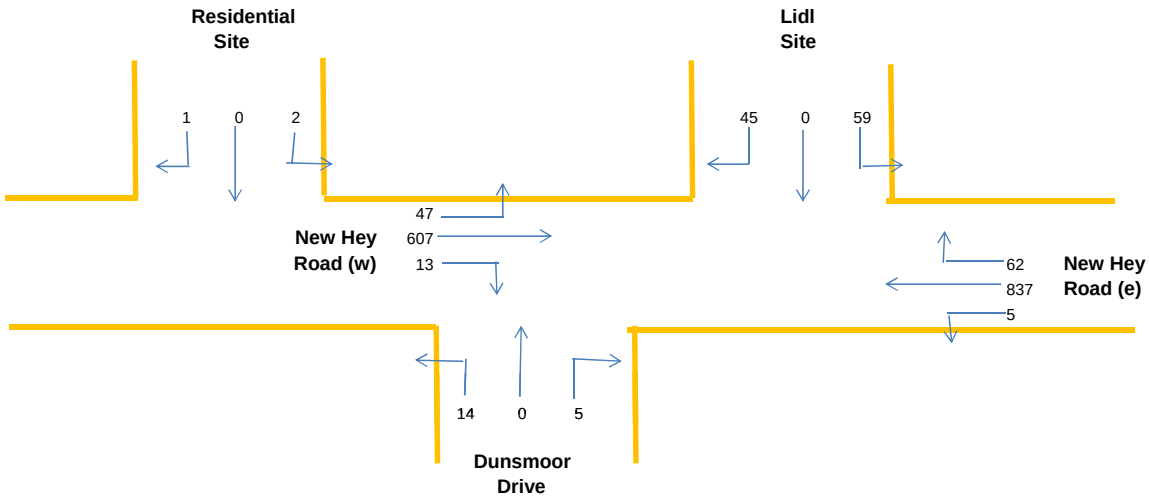
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Proposed Lidl Foodstore, New Hey Road, Huddersfield

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Traffic Count Friday 12 October 2018 growthed to 2020 + Traffic Generated by the Proposed Developments

16.00-17.00



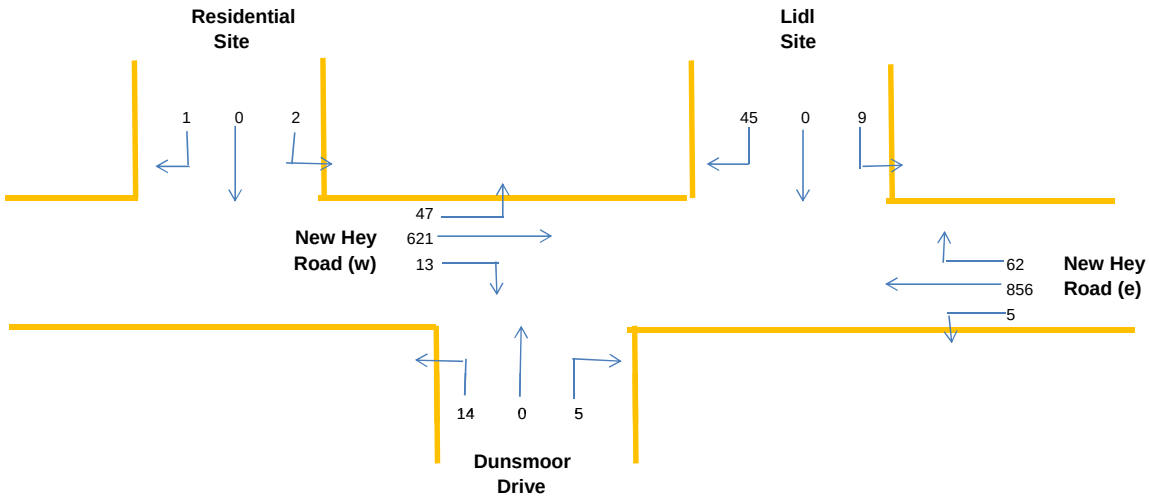
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Proposed Lidl Foodstore, New Hey Road, Huddersfield

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Traffic Count Friday 12 October 2018 growthed to 2025 + Traffic Generated by the Proposed Developments

16.00-17.00



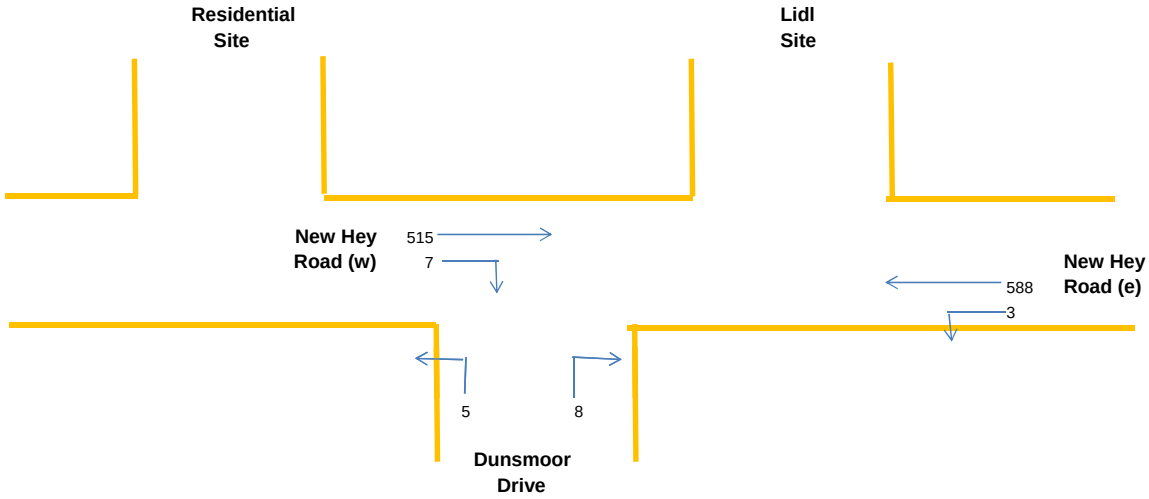
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Proposed Lidl Foodstore, New Hey Road, Huddersfield

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Traffic Count Saturday 13 October 2018

12.00-13.00



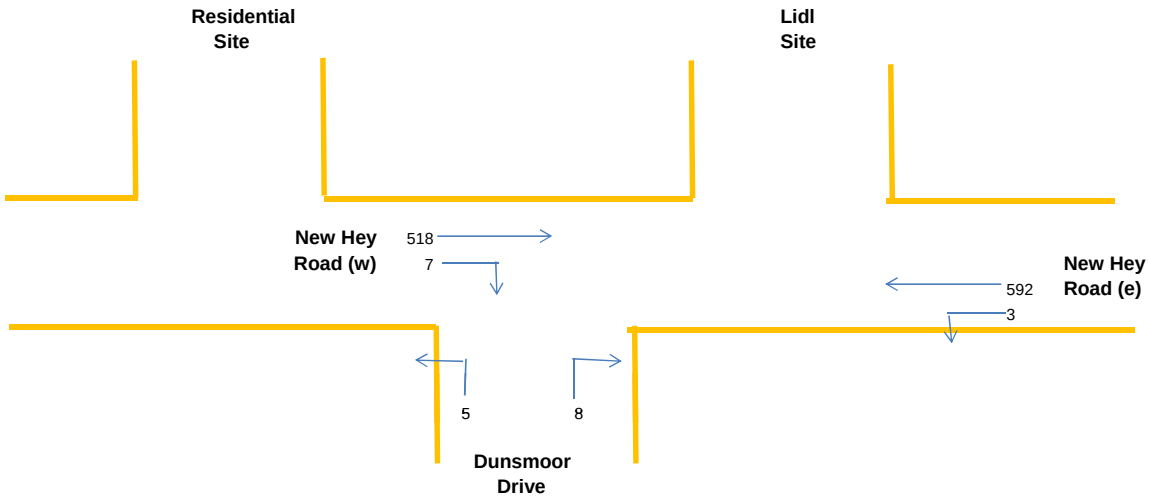
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Proposed Lidl Foodstore, New Hey Road, Huddersfield

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Traffic Count Saturday 13 October 2018 growthed to 2020 (x 1.00645)

12.00-13.00



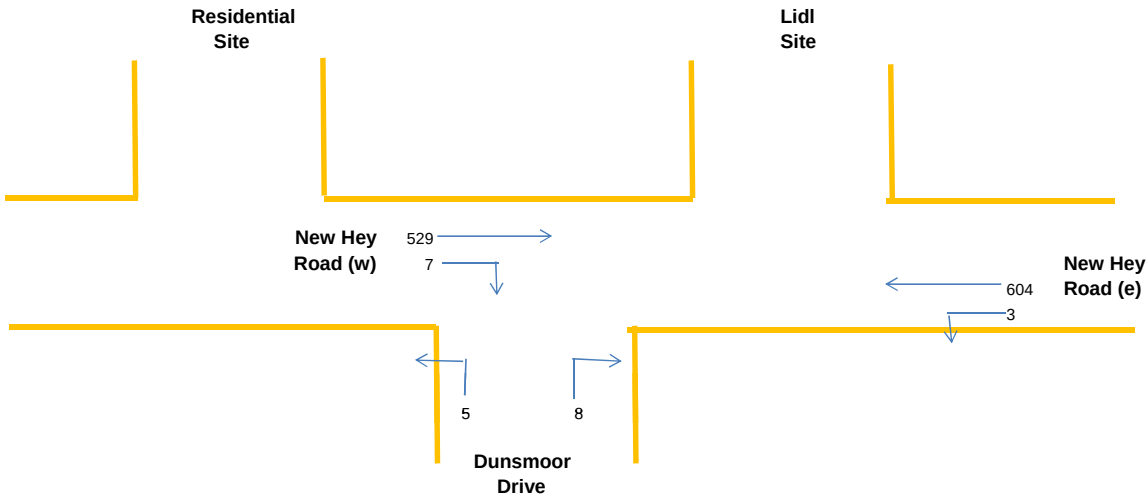
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Traffic Count Saturday 13 October 2018 growthed to 2025 (x 1.02735)

12.00-13.00



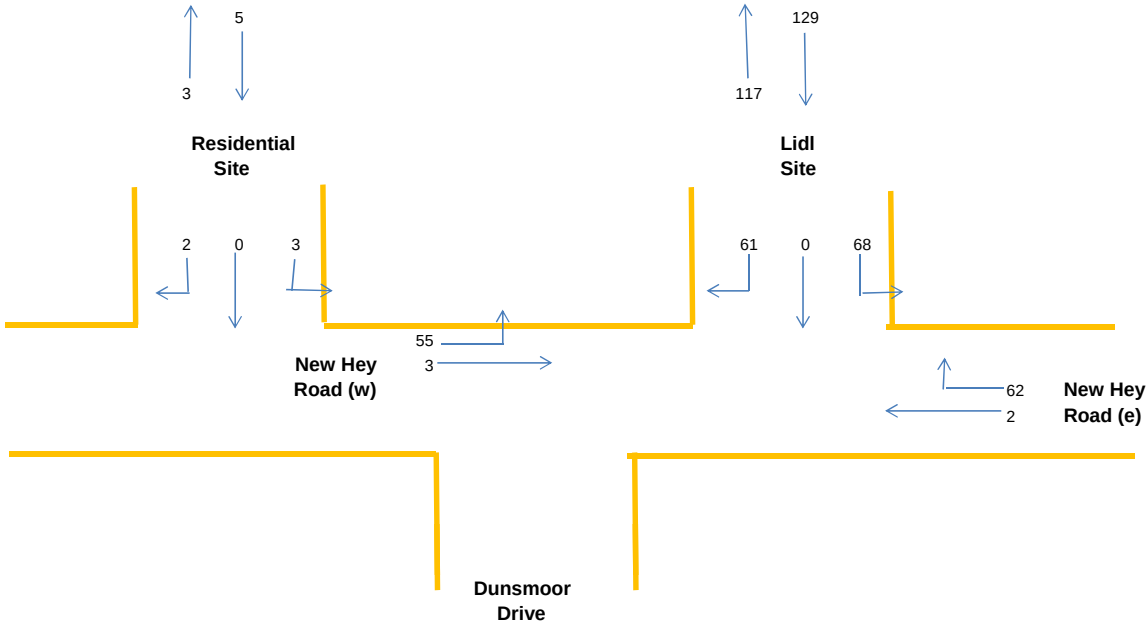
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Traffic Generated by Proposed Lidl Foodstore and Residential Development

12.00-13.00 **Saturday**



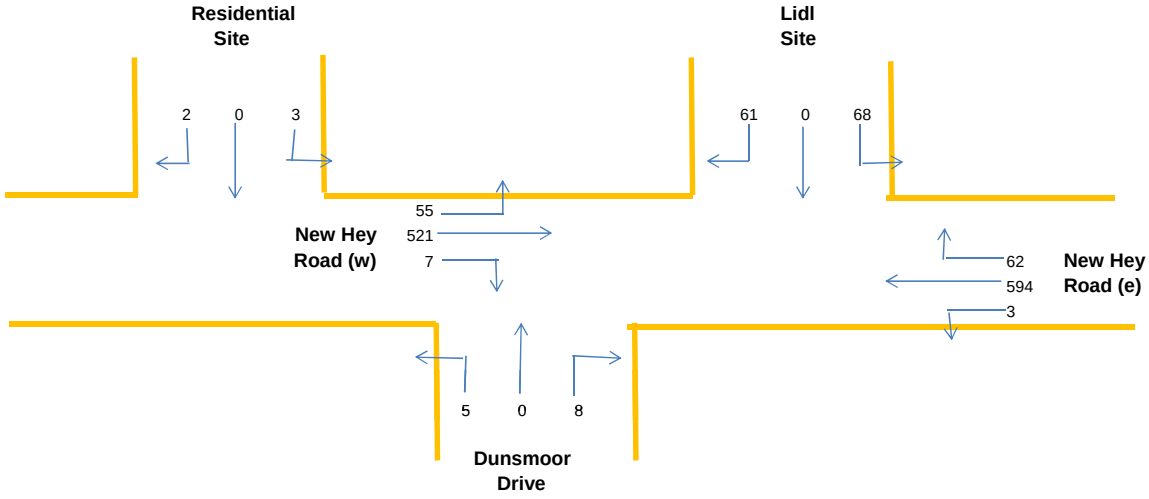
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Traffic Count Saturday 13 October 2018 growthed to 2020 + Traffic Generated by Proposed Developments

12.00-13.00



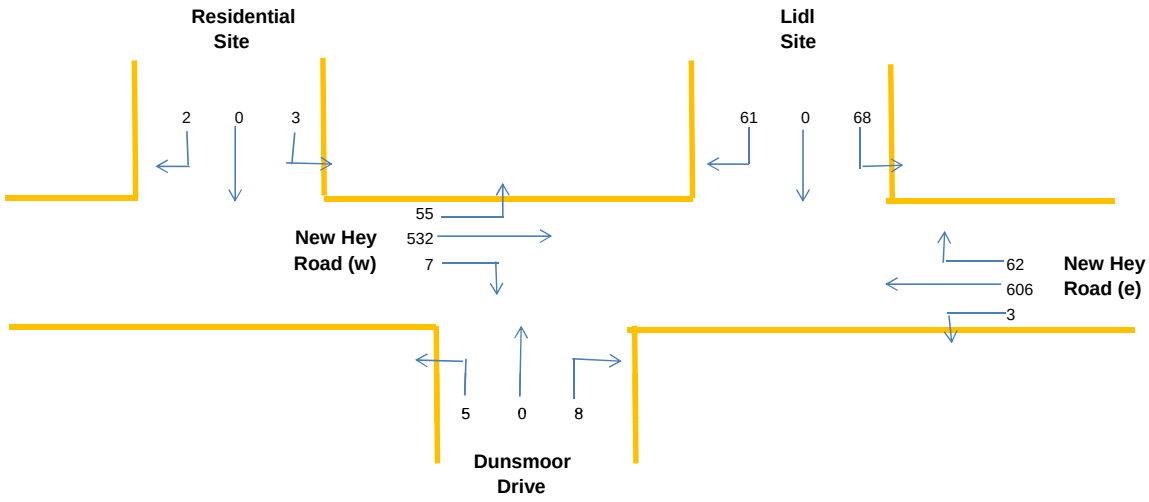
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Proposed Lidl Foodstore, New Hey Road, Huddersfield

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Traffic Count Saturday 13 October 2018 growthed to 2025 + Traffic Generated by Proposed Developments

12.00-13.00



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Appendix F – Modelling Outputs

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PICADY
GUI Version: 5.1 AE Analysis Program Release: 5.0 (MAY 2010) © Copyright TRL Limited, 2010 Adapted from PICADY/3 which is Crown Copyright by permission of the controller of HMSO
For sales and distribution information, program advice and maintenance, contact:
TRL Limited Crowthorne House Nine Mile Ride Wokingham, Berks. RG40 3GA, UK Tel: +44 (0)1344 770758 Fax:+44 (0)1344 770864 E-mail: software@trl.co.uk Web: www.trlsoftware.co.uk
The user of this computer program for the solution of an engineering problem is in no way relieved of their responsibility for the correctness of the solution

Run Analysis

Parameter	Values
File Run	C:\Program Files\PICADY 5\New Hey Road.vpi
Date Run	01 March 2019
Time Run	18:48:07
Driving Side	Drive On The Left

Arm Names and Flow Scaling Factors

Arm	Arm Name	Flow Scaling Factor (%)
Arm A	New Hey Road (e)	100
Arm B	Dunsmoor Drive	100
Arm C	New Hey Road (w)	100
Arm D	Lidl Access	100

Stream Labelling Convention

Stream A-B contains traffic going from A to B etc.

Run Information

Parameter	Values
Run Title	2025 Base + Developments
Location	New Hey Road, Huddersfield
Date	01 March 2019
Enumerator	Admin [PC-080908]
Job Number	2014-1-7
Status	TIA
Client	Lidl Great Britain Limited
Description	Friday pm peak

Errors and Warnings

Parameter	Values
Warning	No Errors Or Warnings

Geometric Data

Geometric Parameters

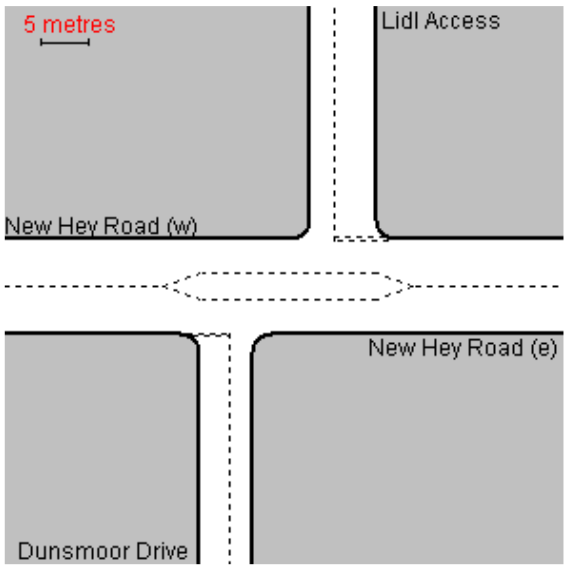
Parameter	Minor Arm B	Minor Arm D
Major Road Carriageway Width (m)	7.00	7.00
Major Road Kerbed Central Reserve Width (m)	0.00	0.00
Major Road Right Turning Lane Width (m)	3.00	3.00
Minor Road First Lane Width (m)	3.00	4.50
Minor Road Visibility To Right (m)	45	45
Minor Road Visibility To Left (m)	45	45
Major Road Right Turn Visibility (m)	100	100
Major Road Right Turn Blocks Traffic	Yes (if over 1 veh)	Yes (if over 1 veh)

Slope and Intercept Values

Stream	Intercept for Stream	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
B-C	652.266	0.090	0.226	-	-	-	-	-	-	0.090	0.226
B-AD	514.370	0.096	0.242	-	-	-	0.142	0.324	0.142	0.096	0.242
D-A	750.220	0.110	-	-	-	-	0.278	-	-	0.110	0.278
D-BC	591.615	0.164	0.164	0.372	0.261	0.103	0.261	-	0.103	-	-
C-B	686.890	0.255	0.255	-	-	-	-	-	-	0.255	0.255
A-D	686.890	-	-	-	0.255	0.255	0.255	-	0.255	-	-

Note: Streams may be combined in which case capacity will be adjusted
These values do not allow for any site-specific corrections

Junction Diagram



Demand Data

Modelling Periods

Parameter	Period	Duration (min)	Segment Length (min)
First Modelling Period	15:45-17:15	90	15

ODTAB Turning Counts

Demand Set: 2025 Base + Developments
Modelling Period: 15:45-17:15

From/To	Arm A	Arm B	Arm C	Arm D
Arm A	0.0	5.0	856.0	62.0
Arm B	5.0	0.0	14.0	0.0
Arm C	621.0	13.0	0.0	47.0
Arm D	59.0	0.0	45.0	0.0

ODTAB Synthesised Flows

Demand Set: 2025 Base + Developments
Modelling Period: 15:45-17:15

Arm	Rising Time	Rising Flow (veh/min)	Peak Time	Peak Flow (veh/min)	Falling Time	Falling Flow (veh/min)
Arm A	16:00	11.538	16:30	17.306	17:00	11.538
Arm B	16:00	0.237	16:30	0.356	17:00	0.237
Arm C	16:00	8.512	16:30	12.769	17:00	8.512
Arm D	16:00	1.300	16:30	1.950	17:00	1.300

Heavy Vehicles Percentages

Demand Set: 2025 Base + Developments
Modelling Period: 15:45-17:15

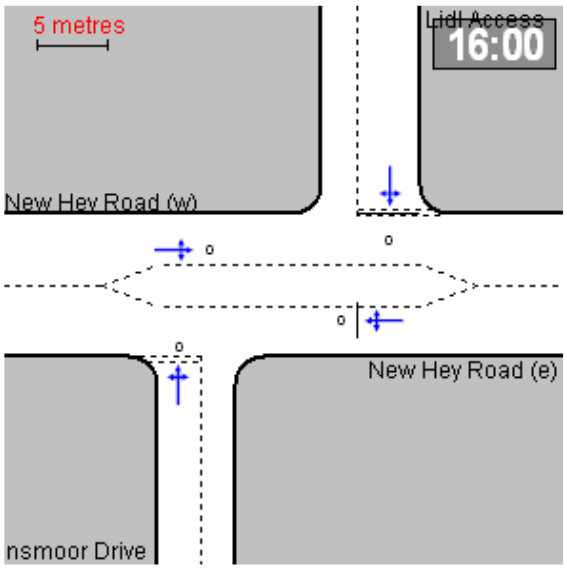
From/To	Arm A	Arm B	Arm C	Arm D
Arm A	-	10.0	10.0	10.0
Arm B	10.0	-	10.0	10.0
Arm C	10.0	10.0	-	10.0
Arm D	10.0	10.0	10.0	-

Default proportions of heavy vehicles are used

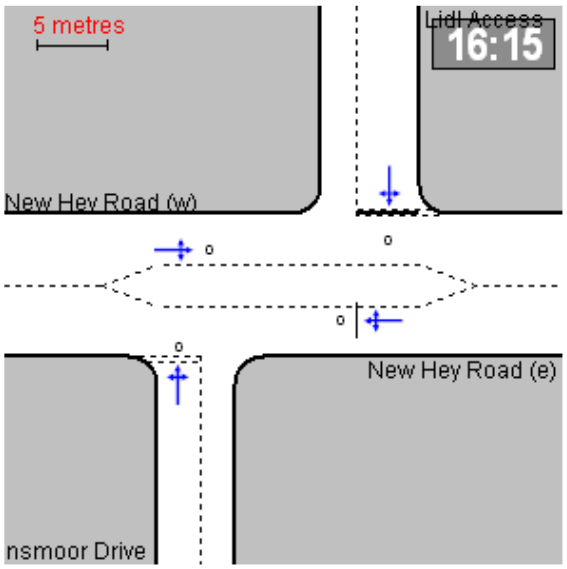
Queue Diagrams

Demand Set: Sum of Demand Sets for Modelling Period: 15:45 - 17:15
Modelling Period: 15:45-17:15
View Extent: 40m

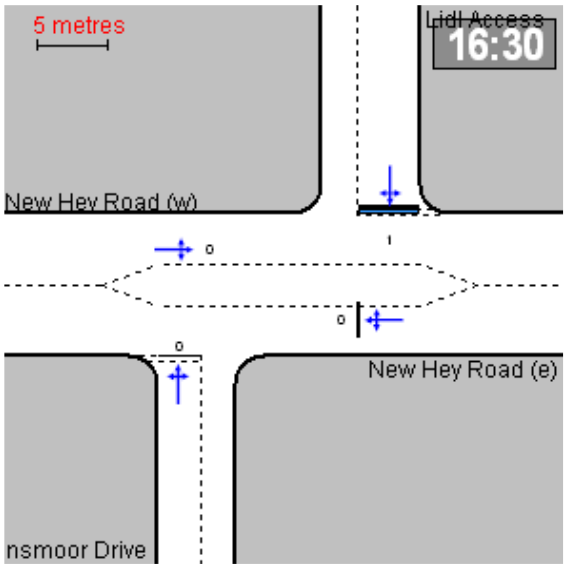
Queue Interval 1: 15:45-16:00



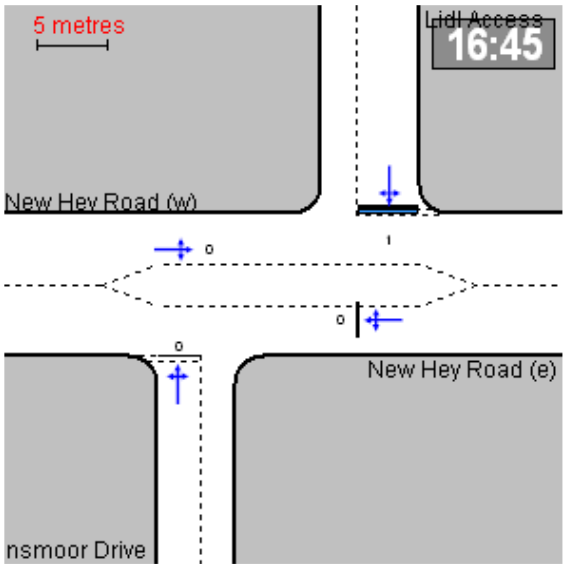
Queue Interval 2: 16:00-16:15



Queue Interval 3: 16:15-16:30

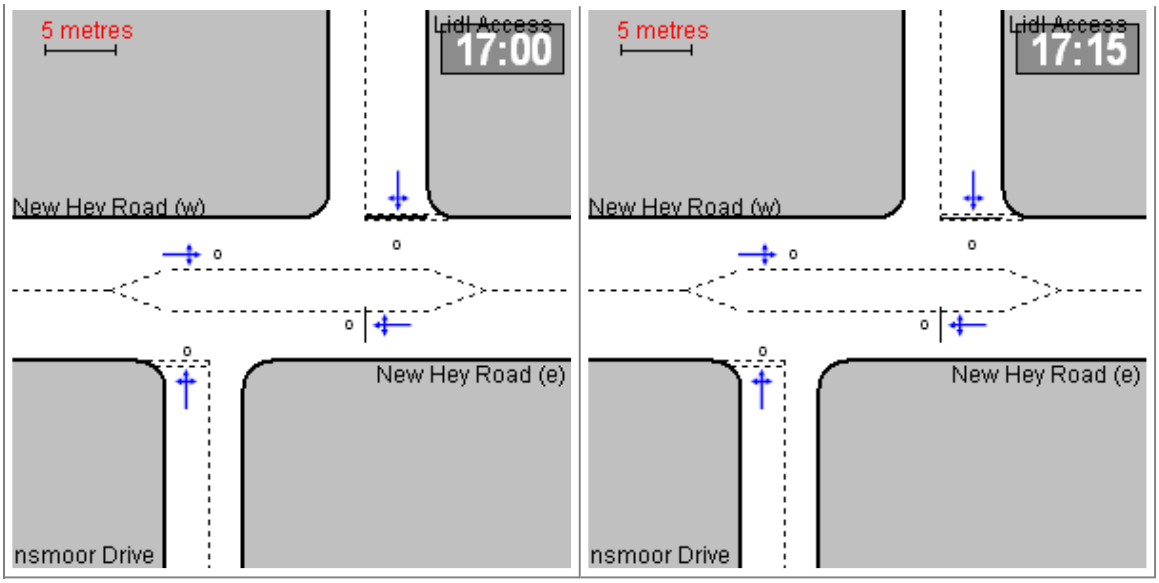


Queue Interval 4: 16:30-16:45



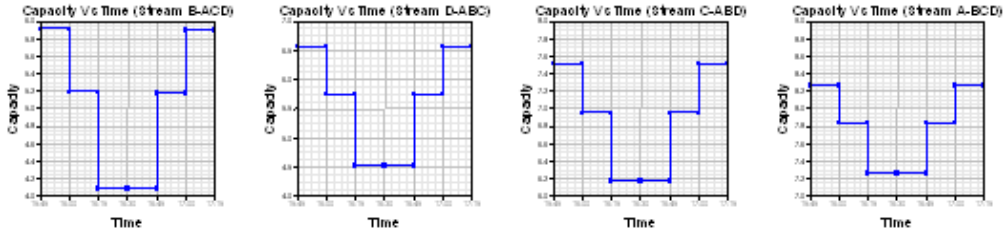
Queue Interval 5: 16:45-17:00

Queue Interval 6: 17:00-17:15



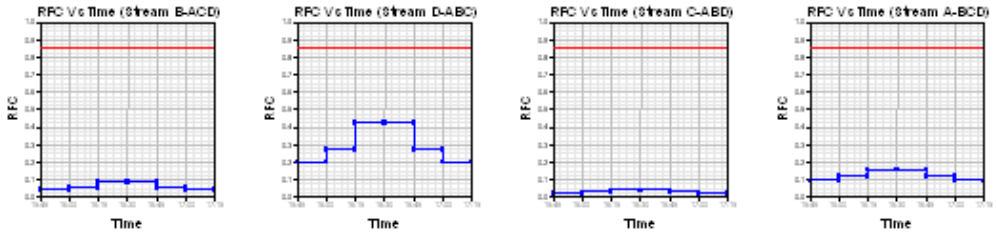
Capacity Graph

Demand Set: Sum of Demand Sets for Modelling Period: 15:45 - 17:15
Modelling Period: 15:45-17:15



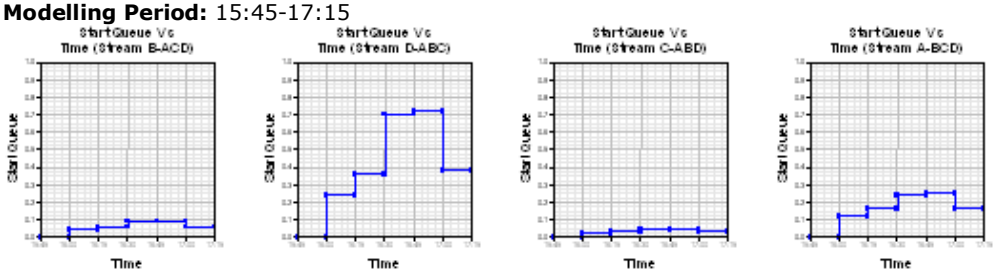
RFC Graph

Demand Set: Sum of Demand Sets for Modelling Period: 15:45 - 17:15
Modelling Period: 15:45-17:15



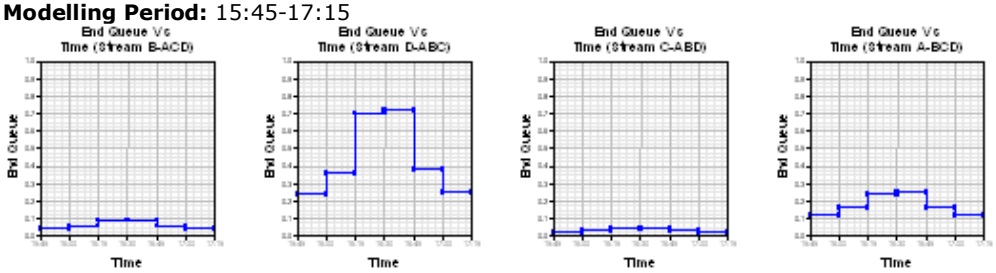
Start Queue Graph

Demand Set: Sum of Demand Sets for Modelling Period: 15:45 - 17:15
Modelling Period: 15:45-17:15



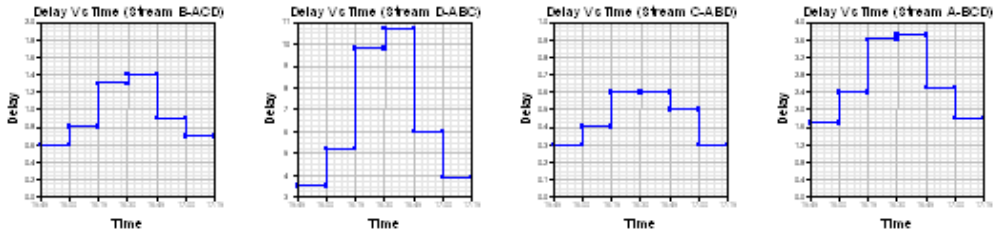
End Queue Graph

Demand Set: Sum of Demand Sets for Modelling Period: 15:45 - 17:15
Modelling Period: 15:45-17:15



Delay Graph

Demand Set: Sum of Demand Sets for Modelling Period: 15:45 - 17:15
Modelling Period: 15:45-17:15



Queues & Delays

Demand Set: Sum of Demand Sets for Modelling Period: 15:45 - 17:15
Modelling Period: 15:45-17:15

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
15:45-16:00	B-ACD	0.24	5.91	0.040	-	0.00	0.04	-	0.6	0.18
	D-ABC	1.30	6.56	0.199	-	0.00	0.24	-	3.5	0.19
	C-ABD	0.16	7.51	0.022	-	0.00	0.02	-	0.3	0.14
	C-A	-	-	-	-	-	-	-	-	-
	C-D	-	-	-	-	-	-	-	-	-
	A-BCD	0.78	8.26	0.094	-	0.00	0.12	-	1.7	0.13
	A-B	-	-	-	-	-	-	-	-	-
	A-C	-	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
16:00-16:15	B-ACD	0.28	5.19	0.055	-	0.04	0.06	-	0.8	0.20
	D-ABC	1.56	5.75	0.271	-	0.24	0.36	-	5.2	0.24
	C-ABD	0.19	6.95	0.028	-	0.02	0.03	-	0.4	0.15
	C-A	-	-	-	-	-	-	-	-	-
	C-D	-	-	-	-	-	-	-	-	-
	A-BCD	0.93	7.84	0.118	-	0.12	0.16	-	2.4	0.14
	A-B	-	-	-	-	-	-	-	-	-
	A-C	-	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
16:15-16:30	B-ACD	0.35	4.09	0.085	-	0.06	0.09	-	1.3	0.27
	D-ABC	1.91	4.52	0.422	-	0.36	0.70	-	9.8	0.38
	C-ABD	0.24	6.17	0.039	-	0.03	0.04	-	0.6	0.17
	C-A	-	-	-	-	-	-	-	-	-
	C-D	-	-	-	-	-	-	-	-	-
	A-BCD	1.14	7.26	0.157	-	0.16	0.24	-	3.6	0.16
	A-B	-	-	-	-	-	-	-	-	-
	A-C	-	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
16:30-16:45	B-ACD	0.35	4.09	0.085	-	0.09	0.09	-	1.4	0.27
	D-ABC	1.91	4.52	0.422	-	0.70	0.72	-	10.7	0.38
	C-ABD	0.24	6.17	0.039	-	0.04	0.04	-	0.6	0.17
	C-A	-	-	-	-	-	-	-	-	-
	C-D	-	-	-	-	-	-	-	-	-
	A-BCD	1.14	7.26	0.157	-	0.24	0.25	-	3.7	0.16

	A-B	-	-	-	-	-	-	-	-	-
	A-C	-	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
16:45-17:00	B-ACD	0.28	5.18	0.055	-	0.09	0.06	-	0.9	0.20
	D-ABC	1.56	5.75	0.271	-	0.72	0.38	-	6.0	0.24
	C-ABD	0.19	6.95	0.028	-	0.04	0.03	-	0.5	0.15
	C-A	-	-	-	-	-	-	-	-	-
	C-D	-	-	-	-	-	-	-	-	-
	A-BCD	0.93	7.84	0.118	-	0.25	0.16	-	2.5	0.14
	A-B	-	-	-	-	-	-	-	-	-
	A-C	-	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
17:00-17:15	B-ACD	0.24	5.90	0.040	-	0.06	0.04	-	0.7	0.18
	D-ABC	1.30	6.56	0.199	-	0.38	0.25	-	3.9	0.19
	C-ABD	0.16	7.51	0.022	-	0.03	0.02	-	0.3	0.14
	C-A	-	-	-	-	-	-	-	-	-
	C-D	-	-	-	-	-	-	-	-	-
	A-BCD	0.78	8.26	0.094	-	0.16	0.12	-	1.8	0.13
	A-B	-	-	-	-	-	-	-	-	-
	A-C	-	-	-	-	-	-	-	-	-

Entry capacities marked with an '(X)' are dominated by a pedestrian crossing in that time segment.
In time segments marked with a '(B)', traffic leaving the junction may block back from a crossing so impairing normal operation of the junction.
Delays marked with '##' could not be calculated.

Overall Queues & Delays

Queueing Delay Information Over Whole Period

Demand Set: Sum of Demand Sets for Modelling Period: 15:45 - 17:15
Modelling Period: 15:45-17:15

Stream	Total Demand (veh)	Total Demand (veh/h)	Queueing Delay (min)	Queueing Delay (min/veh)	Inclusive Delay (min)	Inclusive Delay (min/veh)
B-ACD	26.2	17.4	5.7	0.2	5.7	0.2
D-ABC	143.1	95.4	39.1	0.3	39.1	0.3
C-ABD	17.9	11.9	2.9	0.2	2.9	0.2
C-A	-	-	-	-	-	-
C-D	-	-	-	-	-	-
A-BCD	85.3	56.9	15.7	0.2	15.7	0.2
A-B	2377.1	1584.7	63.4	0.0	63.4	0.0
A-C	-	-	-	-	-	-
All	**-**	**-**	**-**	**-**	**-**	**-**

Delay is that occurring only within the time period.
Inclusive delay includes delay suffered by vehicles which are still queuing after the end of the time period.
These will only be significantly different if there is a large queue remaining at the end of the time period.

PICADY 5 Run Successful

PICADY
GUI Version: 5.1 AE Analysis Program Release: 5.0 (MAY 2010) © Copyright TRL Limited, 2010 Adapted from PICADY/3 which is Crown Copyright by permission of the controller of HMSO
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The user of this computer program for the solution of an engineering problem is in no way relieved of their responsibility for the correctness of the solution

Run Analysis

Parameter	Values
File Run	C:\Program Files\PICADY 5\New Hey Road.vpi
Date Run	01 March 2019
Time Run	18:52:51
Driving Side	Drive On The Left

Arm Names and Flow Scaling Factors

Arm	Arm Name	Flow Scaling Factor (%)
Arm A	New Hey Road (e)	100
Arm B	Dunsmoor Drive	100
Arm C	New Hey Road (w)	100
Arm D	Lidl Access	100

Stream Labelling Convention

Stream A-B contains traffic going from A to B etc.

Run Information

Parameter	Values
Run Title	2025 Base + Developments
Location	New Hey Road, Huddersfield
Date	01 March 2019
Enumerator	Admin [PC-080908]
Job Number	2014-1-7
Status	TIA
Client	Lidl Great Britain Limited
Description	Saturday peak

Errors and Warnings

Parameter	Values
Warning	No Errors Or Warnings

Geometric Data

Geometric Parameters

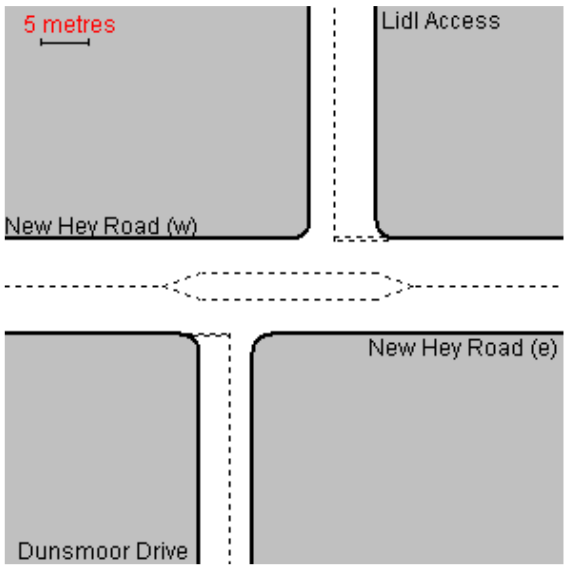
Parameter	Minor Arm B	Minor Arm D
Major Road Carriageway Width (m)	7.00	7.00
Major Road Kerbed Central Reserve Width (m)	0.00	0.00
Major Road Right Turning Lane Width (m)	3.00	3.00
Minor Road First Lane Width (m)	3.00	4.50
Minor Road Visibility To Right (m)	45	45
Minor Road Visibility To Left (m)	45	45
Major Road Right Turn Visibility (m)	100	100
Major Road Right Turn Blocks Traffic	Yes (if over 1 veh)	Yes (if over 1 veh)

Slope and Intercept Values

Stream	Intercept for Stream	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
B-C	652.266	0.090	0.226	-	-	-	-	-	-	0.090	0.226
B-AD	514.370	0.096	0.242	-	-	-	0.142	0.324	0.142	0.096	0.242
D-A	750.220	0.110	-	-	-	-	0.278	-	-	0.110	0.278
D-BC	591.615	0.164	0.164	0.372	0.261	0.103	0.261	-	0.103	-	-
C-B	686.890	0.255	0.255	-	-	-	-	-	-	0.255	0.255
A-D	686.890	-	-	-	0.255	0.255	0.255	-	0.255	-	-

Note: Streams may be combined in which case capacity will be adjusted
These values do not allow for any site-specific corrections

Junction Diagram



Demand Data

Modelling Periods

Parameter	Period	Duration (min)	Segment Length (min)
First Modelling Period	11:45-13:15	90	15

ODTAB Turning Counts

Demand Set: 2025 Base + Developments
Modelling Period: 11:45-13:15

From/To	Arm A	Arm B	Arm C	Arm D
Arm A	0.0	3.0	616.0	62.0
Arm B	8.0	0.0	5.0	0.0
Arm C	532.0	7.0	0.0	55.0
Arm D	68.0	0.0	61.0	0.0

ODTAB Synthesised Flows

Demand Set: 2025 Base + Developments
Modelling Period: 11:45-13:15

Arm	Rising Time	Rising Flow (veh/min)	Peak Time	Peak Flow (veh/min)	Falling Time	Falling Flow (veh/min)
Arm A	12:00	8.512	12:30	12.769	13:00	8.512
Arm B	12:00	0.162	12:30	0.244	13:00	0.162
Arm C	12:00	7.425	12:30	11.138	13:00	7.425
Arm D	12:00	1.612	12:30	2.419	13:00	1.612

Heavy Vehicles Percentages

Demand Set: 2025 Base + Developments
Modelling Period: 11:45-13:15

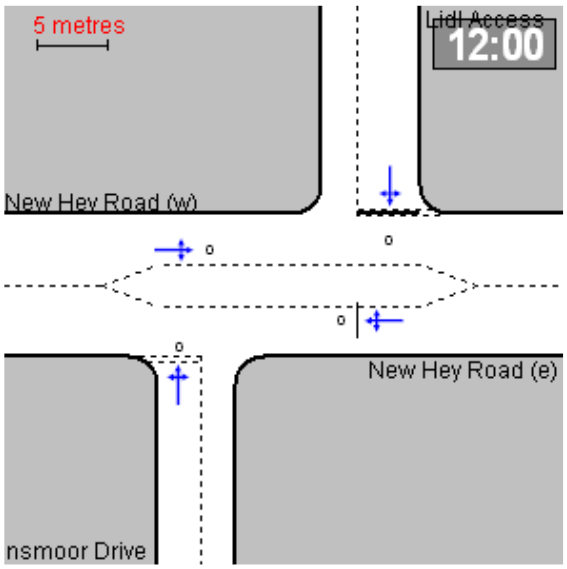
From/To	Arm A	Arm B	Arm C	Arm D
Arm A	-	10.0	10.0	10.0
Arm B	10.0	-	10.0	10.0
Arm C	10.0	10.0	-	10.0
Arm D	10.0	10.0	10.0	-

Default proportions of heavy vehicles are used

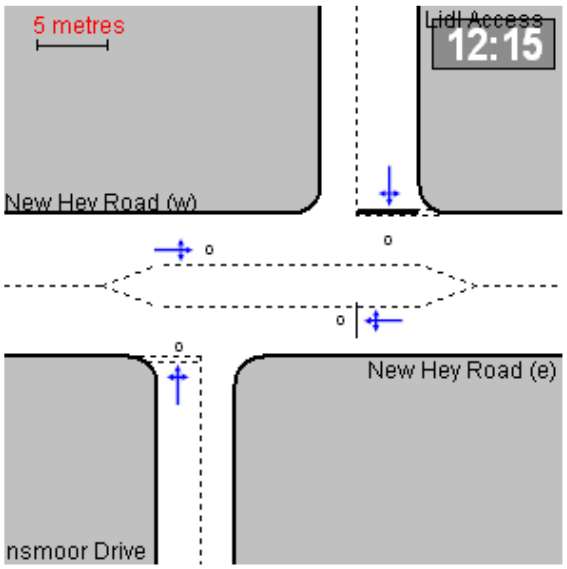
Queue Diagrams

Demand Set: Sum of Demand Sets for Modelling Period: 11:45 - 13:15
Modelling Period: 11:45-13:15
View Extent: 40m

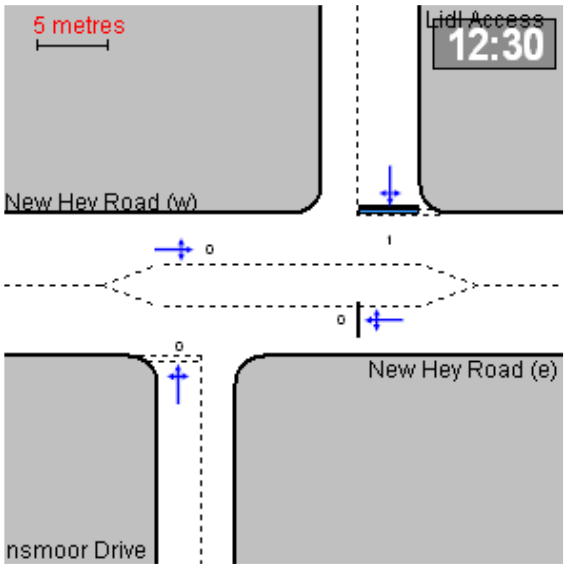
Queue Interval 1: 11:45-12:00



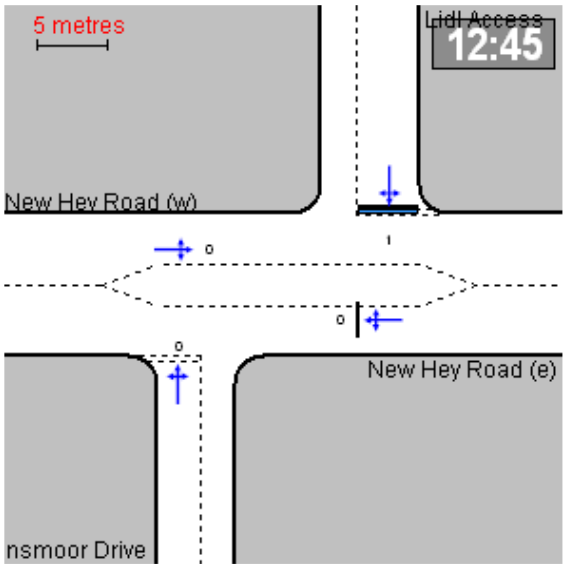
Queue Interval 2: 12:00-12:15



Queue Interval 3: 12:15-12:30

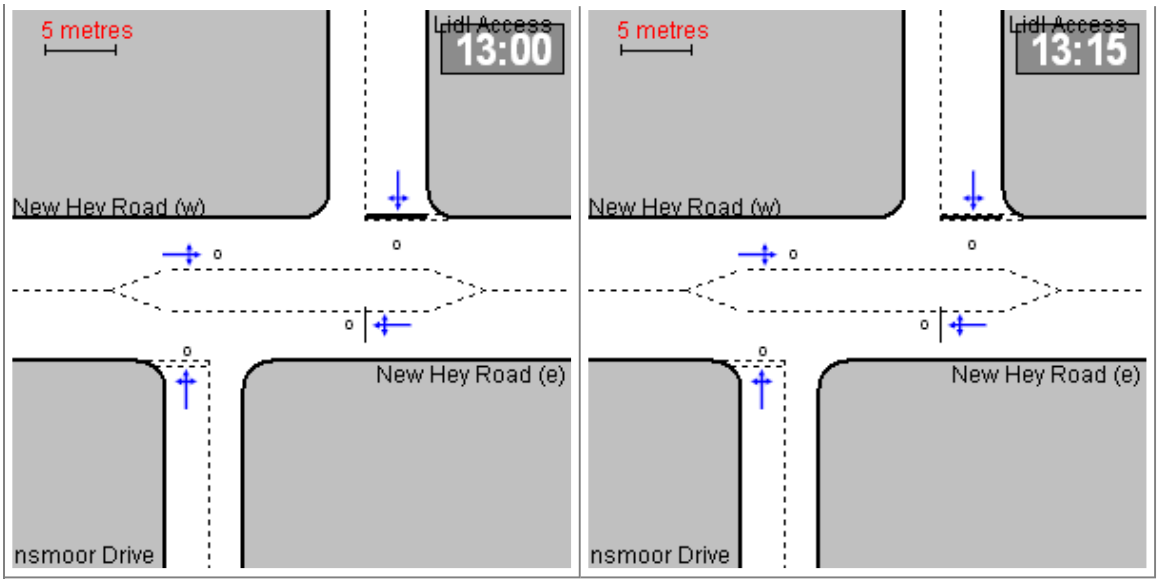


Queue Interval 4: 12:30-12:45



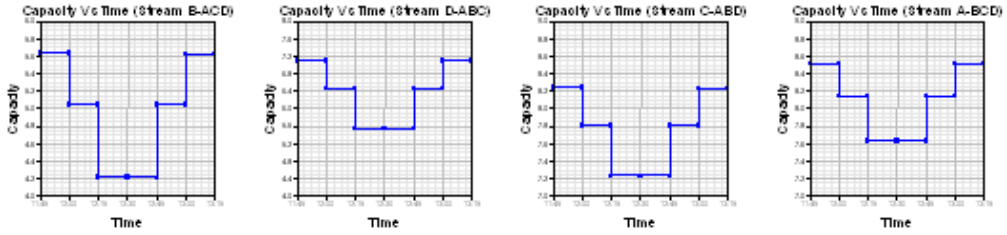
Queue Interval 5: 12:45-13:00

Queue Interval 6: 13:00-13:15



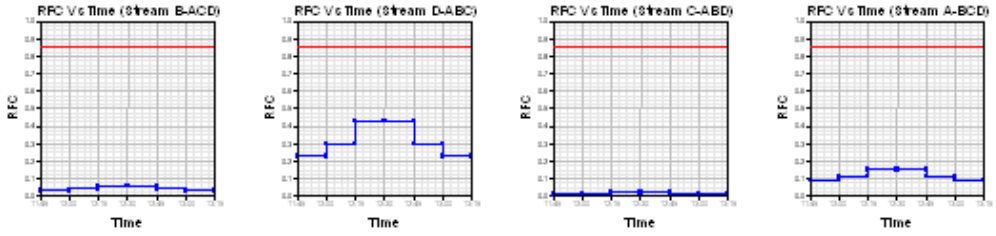
Capacity Graph

Demand Set: Sum of Demand Sets for Modelling Period: 11:45 - 13:15
Modelling Period: 11:45-13:15



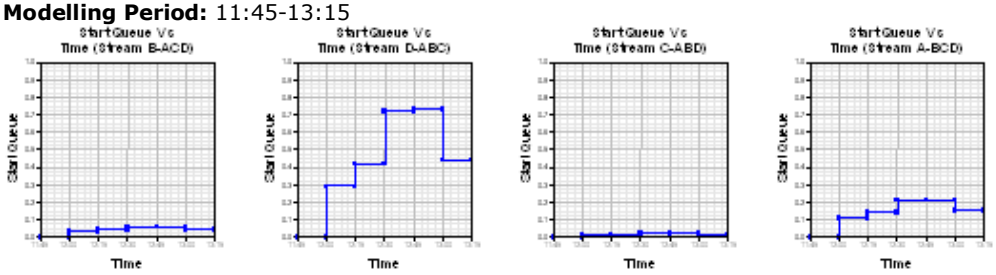
RFC Graph

Demand Set: Sum of Demand Sets for Modelling Period: 11:45 - 13:15
Modelling Period: 11:45-13:15



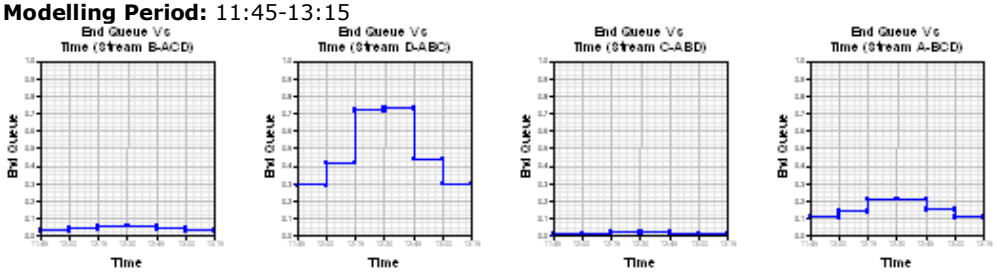
Start Queue Graph

Demand Set: Sum of Demand Sets for Modelling Period: 11:45 - 13:15
Modelling Period: 11:45-13:15



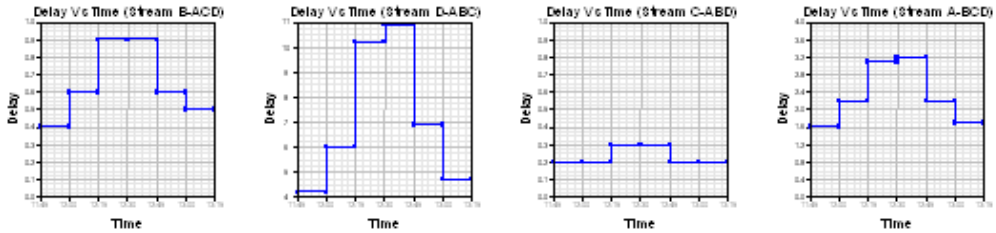
End Queue Graph

Demand Set: Sum of Demand Sets for Modelling Period: 11:45 - 13:15
Modelling Period: 11:45-13:15



Delay Graph

Demand Set: Sum of Demand Sets for Modelling Period: 11:45 - 13:15
Modelling Period: 11:45-13:15



Queues & Delays

Demand Set: Sum of Demand Sets for Modelling Period: 11:45 - 13:15
Modelling Period: 11:45-13:15

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
11:45-12:00	B-ACD	0.16	5.63	0.029	-	0.00	0.03	-	0.4	0.18
	D-ABC	1.62	7.09	0.228	-	0.00	0.29	-	4.2	0.18
	C-ABD	0.09	8.24	0.011	-	0.00	0.01	-	0.2	0.12
	C-A	-	-	-	-	-	-	-	-	-
	C-D	-	-	-	-	-	-	-	-	-
	A-BCD	0.78	8.51	0.091	-	0.00	0.11	-	1.6	0.13
	A-B	-	-	-	-	-	-	-	-	-
	A-C	-	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
12:00-12:15	B-ACD	0.19	5.04	0.039	-	0.03	0.04	-	0.6	0.21
	D-ABC	1.93	6.46	0.299	-	0.29	0.42	-	6.0	0.22
	C-ABD	0.10	7.81	0.013	-	0.01	0.01	-	0.2	0.13
	C-A	-	-	-	-	-	-	-	-	-
	C-D	-	-	-	-	-	-	-	-	-
	A-BCD	0.93	8.14	0.114	-	0.11	0.14	-	2.2	0.14
	A-B	-	-	-	-	-	-	-	-	-
	A-C	-	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
12:15-12:30	B-ACD	0.24	4.22	0.057	-	0.04	0.06	-	0.9	0.25
	D-ABC	2.37	5.54	0.427	-	0.42	0.72	-	10.2	0.31
	C-ABD	0.13	7.23	0.018	-	0.01	0.02	-	0.3	0.14
	C-A	-	-	-	-	-	-	-	-	-
	C-D	-	-	-	-	-	-	-	-	-
	A-BCD	1.14	7.63	0.149	-	0.14	0.21	-	3.1	0.15
	A-B	-	-	-	-	-	-	-	-	-
	A-C	-	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
12:30-12:45	B-ACD	0.24	4.21	0.057	-	0.06	0.06	-	0.9	0.25
	D-ABC	2.37	5.54	0.428	-	0.72	0.73	-	10.9	0.32
	C-ABD	0.13	7.23	0.018	-	0.02	0.02	-	0.3	0.14
	C-A	-	-	-	-	-	-	-	-	-
	C-D	-	-	-	-	-	-	-	-	-
	A-BCD	1.14	7.63	0.149	-	0.21	0.21	-	3.2	0.15

	A-B	-	-	-	-	-	-	-	-	-
	A-C	-	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
12:45-13:00	B-ACD	0.19	5.04	0.039	-	0.06	0.04	-	0.6	0.21
	D-ABC	1.93	6.46	0.299	-	0.73	0.44	-	6.9	0.22
	C-ABD	0.10	7.81	0.013	-	0.02	0.01	-	0.2	0.13
	C-A	-	-	-	-	-	-	-	-	-
	C-D	-	-	-	-	-	-	-	-	-
	A-BCD	0.93	8.14	0.114	-	0.21	0.15	-	2.2	0.14
	A-B	-	-	-	-	-	-	-	-	-
	A-C	-	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
13:00-13:15	B-ACD	0.16	5.62	0.029	-	0.04	0.03	-	0.5	0.18
	D-ABC	1.62	7.09	0.228	-	0.44	0.30	-	4.7	0.18
	C-ABD	0.09	8.23	0.011	-	0.01	0.01	-	0.2	0.12
	C-A	-	-	-	-	-	-	-	-	-
	C-D	-	-	-	-	-	-	-	-	-
	A-BCD	0.78	8.51	0.091	-	0.15	0.11	-	1.7	0.13
	A-B	-	-	-	-	-	-	-	-	-
	A-C	-	-	-	-	-	-	-	-	-

Entry capacities marked with an '(X)' are dominated by a pedestrian crossing in that time segment.
In time segments marked with a '(B)', traffic leaving the junction may block back from a crossing so impairing normal operation of the junction.
Delays marked with '##' could not be calculated.

Overall Queues & Delays

Queueing Delay Information Over Whole Period

Demand Set: Sum of Demand Sets for Modelling Period: 11:45 - 13:15
Modelling Period: 11:45-13:15

Stream	Total Demand (veh)	Total Demand (veh/h)	Queueing Delay (min)	Queueing Delay (min/veh)	Inclusive Delay (min)	Inclusive Delay (min/veh)
B-ACD	17.9	11.9	3.8	0.2	3.8	0.2
D-ABC	177.6	118.4	42.8	0.2	42.8	0.2
C-ABD	9.6	6.4	1.3	0.1	1.3	0.1
C-A	-	-	-	-	-	-
C-D	-	-	-	-	-	-
A-BCD	85.3	56.9	14.0	0.2	14.0	0.2
A-B	1950.4	1300.3	62.0	0.0	62.0	0.0
A-C	-	-	-	-	-	-
All	**-**	**-**	**-**	**-**	**-**	**-**

Delay is that occurring only within the time period.
Inclusive delay includes delay suffered by vehicles which are still queuing after the end of the time period.
These will only be significantly different if there is a large queue remaining at the end of the time period.

PICADY 5 Run Successful