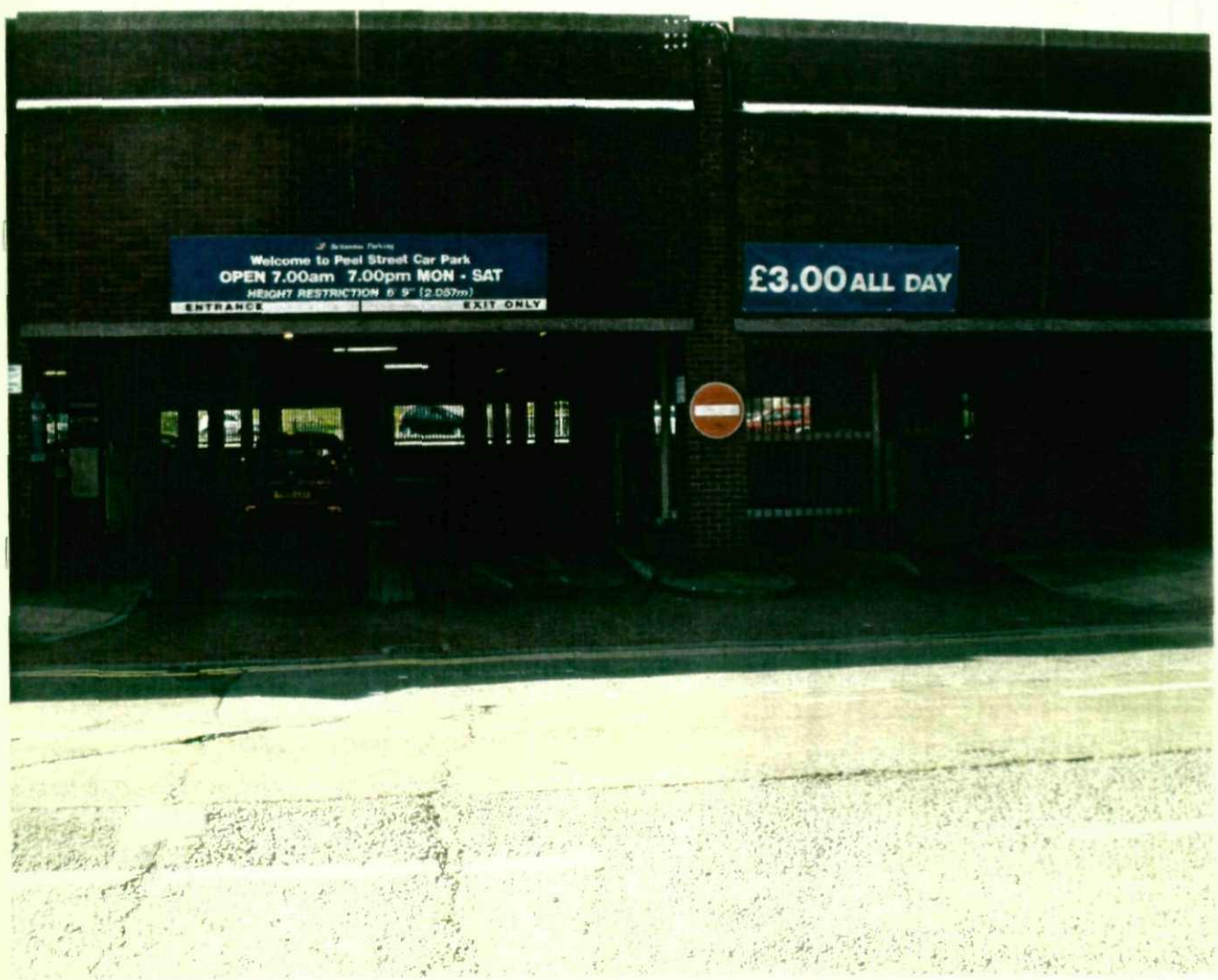
AECOM Transportation Lidl (GmbH) June 2010

Lidl, Peel Street
Transport Assessment



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Transport Assessment

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Introduction

1. Introduction

1.1. Background

This Transport Assessment (TA) has been prepared in support of a planning application for a discount foodstore (Lidl) and non-food retail units located at Peel Street, Barnsley.

This TA will assess the accessibility of the site by all modes, and address the level of traffic generation and its impact on the local highway network.

1.2. Proposed Development Site

The site is bounded by Peel Street to the north, West Way to the south and further retail development associated with Barnsley town centre to the east. The site is triangular in shape and is currently a car park to which the public have access (on a payment basis) together with a foodstore that is vacant. The proposed development comprises of:

- 1,617m² Lidl Store;
- A second unit of 2,694m^2 GFA over two floors, comprising 836m^2 health centre use, with the remainder being non-food retail; and
- 130 Parking Spaces (including 4 disabled spaces and 4 Parent and Child spaces).

Access to the store by customers will be taken from Peel Street whilst access for servicing will be taken via West Way. The proposed site layout is illustrated in **Drawing 747-12** (Humphreys Teal Partnership) and included in **Appendix A**, whilst the site location plan is shown in **Figure 1**.

The previous use of the site was a 5155m² Co-op supermarket with associated parking. The Co-op supermarket is now vacant and the site is currently utilised as a Pay and Display car park with a capacity of 364 spaces. This Transport Assessment will consider the net difference in trip generation between the proposed development and the site's previous use.

A Parking Accumulation study has already been undertaken in relation to the development proposals this confirmed the capacity of the site to cater for both parking associated with the proposed development and town centre trips. The Parking Accumulation study is included in **Appendix B** and summarised later in this TA.

1.3. Structure of the Report

Following this introductory section, the report is structured as stated below:

- **Section 2** reviews local and national transport and planning policy in relation to the development;
- **Section 3** provides an appraisal of the site, with respect to access (by all modes) and sustainability, in terms of location;
- **Section 4** provides an analysis of accident data in the vicinity of the site;
- **Section 5** sets out the derivation of trip rates and traffic generation;
- **Section 6** demonstrates the parking accumulation associated with the proposed 130 car park; and
- **Section 7** provides a summary and conclusion.

Policy Review

2. Policy Review

2.1. Introduction

This section considers the proposed development in the context of local and national transport policy. National policy, with respect to transport and land use planning, seeks to support the promotion of accessibility by all travel modes. The proposed development therefore has to be viewed in the context of national and local Government planning guidelines and strategies. The following documents have thus been reviewed:

- The Transport White Paper (2004);
- Planning Policy Guidance Note 13 (PPG 13) (2001);
- Planning Policy Statement 1 (PPS 1) (2005);
- South Yorkshire Second Local Transport Plan (LTP) (2006 – 2011); and
- Barnsley Unitary Development Plan.

2.2. The Transport White Paper - Future of Transport – A Network for 2030 (2004)

The Government's strategic policy on transport is set out in the Transport White Paper 'A New Deal for Transport: Better for Everyone'. The principal objective of the guidance is to deliver an integrated transport policy to tackle problems of congestion and pollution, promote transport choice, and reduce car dependency. It seeks to achieve integration:

- Within and between different types of transport;
- With the environment;
- With land use planning; and
- With policies for education, health and wealth creation.

The location of the site has the potential to reduce car trips as the site is within easy walking distance of residential areas to the west of Barnsley town centre, and similarly there is the potential for linked trips to other retail developments in the town centre itself. **Section 3** contains an assessment of the accessibility of the proposed development, particularly by modes other than the private car. This is further supported by the development of the accompanying Travel Plan.

2.3. Planning Policy Guidance Note 13 (PPG 13) March 2001

PPG13 'Transport' published in March 2001 takes on board the new strategic transport framework launched in the 1998 White Paper. The proposed development has been designed to conform to PPG13, having regard particularly to two of the central objectives in the guidance, these being to integrate planning and transport to:

- Promote more sustainable transport choices; and
- Reduce the need to travel, especially by car.

The guidance states that, *"new developments should help to create places that connect with each other in a sustainable manner, providing the right conditions to encourage walking, cycling and the use of public transport."*

Safe and secure facilities for pedestrians and cyclists will encourage sustainable movement to the site. A Travel Plan has been developed for the proposed development site. It will include a range of measures which will aim to encourage travel to the site by sustainable transport forms and by promoting walking, cycling and public transport routes.

2.4. Planning Policy Statement 1 (PPS 1), 2005

PPS1 'Delivering Sustainable Development' sets the overarching policy context for the delivery of sustainable developments. *With specific reference to transport, the guidance seeks to:*

- Provide improved access for all to jobs, health, housing, shops, leisure and community facilities, and open space; and
- Reduce the need to travel and manage the patterns of urban growth to maximise the use of public transport.

The proposed development is considered to complement the above, being well located with respect to existing urban populations – improving access to a local amenity for existing residents. Public transport facilities in the vicinity of the site are good (as detailed further in **Section 3**) and thereby meet the guidance.

2.5. South Yorkshire Second Local Transport Plan 2006 - 2011.

There are a number of key priorities set by the government for all local authorities to achieve by 2010 which include the following:

- Reduce congestion;
- Make bus services more accessible, punctual and reliable;
- Reduce the number of people killed or seriously injured in road accidents;
- Improve the air quality by meeting national air quality strategy objectives; and
- Triple the number of cycling trips.

The 2nd South Yorkshire Local Transport Plan (LTP) reflects the objectives of the local authority with respect to transport, giving consideration to the wider policy context as outlined above. The proposed development seeks to accord with the above by being situated close to residential areas, the town centre and public transport links.

Furthermore, the 2nd LTP provides a related set of objectives for the Borough, including improving access to jobs and services, particularly for those most in need. The proposed development seeks to meet these objectives by providing both a service and employment opportunities for residents.

2.6. Barnsley Unitary Development Plan (UDP)

Barnsley UDP has three key aims; to increase the scale and range of job opportunities; to conserve and improve the natural environment in order to maintain and increase the attractiveness of Barnsley as a place to live, work, invest in and visit and to revitalise communities and lessen disadvantage.

The UDP highlights the importance of sustainable development, and developments located such that they can be accessed by modes of travel other than private car. The UDP seeks to complement this by creating a transport network that supports sustainable travel and economic regeneration. The location of the proposed Lidl Peel Street development is such that it complements both of these key aims.

To further support these aims the UDP seeks to improve the attractiveness and environment of the Town Centre and other shopping areas to increase the attractiveness of Barnsley Town Centre. The proposed Lidl development support economic regeneration in the town centre. Additionally its location is such that it can be accessed by a number of sustainable modes of travel.

The UDP also contains a number of policies pertaining to car parking (T17, T18 and T37), which seek to:

- Encourage development that increases the number and range of job opportunities the vitality and viability of Barnsley town centre; and
- Improve the attractiveness of car parks by co-ordinating the approach to supply, location, design and charging.

2.7. Summary

A number of pertinent documents have been reviewed in relation to the proposed Lidl Peel Street store, including both local and national policy. The location of the site – in close proximity to good public transport facilities, and within walking distance of an existing residential population, and Barnsley town centre – is complementary of the prevailing sustainable travel agenda.

Furthermore, the proposed development is reflective of the aspirations of the local authority to regenerate the area in order to improve individuals' access to a range of local amenities.

Site Accessibility

3. Site Accessibility

3.1. Introduction

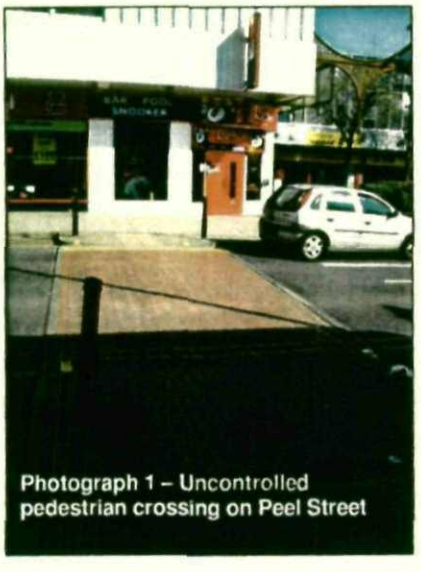
This section of the report outlines the accessibility of the proposed site, including the current provision for sustainable travel, including: public transport; cycling; and walking.

3.2. Pedestrian Accessibility

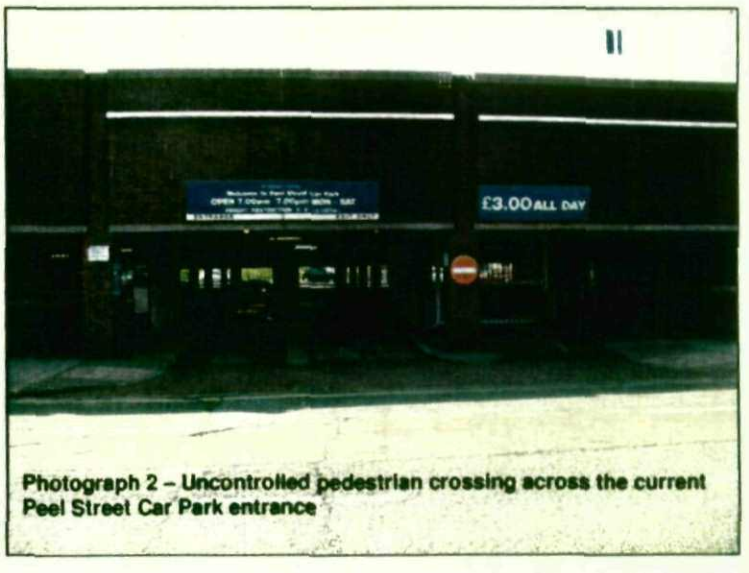
Pedestrians accessing the site from Barnsley town centre will approach the site from the east along Peel Street. There is a wide footway on both sides of Peel Street, from the roundabout junction to the west of the site to the town centre. There are dropped kerbs and tactile paving across all side and access roads. Along the length of Peel Street there are a number of uncontrolled pedestrian crossings points, all of which have tactile paving and dropped kerbs. There is also block paving on the carriageway to indicate the crossing point locations, as illustrated in **Photograph 1**.

Across the current access to the Peel Street car park there are dropped kerbs and tactile paving as illustrated in **Photograph 2**.

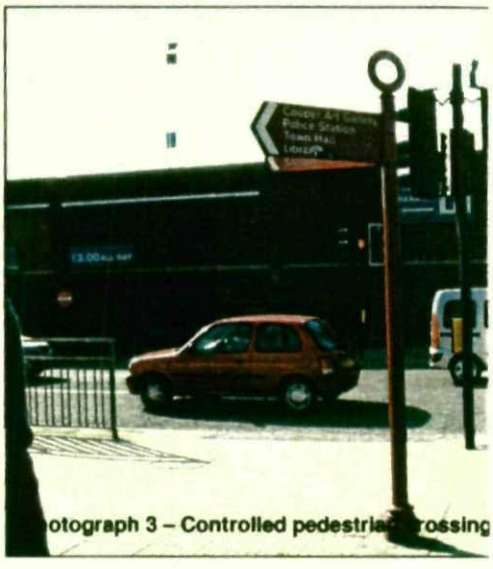
There is a controlled pedestrian crossing across Peel Street to the west of the Peel Street car park entrance, this has dropped kerbs and tactile paving. The crossing is surrounded with pedestrian guard railing, as shown in **Photograph 3**.



Photograph 1 – Uncontrolled pedestrian crossing on Peel Street

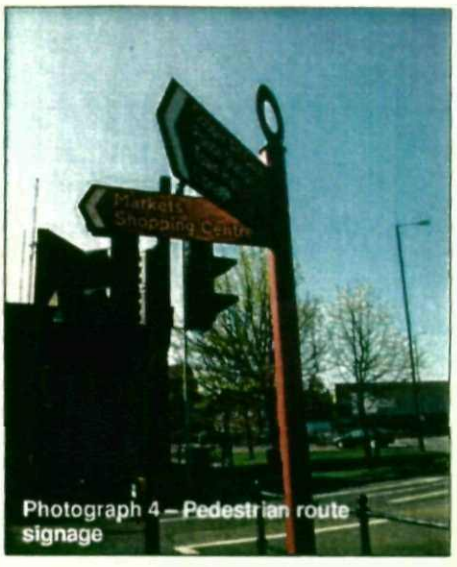


Photograph 2 – Uncontrolled pedestrian crossing across the current Peel Street Car Park entrance



otograph 3 – Controlled pedestria rossing





Photograph 4 – Pedestrian route signage

Any pedestrians accessing the site from the nearby al areas would travel from the west of the site via the large Townend Roundabout. There are signalised pedestrians cro cross all six arms of this roundabout, each with dropped kerbs and tactile paving. All the pedestrian crossings are se om the give way lines. The entire roundabout is surrounded with pedestrian guard railing to encourage the safe mov pedestrians through the junction. The pedestrian crossings across West Way, Dodworth Street and Shambles Street a red.

Onsite observations indicated that there was a high n the Townend roundabout pedestrian crossings, but there was only a short wait for pedestrians once the push button ha ressed.

Table 1, from 'Guidelines for Providing Journeys on IT), indicates that the preferred maximum walking distances required to access the proposed Lidl store is 800m for custor 2km for employees. This distance is illustrated in **Figure 2**.

Table 1 – Suggested Acceptable Walking Distanc

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

In addition to provision for pedestrians, there was r signage in the vicinity of the site for pedestrian routes to the key town centre attractions (**Photograph 4**).

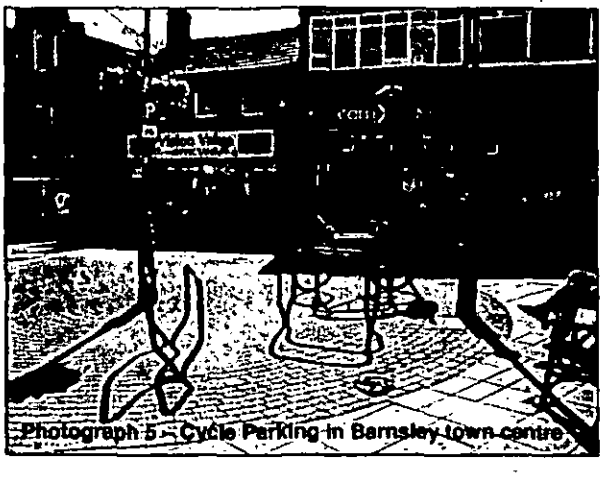
The proposed development will significantly enhanc to the site for pedestrians from Pitt Street, a spiral staircase will be provided to allow pedestrians on Pitt Street to acc at-grade pedestrian facilities on Westway, along the southern site boundary. On Westway itself, facilities will be enhan gh the provision of an uncontrolled crossing over the service access and a continuous footway from here to meet the provision at the western end of Westway. Currently there is no

pedestrian link between Pitt Street and Westway and as such the proposals offer a significant benefit in terms of catering for pedestrian trips.

3.3. *Cyclists*

Over the course of the site visit there were no specific cycle facilities observed on the highway network in the immediate vicinity of the site. Indeed, Sustrans indicates that there are no dedicated on road or traffic free cycle routes to the west of the proposed site. *There is a link starting at Barnsley Train Station, eastbound, which joins the Trans Pennine Trail, however, this is some* 650m from the proposed store. This is illustrated in **Figure 3**.

Currently there are six Sheffield style cycle parking stands located in the pedestrianised area of Barnsley town centre, to the east of Peel Street, the location of these are illustrated in **Figure 3**, and shown in **Photograph 5**.



Photograph 5 – Cycle Parking in Barnsley town centre

Cycle parking will be provided at the development in line with the standard design for all Lidl stores, these are Butterfly stands fixed to the trolley stand at the front of the store. **Drawings LD-M1.2** and **LD-M2** (Humphreys Teal Partnership) outline the location and extent of cycle parking provision at the development.

Planning Policy Guidance Note (PGG) 13 states that cycling has the potential to substitute for short car journeys, particularly those of 5km or less. As such there is the potential to encourage cycle trips to be made from the surrounding residential areas by employees, the potential for customers is less so. **Figure 3** shows a 5km cycle isochrone.

3.4. Public Transport

3.4.1. Bus

Guidance, offered by the Institution of Highways and Transportation (IHT), 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'). **Figure 4** illustrates the 300m and 400m catchment from the nearby bus stops. As can be seen, the entire site falls within 300m of a bus stop.

The closest bus stops are located on Shambles Street, their locations are indicated in **Figure 4**, and the services outlined in **Table 2**.

Table 2 – Bus Services

Bus Service	Route	Frequency	
		Monday - Saturday	Sunday
7 / 7a	Barnsley – Blacker Hill	Every 2 Hours	Every 2 Hours
14	Barnsley - Gilroyd	Every 20 Mins	-
20a	Barnsley - Deepcar	Every 2 Hours	Every 2 Hours
21	Barnsley - Cubley	Every 30 Mins	Every Hour
22	Barnsley - Gilroyd	Every 20 Mins	-
23	Barnsley - Stocksbridge	Every 2 Hours	Every 2 Hours
24	Barnsley - Penistone	Every 2 Hours	-
43 / 44	Barnsley - Kingstone	Every 15 Mins	Every 30 Mins

Table 3 outlines the facilities at each of the bus stops,

Table 3 – Bus Stop Facilities

Bus Stop	Facilities						
	Flag	Pole	Shelter	Timetable	Bench	Bin	Bus Cage
1	✓	✓		✓			
2	✓		✓	✓	✓		
3	✓	✓		✓		✓	✓

As can be seen, there is a wide range of frequent bus services available to access the proposed Lidl Peel Street Store. **Photographs 6 – 8** illustrate the bus stop provision on Shambles Street.



Photograph 6 – Bus Stop 1



Photograph 7 – Bus Stop 2



Photograph 5 – Bus Stop

Barnsley Interchange is located approximately 650m to the east of the site, (illustrated in **Figure 4**) from which a wider range of services can be accessed. Whilst this is in excess of the preferred maximum walking distance to access public transport it is considered that the potential for linked trips to additional retail facilities within Barnsley Town centre and the increased range of destinations served mean a proportion of journeys are made via this facility.

3.4.2. Train

Barnsley Train Station, incorporated into Barnsley Interchange, is located 650m to the east of the proposed Lidl Peel Street development, illustrated in **Figure 4**. The station is on the Hallam line, with regular services between Leeds and Nottingham and the Huddersfield Line, with regular services between Huddersfield and Sheffield.

In addition, there is a taxi rank and drop off point directly outside the station and the aforementioned bus interchange which adjoins the station.

Rail offers a realistic mode of transport to access Lidl, Peel Street, particularly for employees, with regular and wide reaching train services, from an easily accessible station.

3.5. Vehicular Access

The site is bound by Peel Street to the north. There are Pay and Display parking bays provided to the eastern end of the road, with parking limited to an hour maximum. Closer to the current site accesses there are double yellow lines on both sides of the carriageway.

The site is bounded by West Way to the south. This is a dual carriageway round the south of the town centre which links to the A61. The speed limit along West Way is 40mph.

The site will be accessed via Peel Street by customers, whilst the servicing will be via a one way system, entering the site via West Way and exiting the site onto Peel Street.

As outlined previously, the Lidl Peel Street development will have a total of 130 parking spaces, including 4 disabled bays and 4 parent and child bays. This has been demonstrated as sufficient capacity to accommodate Lidl and town centre trips, as outlined in the car park accumulation study contained within **Appendix B**.

3.6. Summary

The location of the proposed development is considered to be good as it is in close proximity to residential areas, the town centre, and public transport. The pedestrian facilities are also good.

Baseline Conditions

4. Baseline Conditions

4.1. Introduction

This section of the report provides an assessment of existing conditions on the road network under consideration. Historic accident data for the area is also provided, with trends in causality identified.

4.2. Road Accident Data

Accident data was obtained from Barnsley Metropolitan Borough Council for the most recent five year period between February 2005 and January 2010. A summary of data is provided below, with the full accident record provided in **Appendix C**.

There have been a total of fifty-five accidents recorded in the vicinity of the Peel Street site over the five year period, of which four resulted in serious injury, and fifty-one in slight injury. There were no fatal accidents recorded. **Table 4** illustrates the accident records disaggregated by year and severity.

Table 4 – Accident Summary

Severity	Year						Total
	2005	2006	2007	2008	2009	2010	
Slight	14	7	10	7	12	1	51
Serious	1	1	1	0	1	0	4
Fatal	0	0	0	0	0	0	0
Total	15	8	11	7	13	1	55

Of the fifty-five accidents recorded, nine occurred in weekday AM peak periods (0700-1000), six in weekday PM peak periods (1600-1800) and one in the Saturday peak period (1100-1400).

4.2.1. Peel Street

Over the past five year period there have been a total of six accidents recorded along the length of Peel Street, all resulting in only slight injury. One accident was as a consequence of a vehicle turning right into the Peel Street car park and colliding with an oncoming vehicle.

The remaining five accidents were as a result of pedestrians stepping out into the path of oncoming vehicles along Peel Street, these accidents occurred at a frequency of roughly one per year. It should be noted that three of the five accidents occurred between 2100 – 0000, and are therefore, unlikely to be exacerbated by the development traffic associated with the proposed Lidl and non-food retail development.

4.2.2. West Way

A total of eight accidents have occurred along West Way in the vicinity of the Peel Street site. Of these, one resulted in serious injury, and the remaining seven in slight injury.

Of the eight accidents that occurred, five were as a result of pedestrians crossing and colliding with oncoming vehicles, one of which resulted in serious injury. These accidents involving pedestrians occurred to the east of the proposed development in the vicinity of the junction with Wellington Street, with two occurring between 2100-2300.

The remaining accidents comprised of a passenger falling on a bus due to sudden braking, a rear end shunt at traffic signals and a collision with a stationary vehicle.

4.2.3. Townend Roundabout

There have been a total of forty-one accidents occurred on or around the Townend roundabout over the most recent five year period, of these three have resulted in serious injury, the remaining thirty-eight in only slight injury.

For the purpose of clarity the accidents occurring on, or on the approaches to, the Townend roundabout have been grouped by location.

4.2.3.1. West Way

A total of eleven accidents have occurred in the vicinity of the West Way approach to the Townend roundabout in the last five year period, all resulting in only slight injury. Of these accidents six were rear end shunts at the West Way entry onto the roundabout, two were as a result of vehicles entering the circulating carriageway of the roundabout in front of oncoming vehicles, and the remaining three were due to pedestrians crossing at the pelican crossings across West Way when the green light was showing to traffic.

4.2.3.2. Racecommon Road

Five accidents have occurred at the Racecommon Road entry to the roundabout over the five years, all resulting in slight injury. There is no pattern amongst the causation or resultant type of accidents in this location.

4.2.3.3. Dodworth Road

Over the past five year period a total of seven accidents have occurred in the vicinity of the Dodworth Road approach to the Townend roundabout. Two of these have resulted in serious injury, with the remaining five accidents resulting in slight injury. Both serious injury accidents were as a consequence of pedestrians stepping out at the pelican crossing, it is not clear whether the pedestrian or vehicle had right of way. Of the slight accidents two were rear end shunts on the entry to the roundabout, one occurred when a vehicle entered the roundabout into the path of a vehicle, one occurred when a vehicle changed lanes on the approach to the roundabout and there was a further pedestrian collision at the Pelican crossing, which resulted in slight injury.

4.2.3.4. Summer Lane

A total of ten accidents have been recorded on the Summer Lane approach to the Townend roundabout over the past five year period, of these one resulted in serious injury, the remaining nine accidents in only slight injury. The serious injury occurred when a pedestrian crossed at the Pelican crossing when the traffic light was flashing amber.

Of the remaining nine slight accidents, three were as a consequence of pedestrians crossing Summer Lane at unauthorised times and locations, three were rear end shunts at the Summer Lane entry onto the roundabout, two occurred as a result of vehicles being in the wrong lane, and one accident occurred when a vehicle entered the roundabout into the path of an oncoming vehicle.

4.2.3.5. Shambles Street

Eight accidents have been recorded in the vicinity of the Shambles Street approach, all of which resulted in slight injury. A total of four accidents were rear end shunts at the pelican crossing, set back from the roundabout exit, a further two accidents were as a consequence of pedestrians stepping out into the path of oncoming vehicles, one accident occurred as a consequence of vehicles being in the wrong lane, and the final accident occurred when a vehicle entered the circulating carriageway of the roundabout into the path of an oncoming vehicle.

4.3. Summary

There have been a number of rear end shunts, these accidents are common at roundabout junctions, and it is therefore considered that the development trips are not likely to contribute to an increase in frequency of these type of accidents given that the proposals will result in fewer vehicle trips than the previous use of the site. Similarly, accidents involving pedestrians were recorded in the vicinity of the site. As indicated in **Sections 4.2.1** and **4.2.2**, in the immediate vicinity of the site these commonly

occurred outside the likely hours of operation of the proposed development. There is pedestrian guard railing around the entire Townend roundabout and pelican crossings across all approaches in order to encourage safe pedestrian movement. Notwithstanding this, there may be merit in the Local Authority reviewing signal timings – if pedestrians are required to wait for a significant amount of time after pressing the push button this may encourage them to try and cross while traffic is still running.

It is considered that the proposed development is not likely to increase the frequency or severity of accidents in the vicinity of the site particularly as it is expected to generate less trips than the former Co-op use.

Trip Generation

5. Trip Generation

5.1. Introduction

This section considers the number of trips likely to be generated by the proposed development – a discount food store with total Gross Floor Area (GIA) of 1617m^2, non-food retail with a total GIA of 1858m^2 and a potential health centre of 836m^2 GIA. The trip generation will then be compared with the previous use (and legal land use) of the site, this being a 5155m^2 (approximately) supermarket with parking to establish the net difference in vehicle movements.

5.2. Proposed Development Trip Rates and Traffic Generation

TRICS 2010 (a) v6.5.1 has been interrogated to determine vehicular trip generation associated with each element of the development for a weekday and a Saturday peak.

Appendix D contains the TRICS outputs.

5.2.1. Food Retail

Average (multi-modal) person trip rates have been derived for the weekday and Saturday peak periods for the Lidl store. The assessment has been based on the "discount food stores" land use.

The proposed weekday AM and PM, and Saturday trip rates are summarised in **Tables 5** and **6**. The AM and PM weekday peak periods detailed in the table are 08:00 to 09:00 hours and 17:00 to 18:00 hours respectively, and the weekend peak period is 11:00 to 12:00 hours.

Table 5 – Weekday Person Trip Generation

	AM		PM	
	Arrival	Departure	Arrival	Departure
Trip Rate	1.789	1.308	7.21	7.984
Trip Generation	29	21	117	129

Table 6 – Saturday Person Trip Generation

	Saturday	
	Arrival	Departure
Trip Rate	13.36	12.91
Trip Generation	216	209

The modal splits associated with the selected sites within TRICS have been applied to the total person trips in order to identify vehicle trips associated with the proposed developments. The average mode splits are summarised in **Table 7**.

Table 7 – Modal Splits

Mode	Weekday	Saturday
Vehicle	79%	78%
Cycle	1%	1%
Foot	18%	20%
Public Transport	2%	1%

The weekday and Saturday vehicle trip generation associated with the Lidl element of the proposed development are therefore illustrated in **Table 8** and **9** respectively.

Table 8 – Weekday Vehicle Trip Generation

	AM		PM	
	Arrival	Departure	Arrival	Departure
Vehicle Trips	23	17	92	102

Table 9 – Saturday Vehicle Trip Generation

	Saturday	
	Arrival	Departure
Vehicle Trips	171	165

5.2.2. Non-Food Retail

Average vehicle trips rates have been derived for the corresponding weekday and Saturday peak periods for the non-food retail element of the development. The assessment has been based on "other non-food superstores".

The proposed weekday and Saturday trip rates are summarised in **Table 10** and **11**.

Table 10 – Weekday Non-Food Retail Trip Rates

	AM		PM	
	Arrival	Departure	Arrival	Departure
Trip Rate	0.245	0.059	0.575	0.726
Trip Generation	6	1	13	17

Table 11 – Saturday Non-Food Retail Trip Generation

	Saturday	
	Arrival	Departure
Trip Rate	1.271	1.000
Trip Generation	29	23

5.2.3. Health Centre

Average vehicle trips rates have been derived for the weekday peak periods for the health centre element of the development. No Saturday trip rates have been obtained, given that the facility would be likely to be open during the week only. Table 12 shows the trip rates and resultant traffic generation.

Table 12 – Weekday Health Centre Trip Rates

	AM		PM	
	Arrival	Departure	Arrival	Departure
Trip Rate	5.541	2.623	3.574	5.082
Trip Generation	23	11	15	21

5.2.4. Total Trip Generation

Table 13 illustrates the total weekday and Saturday vehicle trip generation respectively associated with the proposed development.

Table 13 – Total Weekday Vehicle Trip Generation

	AM		PM		Saturday	
	Arrival	Departure	Arrival	Departure	Arrival	Departure
Lidl	23	17	92	102	171	165
Non-Food Retail	6	1	13	17	29	23
Health Centre	23	11	15	21	-	-
Total	**52**	**35**	**120**	**140**	**200**	**188**

5.3. Trip Types

Due to the variety of food and non-food retail proposed for the site it is expected that a proportion of the trips will be linked internally, with visitors to Lidl also visiting the non-food retail provision. Similarly, due to its proximity to Barnsley town centre it is considered that trips to the site may also form part of a linked trip externally (with the town centre).

It is envisaged that the vehicle trips to the site will be made up of:

1. Development trips visiting only one use (either Lidl, the non-food retail units or the health centre);

2. Development trips visiting both retail uses (linked);
3. Linked trips visiting the town centre via the development (parking at the developing and travelling on to the town centre on foot); and
4. Town centre only users, with a proportion of the car park being made available for this purpose (as detailed in the next section).

A review of TRICS conference papers and consideration of the Institution of Highways and Transportation's Guidelines on Traffic Impact Assessment, it is considered feasible that as many as 15% of trips could be linked internally, whereby a driver visiting the Lidl store will also go on to visit the non-food retail units (thus occupying one space but visiting both uses).

Furthermore, up to 40% of trips might visit the Lidl store or non-food retail units (parking in the proposed car park) before walking to the town centre.

Table 14 illustrates total vehicle trip generation adjusted to take into account a 15% reduction of non-food retail vehicle trips, to reflect the potential for internal linked trips. No reduction will be made to reflect linked trips with town centre uses, as (in the worst case scenario) all these would park at the development (rather than parking elsewhere in the town centre and walking to the site).

Table 14 – Adjusted Total Weekday Vehicle Trip Generation

	AM		PM		Saturday	
	Arrival	Departure	Arrival	Departure	Arrival	Departure
Vehicle Trips	51	35	120	139	196	185

5.4. Trip Generation of former use of the site

The previous use of the site was a 5365m² Co-op supermarket with associated parking. TRICS 2010 (a) v6.5.1 has been interrogated to determine the vehicular trip generation associated with this use on a weekday and a Saturday for comparative purposes.

Appendix D contains the TRICS outputs.

Average vehicle trip rates have been derived for the weekday and Saturday peak periods for a food superstore development.

The weekday AM, PM and Saturday trip rates are summarised in **Tables 15** and **16**. The AM and PM weekday peak periods detailed in the table are 08:00 to 09:00 hours and 17:00 to 18:00 hours respectively, and the weekend peak period is 11:00 to 12:00 hours.

Table 15 – Weekday Vehicle Co-op Trip Generation

	AM		PM	
	Arrival	Departure	Arrival	Departure
Trip Rate	3.274	2.331	7.883	8.345
Trip Generation	176	125	423	448

Table 16 – Saturday Vehicle Co-op Trip Generation

	Saturday	
	Arrival	Departure
Trip Rate	7.463	6.985
Trip Generation	400	375

5.5. Trip Generation Comparison

The site of the proposed Lidl and other non-food retail development is currently a 359 capacity pay and display car park following the closure of the Co-op store. Notwithstanding this, the legal land use is the aforementioned 5365m² supermarket with associated parking.

Table 17 compares the trip generation associated with the sites previous and proposed uses.

Table 17 – Trip Generation Comparison

	AM		PM		Saturday	
	Arrival	Departure	Arrival	Departure	Arrival	Departure
Proposed	51	35	120	139	196	185
Co-op	176	125	423	448	400	375
Diff	-125	-90	-303	-309	-204	-190

As can be seen from the **Table 17**, the proposed Lidl and non-food retail development proposals generate significantly less traffic in all peak hours when compared with the former use. As such, no further assessments have been undertaken.

5.6. Summary

It has been demonstrated that the development proposals are not anticipated to result in a material increase during the peak periods indeed, a net reduction in trips is anticipated when compared with the previous Co-op store. With this in mind, operational assessments have been not been undertaken at any off-site locations.

Car Park Accumulation

6. Car Park Accumulation

6.1. Introduction

The Peel Street site is currently used for Pay and Display town centre parking. The car park has a capacity of 364 vehicles, taking access off both Peel Street and West Way, with all vehicles exiting via Peel Street.

This section demonstrates the capacity of the proposed 130 space car park to more than satisfactorily cater for the development traffic.

The full Car Park Accumulation study is included within **Appendix B**.

6.2. Car Park Accumulation

TRICS 2010 (a) v6.5.1 has been interrogated to determine vehicular trip generation associated with each element of the development on a weekday and a Saturday, as outlined in **Section 5**.

The car park accumulation calculation considers the number of car parking spaces provided, the number of vehicles arriving and departing within each hour and the cumulative impact in terms of utilisation of the car park. The calculation has been undertaken for both the weekday and Saturday scenarios.

Due to the variety of food and non-food retail proposed for the site it is expected that a proportion of the trips to the proposed development will be linked internally, with visitors to Lidl also visiting the non-food retail provision (circa 15%). Similarly, due to its proximity to Barnsley town centre it is considered that trips to the site may also form part of a linked trip externally (with the town centre).

Table 18 and **19** illustrate the total development trips with the 15% linked trip reduction applied to the non-food retail uses (with Lidl considered the primary trip attractor).

Table 18 – Weekday Car Park Accumulation

Weekday	Net (allowing for internal linked trips)			
	Arrival	Departure	Accumulation	Availability
00:00-01:00	0	0	0	130
01:00-02:00	0	0	0	130
02:00-03:00	0	0	0	130
03:00-04:00	0	0	0	130
04:00-05:00	0	0	0	130
05:00-06:00	0	0	0	130
06:00-07:00	0	0	0	130
07:00-08:00	8	4	4	126
08:00-09:00	28	18	14	115
09:00-10:00	66	45	35	93
10:00-11:00	108	89	54	73
11:00-12:00	126	113	68	60
12:00-13:00	113	128	53	74
13:00-14:00	95	98	49	78
14:00-15:00	136	128	58	69
15:00-16:00	132	132	57	70
16:00-17:00	97	107	47	81
17:00-18:00	103	116	34	94
18:00-19:00	86	104	16	113
19:00-20:00	37	50	3	127
20:00-21:00	8	25	0	130
21:00-22:00	0	0	0	130
22:00-23:00	0	0	0	130
23:00-24:00	0	0	0	130

As illustrated in **Table 18** at all times throughout the day, in the weekday scenario, the number of spaces occupied by visitors to the development is expected to be below the maximum car park capacity of 130 spaces.

Table 19 – Saturday Car Park Accumulation

Saturday	Net (allowing for internal linked trips)			
	Arr	Dep	Accumulation	Availability
00:00-01:00	0	0	0	130
01:00-02:00	0	0	0	130
02:00-03:00	0	0	0	130
03:00-04:00	0	0	0	130
04:00-05:00	0	0	0	130
05:00-06:00	0	0	0	130
06:00-07:00	0	0	0	130
07:00-08:00	8	4	4	126
08:00-09:00	28	18	15	115
09:00-10:00	68	46	37	93
10:00-11:00	112	92	57	73
11:00-12:00	130	116	70	60
12:00-13:00	117	132	56	74
13:00-14:00	99	102	52	78
14:00-15:00	140	131	61	69
15:00-16:00	135	136	60	70
16:00-17:00	99	110	49	81
17:00-18:00	105	119	36	94
18:00-19:00	87	106	17	113
19:00-20:00	38	51	3	127
20:00-21:00	10	28	0	130
21:00-22:00	0	0	0	130
22:00-23:00	0	0	0	130
23:00-24:00	0	0	0	130

As illustrated in **Table 19** at all times throughout the day, in the Saturday scenario, the number of spaces occupied by visitors to the development is expected to be below the maximum car park capacity of 130 spaces.

6.3. Conclusions

The assessment of car parking accumulation indicates that on both a Saturday and weekday there will be potential for short stay non-development traffic parking (i.e. people wishing to park at the development and visit the town centre only). As such the proposals are complementary of the aspirations of the Local Authority.

Summary and Conclusion

7. Summary and Conclusion

The proposed development proposals satisfy all relevant planning and transport policy objectives. Furthermore they are complementary of the Local Authority's aspirations.

The strategic location of the site enables its full integration with the transport system offering sustainable transport choices as an alternative to the private car. Sustainable access to the site will be enhanced through the preparation of a supporting Framework Travel Plan.

The proposed development comprises of:

- 1,617m² Lidl Store;
- A second unit of 2,694m² GFA over two floors, comprising 836m² health centre use, with the remainder being non-food retail; and
- 130 Parking Spaces (including 4 disabled spaces and 4 Parent and Child spaces).

The associated parking has been demonstrated to provide sufficient capacity to cater for trips associated with both the Lidl development and town centre trips.

A comparison of trip generation has illustrated that the trips anticipated to be generated by the proposed development will be significantly less than the number of trips that may be generated by the site's former use, (5155m² food store). As such there are no substantive highway reasons why the proposals should not be granted consent on highways or road safety grounds.

Figures

Figures

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Appendix A - Drawings

Appendix A - Drawings

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Appendix B – Parking Accumulation Study

Appendix B – Parking Accumulation Study

Introduction
AECOM has been instructed by Lidl GmbH to undertake a parking accumulation study for the proposed Lidl store, and adjoining retail units and potential health centre use, at Peel Street, Barnsley. **Figure 1** shows the site location.

Figure 1 – Site Location



This Technical Note sets out the methodology undertaken to determine the level of trips anticipated to be generated by the Lidl store, non-food retail units and potential health centre, and thus the associated parking demand. Two scenarios have been considered as follows:

- Weekday; and
- Saturday.

This note also considers the propensity for linked trips, both between the Lidl store and the non-food retail units on site and between the site and the town centre, which is located to the east of the site. The proportion of linked trips has been used to 'adjust' the parking accumulation calculations. This Note concludes by identifying the proportion of parking, which is likely to be utilised by visitors to the development only and those that would be utilised for town centre trips (either using the town centre only or a combination of Lidl / non-food retail and the town centre).

Development Proposals
The proposed site is located in Barnsley town centre and is bounded by Peel Street to the north, West Way to the south and existing development to the east. The site is triangular in shape and is currently a public car park. The proposed development comprises of:

- 1,617m² Lidl Store;
- A second unit of 2,694m^2 GFA over two floors, comprising 836m^2 health centre use, with the remainder being non-food retail; and
- 130 Parking Spaces (including 4 disabled spaces and 4 Parent and Child spaces).

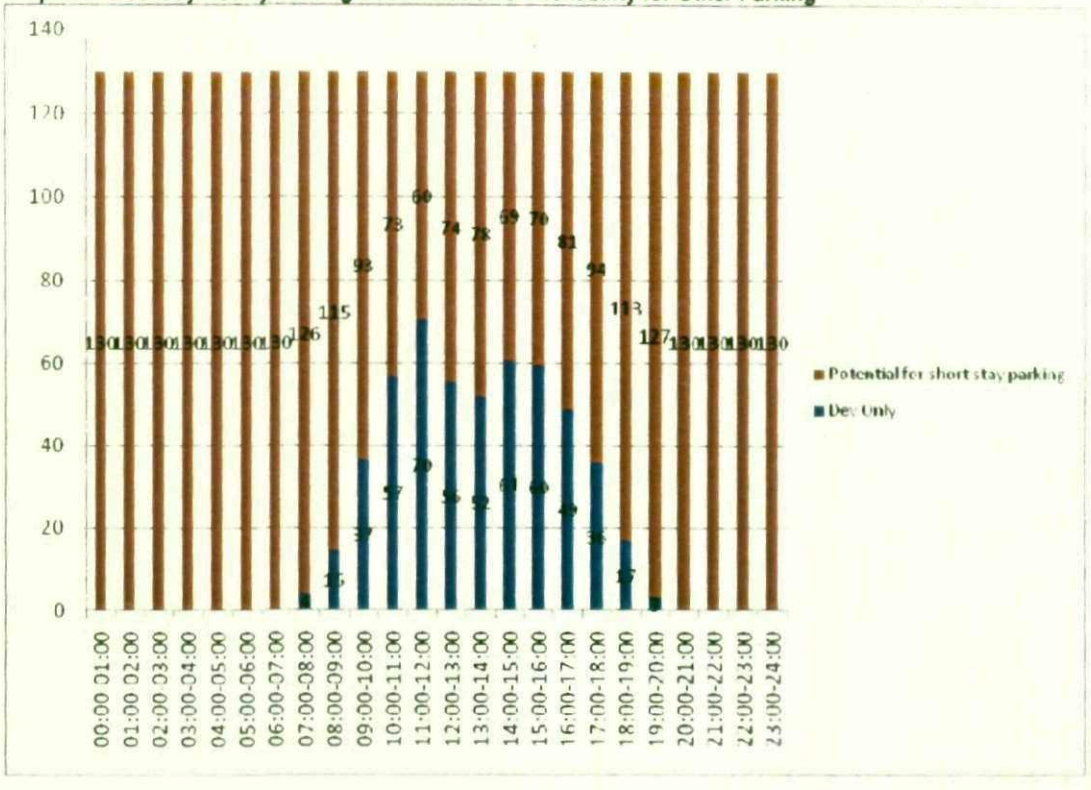
Trip Generation
TRICS 2010 (a) v6.5.1 has been interrogated to determine vehicular trip generation associated with each element of the development on a weekday and a Saturday.

Appendix A contains the TRICS outputs.

Parking Accumulation
In order to determine the demand for parking spaces, a parking accumulation calculation has been undertaken. This considers the number of car parking spaces provided, the number of vehicles arriving and departing within each hour and the cumulative impact in terms of utilisation of the car park. The calculation considers both the weekday and Saturday scenarios. For the purpose of the calculations **Humphreys Teal Drawing 747-12** has been referred to, this indicates that a total of 130 car parking spaces will be provided. Of these 130 spaces, 4 bays provide disabled parking and a further 4 bays provide priority parent and child spaces. No differentiation between space allocations has been used in the calculations.

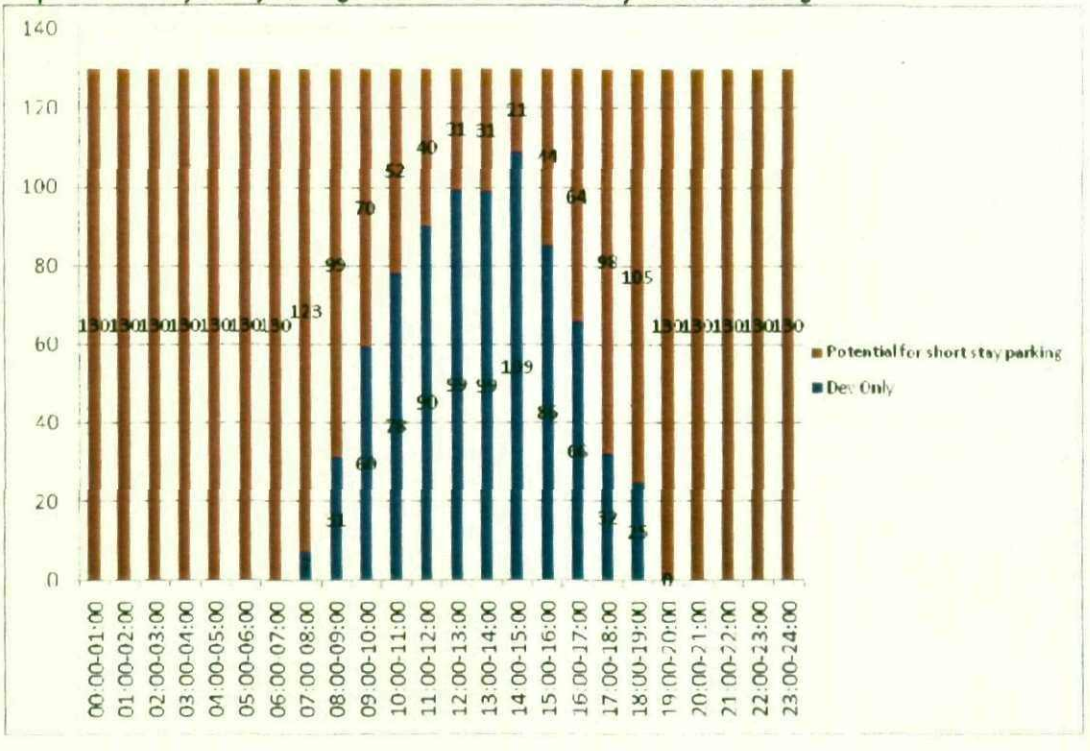
Graph 1 and **Graph 2** illustrate the Parking Accumulation for the weekday and Saturday scenarios respectively. **Appendix B** provides tabulated accumulation data. The blue segments represent the gross parking demand with no allowance for linked trips, i.e. people visiting more than one use on the site. The red segments represent the availability of parking for town centre users.

Graph 1 – Weekday Hourly Parking Accumulation & Availability for Other Parking



As illustrated in **Graph 1** at all times throughout the day, in the weekday scenario, the number of spaces occupied by visitors to the development is expected to be below the maximum car park capacity of 130 spaces, even without any allowance for linked trips.

Graph 2 – Saturday Hourly Parking Accumulation & Availability for Other Parking



As illustrated in **Graph 2,** demand for car parking at the development is likely to be higher on a Saturday than a typical weekday. This is indicated by the increased 'blue segment' values, as compared with Graph 1. Notwithstanding this, there remains available capacity throughout the day.

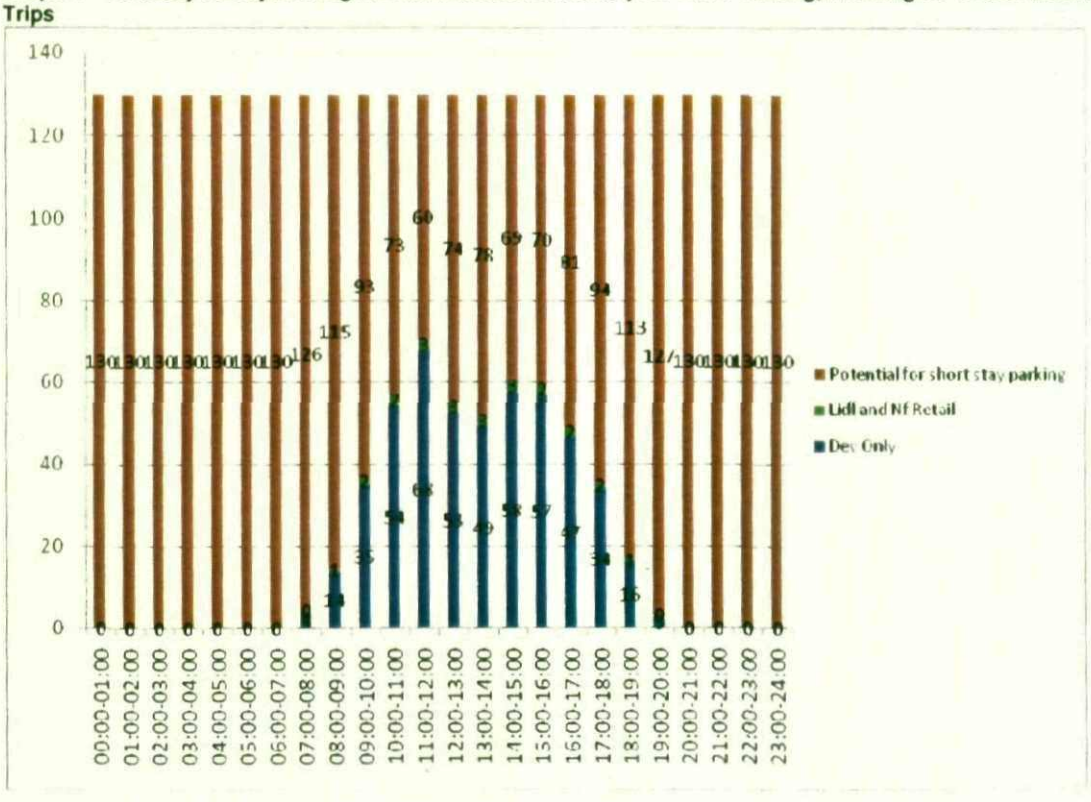
Linked Trips

Graphs 1 and **2** illustrate the anticipated availability if no allowance is made for linked trips. However, due to the variety of food and non-food retail proposed for the site it is expected that a proportion of the trips will be linked internally, with visitors to Lidl also visiting the non-food retail provision. Similarly, due to its proximity to Barnsley town centre it is considered that trips to the site may also form part of a linked trip externally (with the town centre).

A review of TRICS conference papers and consideration of the Institute for Highways and Transportation's Guidelines on Traffic Impact Assessment, it is considered feasible that as many as 15% of trips could be linked internally, whereby a driver visiting the Lidl store will also go on to visit the non-food retail units (thus occupying one space but visiting both uses).

Graphs 3 and **4** illustrate the revised total development trips with the 15% linked trip reduction applied to the non-food retail uses (with Lidl considered the primary trip attractor). The linked trips are represented by the green segments in the following graphs. In effect the green segments illustrates the number of additional spaces that would be potentially available for short stay users on account of the calculations including internal linked trips.

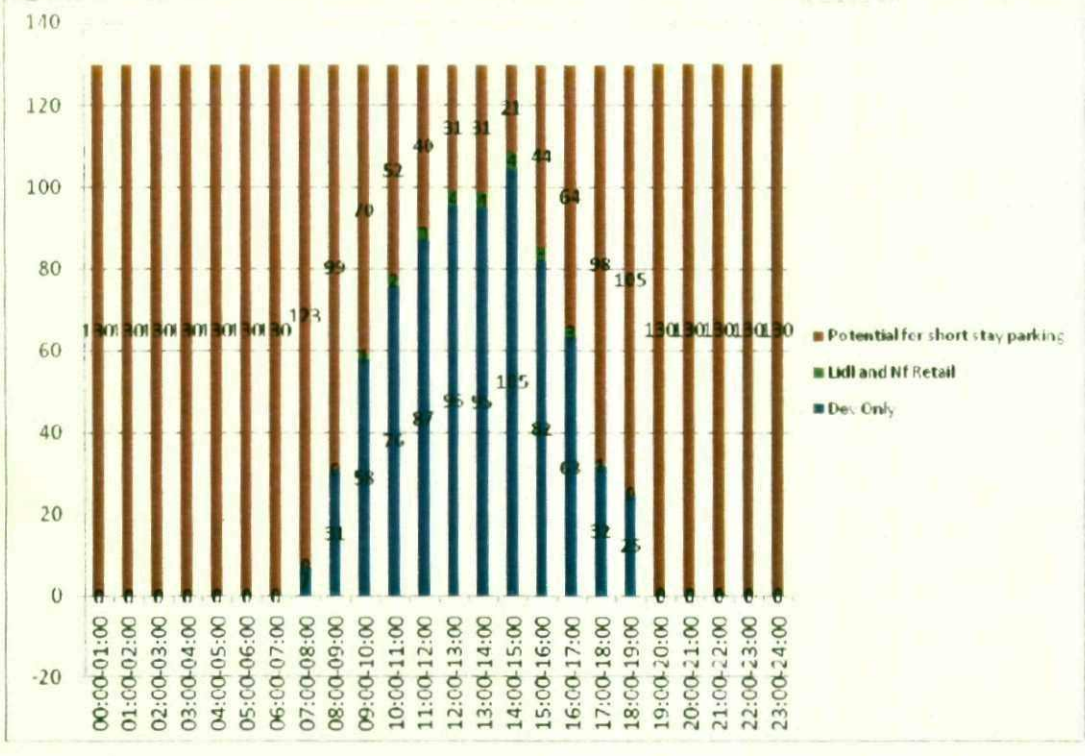
Graph 3 – Weekday Hourly Parking Accumulation & Availability for Other Parking, Allowing for 15% of Internal Linked Trips



As illustrated in **Graph 3**, the reduction in demand for car parking by visitors to the development only, as a result of internal linked trips, has a minimal impact on the availability of car parking for town centre users, with the maximum increase in available capacity being 2 spaces. As such, the total number of available spaces for potential short stay users increases marginally.

Meanwhile, **Graph 4** illustrates that on a Saturday the linked trips would again result in a minimal increase in the availability of spaces for potential short stay users (a maximum of 2 additional spaces).

Graph 4 – Saturday Hourly Parking Accumulation & Availability for Other Parking, Allowing for 15% of Internal Linked Trips



Town Centre Trips

Due to the site's close proximity to Barnsley town centre there is the potential for vehicles that park at the proposed Peel Street development and visit either the Lidl store or non-food retail units, to continue on to the town centre on foot.

A review of TRICS conference papers indicates that up to 40% of trips might visit the Lidl store or non-food retail units before walking to the town centre. However, these trips are already accounted for in the 'blue segments' of the above graphs as making a primary trip to the development (because they park in the car park to visit the development). Whilst this results in no increase in available capacity for pure town centre uses it does demonstrate that the car park is available for dual town centre and development uses.

Summary

The assessment of likely demand for car parking by visitors to the development has been determined, based on trip generation calculated from TRICS 2010(a). Assessments have been undertaken for both a weekday and Saturday, with the latter representing the worst-case scenario (i.e. highest demand for car parking by visitors to the proposed development).

In summary then, the utilisation of the car park will be made up of:

5. Development trips visiting only one use (either Lidl or the non-food retail units);
6. Development trips visiting both uses (linked);
7. Linked trips visiting the town centre via the development (parking at the developing and travelling on to the town centre on foot); and
8. Town centre only users.

The accumulation assessments suggest that even taking no account of linked internal trips (i.e. those visiting the Lidl store and the non-food retail uses) there is capacity within the 130-space car park to more than satisfactorily cater for development traffic. As such on both a weekday and Saturday, there may be potential for excess spaces to be used for short stay parking by other (non-development) users.

Capabilities on project:
Transportation

Appendix C – Accident Data

Appendix C – Accident Data

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Appendix D – TRICS Outputs

Appendix D – TRICS Outputs

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