

KIRKLEES COUNCIL

**PROPOSED RESIDENTIAL DEVELOPMENT
DUNBOTTLE LANE
MIRFIELD**

Transport Statement

November 2017

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Contents

1	INTRODUCTION.....	3
1.1	Introduction	3
1.2	Structure of Report	3
2	EXISTING CONDITIONS & DEVELOPMENT PROPOSALS.....	4
2.1	Introduction	4
2.2	Existing Site	4
2.3	Adjacent Highway Network.....	4
2.4	Baseline Transport Data	4
2.5	Proposed Development.....	5
2.6	Vehicular Access.....	5
2.7	Servicing.....	5
3	ACCESSIBILITY BY NON CAR MODES	6
3.1	Introduction	6
3.2	Access by Foot.....	7
3.3	Access by Cycle.....	12
3.4	Access by Bus	12
3.5	Accessibility by Rail	13
3.6	Accessibility Summary	14
4	TRAFFIC IMPACT ANALYSIS.....	15
4.1	Introduction	15
4.2	Traffic Survey Data	15
4.3	Growthed Flows	15
4.4	Committed Developments.....	16
4.5	Proposed Trip Distribution	16
4.6	Proposed Development Trips	16
4.7	'With Development' Flows	18
4.8	Capacity Assessments.....	18
4.9	Traffic Impact Summary	19
5	SMARTER TRAVEL CHOICES VIA TRAVEL PLANS	20
5.1	Introduction	20
5.2	Travel Planning Guidance	20
5.3	Residential Travel Plan	22
6	ACCIDENT ANALYSIS.....	23
6.1	Introduction	23
6.2	Accident Review.....	23
6.3	Summary.....	24
7	CONCLUSIONS.....	25

Contents

FIGURES **1-10**

PLANS

Plan 1	Site Location
Plan 2	Site Layout
Plan 3	Vehicular Access Plan
Plan 4	800m & 2km Pedestrian Catchment

APPENDICES

Appendix 1	Traffic Survey Data
Appendix 2	TRICS Output for Residential Use
Appendix 3	PICADY Output
Appendix 4	Framework Travel Plan

1 INTRODUCTION

1.1 Introduction

1.1.1 Croft have been commissioned by Kirklees Council to produce a Transport Statement and Travel Plan to support a planning application relating to proposals to develop a site for residential use on land at Dunbottle Lane in the Mirfield area of Kirklees.

1.1.2 Outline planning permission is sought for the construction of up to 60 residential dwellings (Use Class C3) with associated open space, landscaping, and vehicular access which will be taken via a new access off Dunbottle Lane.

1.1.3 This report has been prepared to consider the proposed development in transport and highways terms, in order to provide the necessary reassurance to the local highway authority that the proposals can be delivered in a sustainable manner and be accommodated by the local transport network.

1.2 Structure of Report

1.2.1 Following this introduction, Section 2 of the Report details the existing site conditions, describes the adjacent highway network and provides details of the proposed development.

1.2.2 Section 3 considers the accessibility of the site by non-car modes, including walking, cycling and public transport. Section 4 considers the trip generation and traffic impact assessment of the local highway network.

1.2.3 Section 5 provides details of the Framework Travel Plan document and the review of road safety and personal injury accidents in the vicinity of the site over the last 3 years is detailed in Section 6.

1.2.4 Section 7 draws together the Report's findings and conclusions.

2 EXISTING CONDITIONS & DEVELOPMENT PROPOSALS

2.1 Introduction

- 2.1.1 This section of the report provides an overview of the current conditions on the highway network within the vicinity of the site and details the proposals.

2.2 Existing Site

- 2.2.1 The application site is located around a kilometre to the north-east of Mirfield village centre. The location of the application site is shown within **Plan 1**.
- 2.2.2 The site is bordered to the north by residential properties on Flash Lane, to the east by residential properties on St Mary's Avenue, to the south by residential properties on Dunbottle Way and to the west by Dunbottle Lane.

2.3 Adjacent Highway Network

- 2.3.1 Dunbottle Lane is around 10 metres wide with footways on both sides of around 2 metres wide. A right turning lane exists along Dunbottle Lane along the site frontage and accommodates formal right turning lane provision into Camm Lane (opposite the site) as well as the car park of the Yorkshire Puddin' public house and the junction with Flash Lane to the north of the site.
- 2.3.2 Dunbottle Lane runs northwest-southeast through the northern and eastern parts of Mirfield. All roads in the vicinity of the site are subject to a 30mph speed limit and all have street lighting.

2.4 Baseline Transport Data

- 2.4.1 The site is currently undeveloped and generates no material levels of traffic.

2.5 Proposed Development

- 2.5.1 It is proposed to develop the site to provide up to 60 residential dwellings, with associated car parking, landscaping and vehicular access. The proposed site masterplan is shown, in illustrative form, in **Plan 2**.
- 2.5.2 Car parking across the site will comply with Kirklees Council's current residential car parking standards.
- 2.5.3 The internal layout of the site will be designed to provide a safe environment for pedestrians and cyclists with clearly defined walkways, crossing points and speed reducing features where appropriate.

2.6 Vehicular Access

- 2.6.1 Vehicular access is proposed via a new formal access off Dunbottle Lane. The existing right turning lane into Camm Lane will be slightly amended and will allow a right turning lane to be accommodated into the application site.
- 2.6.2 The proposed site access will have a carriageway width of 5.5 metres with footways of 2 metres on both sides, which will continue through the site. The formal access plan is shown on **Plan 3**.

2.7 Servicing

- 2.7.1 The internal layout will be designed to facilitate standard Kirklees refuse vehicles and allow them to enter the site, turn around and exit in a forward gear. This will ensure there is no detrimental impact to the adjoining highway or that the impact of the proposals will result in any road safety issues.

3 ACCESSIBILITY BY NON CAR MODES

3.1 Introduction

3.1.1 In order to accord with the aspirations of the National Planning Policy Framework (NPPF), any new proposals should extend the choice in transport and secure mobility in a way that supports sustainable development.

3.1.2 The presumption in favour of sustainable development is a central theme running through the framework and transport planning policies are seen as a key element of delivering sustainable development as well as contributing to wider sustainability and health objectives. To achieve these objectives, paragraph 30 states when making decisions, local authorities should:-

“Support a pattern of development which, where reasonable to do so, facilitates the use of sustainable modes of transport.”

3.1.3 One of the core principles of the NPPF is to '*actively manage patterns of growth to make the fullest use of public transport, walking and cycling and focus significant development in locations which are or can be made sustainable*'.

3.1.4 New proposals should therefore attempt to influence the mode of travel to the development in terms of gaining a shift in modal split towards non-car modes, thus assisting in meeting the aspirations of current national and local planning policy.

3.1.5 The accessibility of the site has been considered by the following modes of transport:

- Accessibility on foot.
- Accessibility by cycle.
- Accessibility by bus.
- Accessibility by rail.

3.2 Access by Foot

- 3.2.1 It is important to create a choice of direct, safe and attractive routes between where people live and where they need to travel in their day-to-day life. This philosophy clearly encourages the opportunity to walk whatever the journey purpose and also helps to create more active streets and a more vibrant neighbourhood.
- 3.2.2 An existing pedestrian footway of around 2 metres in width is located to the west of the site on both sides of Dunbottle Lane, this provides pedestrian links throughout Mirfield and provides direct linkages to the nearby day to day amenities within the village.
- 3.2.3 The CIHT document 'Planning for Walking' from 2015 states, in paragraph 2.1, that in 2012 that 79% of all journeys made in the UK of less than a mile (1.6 kilometres) are carried out on foot.
- 3.2.4 Within the Institution of Highways and Transportation (IHT) document, entitled "Guidelines for Providing for Journeys on Foot", Table 2.2 suggests distances for desirable, acceptable and preferred maximum walks to 'town centres', 'commuting/schools' and 'elsewhere'. The 'preferred maximum' distances are shown below in Table 3.1.

Suggested Preferred Maximum Walk		
Town Centre	Commuting/School	Elsewhere
800m	2,000m	1,200m

Table 3.1 – IHT 'Providing for Journeys on Foot' Walk Distances

- 3.2.5 Reference to the 2,000 metre walk distance is also made in the now superseded Planning Policy Guidance (PPG) Note 13 which advised 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 2km'.

3.2.6 Manual for Streets (MfS) continues the theme of the acceptability of the 2,000 metre distance in paragraph 4.4.1. This states that *‘walkable neighbourhoods are typically characterised by having a range of facilities within 10 minutes’ (up to about 800m) walking distance of residential areas which residents may access comfortably on foot. However, this is not an upper limit and PPS13 states that walking offers the greatest potential to replace short car trips, particularly those under 2 km’.*

3.2.7 Table 3.2 below summarises this guidance in tabular form.

‘Comfortable’ Walk	‘Preferred Maximum’ Walk
800m	2,000m

Table 3.2 – Manual for Streets Walk Distances

3.2.8 More specific guidance on the distances that children will walk to school is found in the July 2014 document published by the Department for Education (DfE) entitled ‘Home to School Travel and Transport’ statutory guidance document.

3.2.9 This suggests that the maximum walking distance to schools is 2 miles (3.2 kilometres) for children under 8 and 3 miles (4.8 kilometres) for children over the age of 8. This is summarised below in Table 3.3.

Children under 8 Walk Distance	Children over 8 Walk Distance
3,200m	4,800m

Table 3.3 – DfE Walk Distances to Schools

3.2.10 Further evidence that people will walk further than the suggested ‘preferred maximum’ distances in the IHT ‘Providing for Journeys on Foot’ is contained in a WYG Report entitled ‘Accessibility – How Far do People Walk and Cycle’. This report refers to National Travel Survey (NTS) data for the UK as a whole, excluding London, that the 85th percentile walk distance for:

- All journey purposes – 1,930 metres.
- Commuting – 2, 400 metres.
- Shopping – 1,600 metres.
- Education – 3,200 or 4,800 metres.
- Personal business – 1,600 metres.

3.2.11 Overall, in Table 5.1, the document states that 1,950 square metres is the 85th percentile distance for walking as the main mode of travel. Table 3.4 below summarises the various 85th percentile walk distances suggested as guidelines in the WYG Study.

85 th Percentile Walk Distances					Overall Recommen ded Preferred
All Journeys	Commuting	Shopping	Education	Personal	
1,950m	2,100m	1,600m	3,200/ 4,800m	1,600m	1,950m

Table 3.4 – WYG Report/NTS Data Walk Distances

3.2.12 In summary, the distance of 1,950 metres, or around 2 kilometres, represents an acceptable maximum walking distance for the majority of land uses although clearly the DfE guidance for walking to school is up to 3.2 kilometres.

- 3.2.13 Section 3.1 of the CIHT guidance 'Planning for Walking' mentioned earlier in this report provides a useful reminder of the health benefits of walking. This states that:
- 'A brisk 20 minute walk each day could be enough to reduce an individual's risk of an early death'.*
- 3.2.14 A 20 minute walk equates to a walking distance of around 1,600 metres.
- 3.2.15 In light of the above review, a pedestrian catchment of 2 kilometres from the centre of the site, using all usable pedestrian routes, has been provided in **Plan 4** and provides an illustrative indication of the areas that can be reached based on a leisurely walk from the site.
- 3.2.16 In addition, to the pedestrian catchment plan, a review of the proximity of local facilities has been undertaken and the location of these is also shown in **Plan 4**.
- 3.2.17 The 2,000-metre pedestrian catchment illustrates that the majority of Mirfield can be accessed along various amenities such as The Old Colonial and The Shoulder of Mutton public houses, Shillbank stores, Mirfield Evangelical Church, Crossley Fields Junior and Infant School, Knowl Park, Boots Pharmacy, a Co-operative food store, The Station Hotel and Ravensthorpe Retail Park.
- 3.2.18 Table 3.5 below, shows the walking distance from the centre of the site to the local amenities in the vicinity of the site. The table also confirms whether or not the particular amenity is within the 'preferred maximum' walk distances using the above guideline criteria:

Local Amenity	Distance	Guidance Criteria	Meets with Guidance?
The Old Colonial	240m	1,600m	YES
The Shoulder of Mutton Public House	590m	1,600m	YES
Shillbank Stores	640m	1,600m	YES
Mirfield Evangelical Church	710m	1,600m	YES
Crossley Fields Junior and Infant School	760m	3,200m	YES
Knowl Park	960m	1,600m	YES
Boots Pharmacy	1,060m	1,600m	YES
The Co-operative food store	1,080m	1,600m	YES
The Station Hotel	1,180m	1,600m	YES
Ravensthorpe Retail Park	1,770m	1,950m	YES

Table 3.5 - Distance from Site to Local Facilities

- 3.2.19 As can be seen in the above table, the site is located within close proximity to a number of local amenities including shops and schools.
- 3.2.20 All of the day to day amenities are well within the 'preferred maximum' walk distances described earlier in this section and indeed many, including the nearest convenience store and nearest primary school, are around the 800 metres 'comfortable walk' from the site as contained within MfS guidance.
- 3.2.21 It is therefore considered that the existing pedestrian infrastructure will facilitate safe and direct pedestrian linkages between the site and local destinations.

3.3 Access by Cycle

- 3.3.1 An alternative mode of travel to the site could be achieved by bicycle.
- 3.3.2 A distance of 5 kilometres is generally accepted as a distance where cycling has the potential to replace short car journeys. This distance equates to a journey of around 25 minutes based on a leisurely cycle speed of 12 kilometres per hour and would encompass Liversedge Heckmondwike, Ravensthorpe and Dewsbury.
- 3.3.2.1 National cycle route 62 is located approximately 860 metres from the centre of the site, this cycle route runs from central Manchester to Spurn via Bradford, Leeds, York, Beverley and Kingston upon Hull.
- 3.3.3 The site can therefore be considered as being accessible by cycle.

3.4 Access by Bus

- 3.4.1 The nearest bus stops to the site are located to the north-west of the site on Dunbottle Lane approximately 100 metres from the centre of the site consisting of a bus stop pole with passing services shown and a bus service timetable. A summary of the services available from the nearest bus stops from the development site is provided in Table 3.6 below.

Service No	Route	Monday – Friday Frequency per hour				Sat	Sun
		AM Peak	Midday	PM Peak	Eve		
202	Leeds City Centre – Huddersfield Town Centre	2	2	2	1	2	1
205	Dewsbury – Ings Grove Park Huddersfield Road	1	1	1	0	1	0

Table 3.6 - Existing Bus Services Operating Past the Site

- 3.4.2 As can be seen from Table 3.6, the nearest bus stops to the site provides up to 3 services in peak periods to Leeds, Dewsbury and Huddersfield.
- 3.4.3 It is noted that the above services provide a choice of how people travel with the bus services operating from around 6.00am to around midnight, making travel by public transport a real alternative to travelling by car for commuting trips in particular.
- 3.4.4 In order to demonstrate the level of accessibility some example journey times by bus are presented below Table 3.7 below.

Destination	Duration
Dewsbury	13 Minutes
Huddersfield	32 Minutes

Table 3.7 - Example Bus Journey Times from the Site

- 3.4.5 The above table demonstrates that Dewsbury is just a 13-minute bus journey from the site and Huddersfield is just a 32-minute bus journey.
- 3.4.6 It is therefore concluded that the proposed development site is accessible by bus.

3.5 Accessibility by Rail

- 3.5.1 The nearest train station to the site is Mirfield, this is situated approximately 1.8 kilometres from the centre of the site, which is around a 20 minute walk.
- 3.5.2 This train station is managed by Northern and has 3 platforms, offering 7 services per hour to destinations such as Leeds and London Kings Cross.
- 3.5.3 These services increase the opportunity for residents to travel further afield by public transport, with access to Huddersfield and Leeds, journeys of around 11 and 26 minutes respectively, which in turn provide frequent services to destinations throughout the UK.
- 3.5.4 This provides opportunities for commuting/leisure opportunities from the site via rail.

3.6 Accessibility Summary

3.6.1 The proposals have been considered in terms of accessibility by non-car modes for the proposed residential development.

3.6.2 The following conclusions can be drawn from this section of the Report:

- The site is accessible on foot and these connections will be improved as part of the works on the development site.
- The services from the bus stops within a very short walk of the site provide direct access to Dewsbury and Huddersfield shows that the proposed development can be accessed by bus.
- The site is accessible via rail with Mirfield located just 1.8 kilometres, around a 20 minute walk, from the centre of the site.

3.6.3 In light of the above, it is considered the site is highly accessible by non-car modes and will cater for needs of the development's residents and assist in promoting a choice of travel modes other than the private car.

4 TRAFFIC IMPACT ANALYSIS

4.1 Introduction

- 4.1.1 Having established that the application site is highly accessible by modes of transport other than the private car and would be in general accordance with land use and transport policies and the NPPF, which seeks to deliver sustainable development, the following section of the report considers the traffic impact of the development proposals on the local highway network.

4.2 Traffic Survey Data

- 4.2.1 In order to assess the traffic impact of the proposed development on the local highway network traffic surveys were undertaken at the junction of Dunbottle Lane and Camm Lane on Wednesday 6th September 2017, which was after the schools in the area returned after the school holidays.
- 4.2.2 The full traffic survey data is contained within **Appendix 1**. The weekday am and pm peak hours were identified as 0745 to 0845 hours and 1645 to 1745 hours.
- 4.2.3 **Figures 1 and 2** show the 2017 surveyed traffic flows converted into passenger car units (PCUs), the unit of analysis, for the weekday am and peak periods respectively.

4.3 Growthed Flows

- 4.3.1 The year of completion for the proposed development has been assumed to be 2021 based on a two year build and a start on site in 2019.
- 4.3.2 In order to factor the surveyed traffic flows to the future assessment years, NTEM adjusted National Road Traffic Model growth factors have been applied for the Kirklees 020 MSOA.

4.3.3 The resultant growth factors are shown below:

- 2017 to 2021 AM Peak - 1.0478; and
- 2017 to 2021 PM Peak - 1.0466.

4.3.4 The resultant 2021 growthed traffic flows are shown in **Figures 3** and **4** for the weekday am and pm peak periods respectively.

4.4 Committed Developments

4.4.1 It is understood that no committed development requires consideration in this report.

4.5 Proposed Trip Distribution

4.5.1 In order to predict the distribution of traffic associated with proposed development, reference has been made to the current proportions of traffic travelling along Dunbottle Lane in the vicinity of the site.

4.5.2 Based on this methodology, **Figures 5** and **6** display the proposed trip distribution for the weekday am peak and weekday pm peak periods respectively.

4.6 Proposed Development Trips

4.6.1 As previously stated, the proposed development would provide 60 residential units.

4.6.2 To establish the level of traffic generation that the proposed residential development is likely to generate reference has been made to the latest TRICS database for all 'private housing' sites between 10 and 100 units with no Ireland or London sites.

4.6.3 During recent discussions with officers at Kirklees Council they had suggested that the two-way trip rate for residential development should be around 0.7 trips per unit. The only way to replicate that trip rate is to use the 85th percentile trip rates for this particular range of sites in the TRICS database.

- 4.6.4 This is a particularly onerous assessment of the trip rates and not one that is likely to be reflective of the traffic generation from this site. However, for robustness the 85th percentile trip rates have been used for the purposes of this assessment.
- 4.6.5 Table 4.1 below, summarises the trip generations for the proposed residential development whilst the TRICS output is contained within **Appendix 2**.

Time Period	Trip Rates		Number of Trips	
	Arr	Dep	Arr	Dep
AM Peak	0.200	0.500	12	30
PM Peak	0.478	0.261	29	16

Table 4.1 – Trip Rates for Proposed Residential Development

- 4.6.6 As can be seen above the proposed development is forecast to generate around 42 two-way trips during the AM peak hour and 45 two-way trips during the PM peak period. This equates to around one additional vehicle every minute and a half during even the busiest periods of the day.
- 4.6.7 As such, it is likely that the proposed development will generate very few traffic movements on the local highway network during general peak periods of a typical weekday and will therefore not have a material impact on the operation of the local highway network.
- 4.6.8 However, to demonstrate that this will be the case the proposed residential trips have been assigned to the local highway network using the trip distribution contained in Figures 5 and 6. The resultant proposed residential development traffic flows for the Weekday AM and PM peak periods are displayed in **Figures 7 and 8**.

4.7 'With Development' Flows

- 4.7.1 In order to calculate the 2021 'With Development' flows, the proposed development trips have been added to the growthed flows displayed in Figures 3 and 4.
- 4.7.2 The resultant 2021 'With Development' flows are contained within **Figures 9 and 10** for the weekday am and weekday pm peaks respectively.

4.8 Capacity Assessments

Site Access/Dunbottle Lane/Camm Lane

- 4.8.1 To assess the operation of the proposed priority controlled junction the PICADY module of the Junctions 9 computer program has been utilised using the junction layout displayed in **Plan 3** and the 2021 'With Development' Flows.
- 4.8.2 Table 4.2 below summarises the results of the PICADY analysis and the full outputs are contained within **Appendix 3**.

Arm	2021 With Development			
	AM Peak		PM Peak	
	RFC	Max Q	RFC	Max Q
Site Access	0.08	0	0.04	0
Dunbottle Lane (N) Ahead/Right	0.10	0	0.10	0
Camm Lane	0.25	0	0.26	0
Dunbottle Lane (S) Ahead/Right	0.01	0	0.03	0

Table 4.2 - Summary of PICADY Output Site Access/Dunbottle Lane/Camm Lane

- 4.8.3 As can be seen in Table 4.2, the proposed Site Access junction with Dunbottle Lane and Camm Lane is forecast to continue to operate within its theoretical capacity in both of the 2021 'With Development' scenarios.

4.9 Traffic Impact Summary

- 4.9.1 It is therefore concluded that the development proposals will result in a minimal impact on the local highway network and is therefore in accordance with the NPPF.

5 SMARTER TRAVEL CHOICES VIA TRAVEL PLANS

5.1 Introduction

- 5.1.1 In order to manage the travel by residents on the new development, the applicant wishes to offer a Travel Plan to encourage travel to the site by non-car modes.

5.2 Travel Planning Guidance

- 5.2.1 The preparation and adoption of a Travel Plan is an important element of managing the demand for travel to all modern developments.
- 5.2.2 The Department for Transport (DfT) have produced guidance on the preparation of Travel Plans. The document, entitled 'Good Practice Guidelines: Delivering Travel Plans through the Planning Process' was published in August 2009.
- 5.2.3 The guidance explains how *"we often need to meet the demands of population and economic growth whilst simultaneously reducing our impact on the environment"* and identifies that *"The benefits of increases in sustainable travel, in particular cycling and walking, can extend beyond reduction in CO₂ emissions and climate impacts, and include tackling congestion, tackling obesity and health issues, reducing social exclusion and improving quality of life"*.
- 5.2.4 The document sets out an overview of the process and delivery of Travel Plans and states that *"A travel plan is a long-term management strategy for an occupier or site that seeks to deliver sustainable transport objectives through positive action and is articulated in a document that is regularly reviewed."*
- 5.2.5 The Guidance states that *"Travel Plans should involve the development of agreed explicit outcomes linked to an appropriate package of measures aimed at encouraging more sustainable travel, with an emphasis on reducing single occupancy car use..."* and;

“A Travel Plan should seek to establish clear outcomes to be achieved in relation to access and set out all the measures to be implemented in detail, including an action plan, timescales, targets and responsibilities for implementation, monitoring and review”.

- 5.2.6 It is made clear in the document that Travel Plans should focus on achieving the lowest practical level of single occupancy vehicle trips to or from a site and widening the use of other travel modes and assist in the wider aims of encouraging sustainable travel, improving health, reducing congestion, energy consumption and pollution. The Travel Plan, it advises, *“needs to address all the journeys that may be made to and from a site”.*
- 5.2.7 The guidance also specifies that *“It is important to note that travel planning should be developed as one of the means of delivering an area’s sustainable transport strategy. Travel Planning should feature in the policy framework and implementation programmes of Regional Spatial Strategies and Local Development Frameworks”.*
- 5.2.8 Further guidance relating specifically to residential Travel Plans is presented in the DfT document entitled *“Making Residential Travel Plans Work”* published in June 2007.
- 5.2.9 The document states that:
- “Travel Planning is one of a range of measures known as smarter choices which have been found to be effective on reducing traffic and improving accessibility in residential areas”.*
- 5.2.10 A Residential Travel Plan is a package of measures designed to reduce car use originating from new housing by supporting alternative forms of transport and reducing the need to travel in the first place. They are an important tool to help deliver accessible, sustainable communities and offer clear benefits to all the parties involved – public, private and the community. They involve meeting the access needs of residents in a new way and require partnerships between developers, local authorities, local communities and new residents.

- 5.2.11 The value of travel plans in reducing car use to workplaces and schools is widely recognised and many local authorities and developers have experience in their design and implementation.
- 5.2.12 However, until recently, little attention has been given to tackling the origins of journeys from people's homes. Now, forward-thinking developers and local authorities are developing packages of smarter choices to both reduce the traffic generated by new housing developments and increasing the travel choices available to residents. These smarter choices are set out in Residential Travel Plans.

5.3 Residential Travel Plan

- 5.3.1 The objective of a Residential Travel Plan is the delivery of the objectives of the NPPF, i.e. to encourage residents to travel to work by public transport, on foot and by bicycle.
- 5.3.2 A Framework Residential Travel Plan has been prepared and is presented in **Appendix 4**.
- 5.3.3 The Framework Residential Travel Plan outlines physical and management measures that are designed to achieve this objective.
- 5.3.4 However, the principle measure will consist of a Residents Travel Pack containing relevant material to promote non-car modes of travel and the provision of certain physical measures.
- 5.3.5 The Travel Pack will contain information to inform residents of the existing long-term strategy for reducing the dependence of residents and visitors on travel by private car

6 ACCIDENT ANALYSIS

6.1 Introduction

6.1.1 In order to consider the potential impact of the development on road safety, a review of the Crashmap website (www.crashmap.co.uk) has been undertaken. The information provided on the website covered the five year period 2014 to 2016 in the vicinity of the development site.

6.2 Accident Review

6.2.1 The review of the website shows there has been only one personal injury accident on either Flash Lane or Dunbottle Lane in the last 3 years, as identified in Figure 6.1 below.

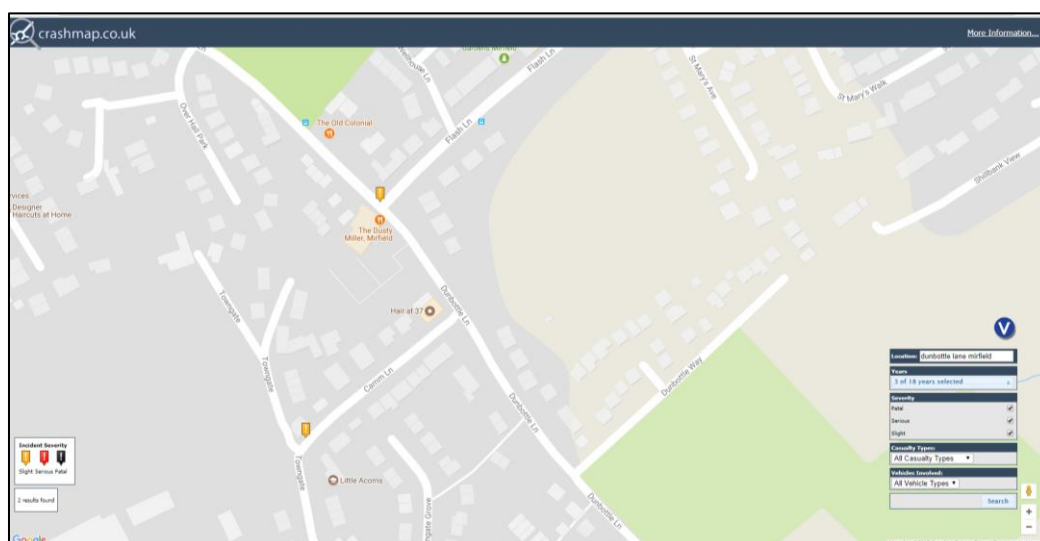


Figure 6.1 – Location of Accidents

6.3 Summary

- 6.3.1 In light of the above, it is not considered that there are specific accident or highway safety problems in the area.
- 6.3.2 On that basis, there is no evidence to suggest that the proposed development, which will have a negligible impact on the local highway network, will have an adverse effect on road safety or the number of accidents in the vicinity.

7 CONCLUSIONS

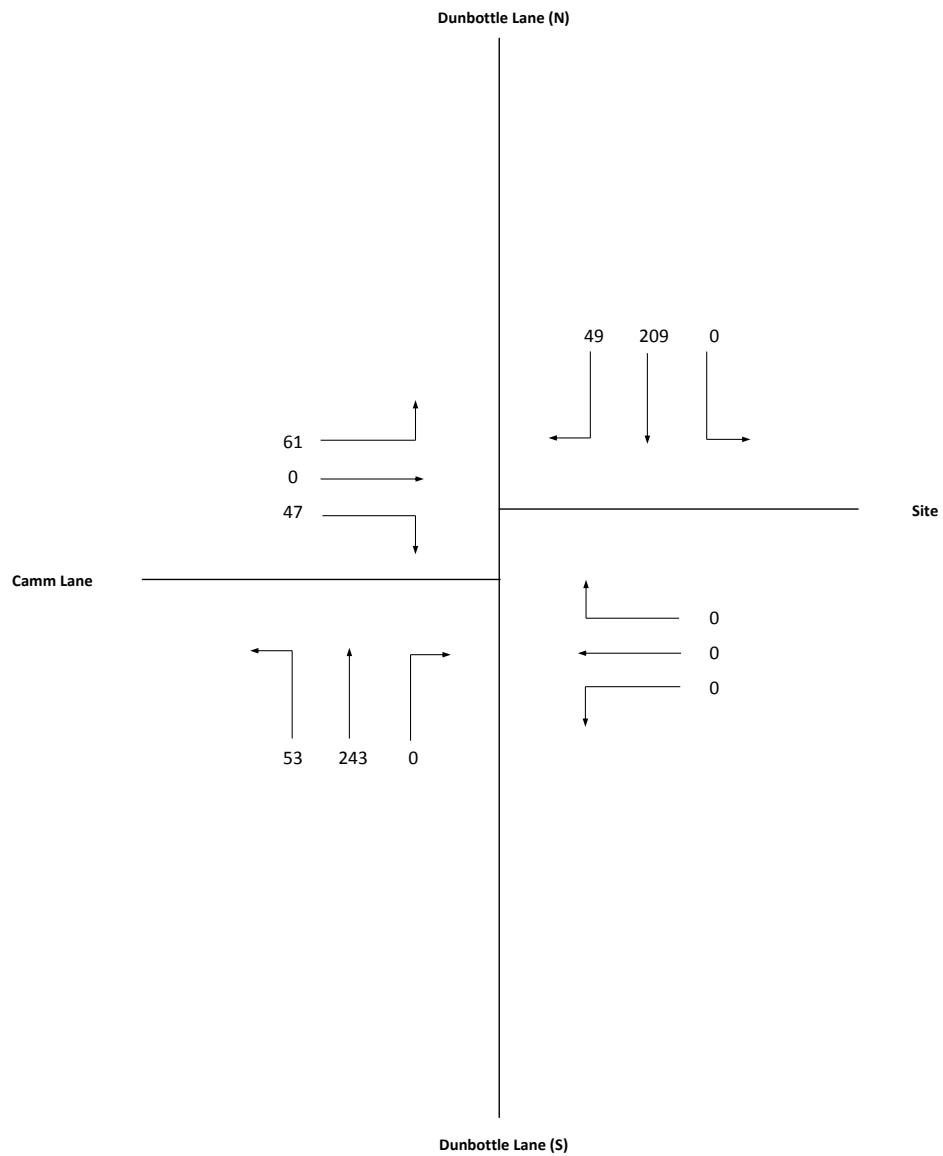
7.1.1 This Report has considered proposals to develop a site for residential use on land at Dunbottle Lane in the Mirfield area of Kirklees.

7.1.2 The conclusions to this report can be summarised as follows:

- The proposed development benefits from being located in a sustainable location that is easily accessible by a range of non-car modes including walking and cycling and public transport.
- The proposed site access onto Dunbottle Lane can achieve the required geometric design parameters in accordance with Manual for Streets, thus demonstrating that the site can be accessed in a safe and efficient manner.
- The traffic impact of the development has been predicted using the TRICS database and has shown the impact of the proposals will be minimal and will not have a material impact on the local highway network.
- Given the low increase in trips as a result of the proposals, it is evident that the additional traffic can be accommodated onto the local highway network and will not give rise to any traffic or highways issues.
- There is no evidence to suggest that the proposals would have an adverse effect on road safety or the number of accidents in the vicinity.

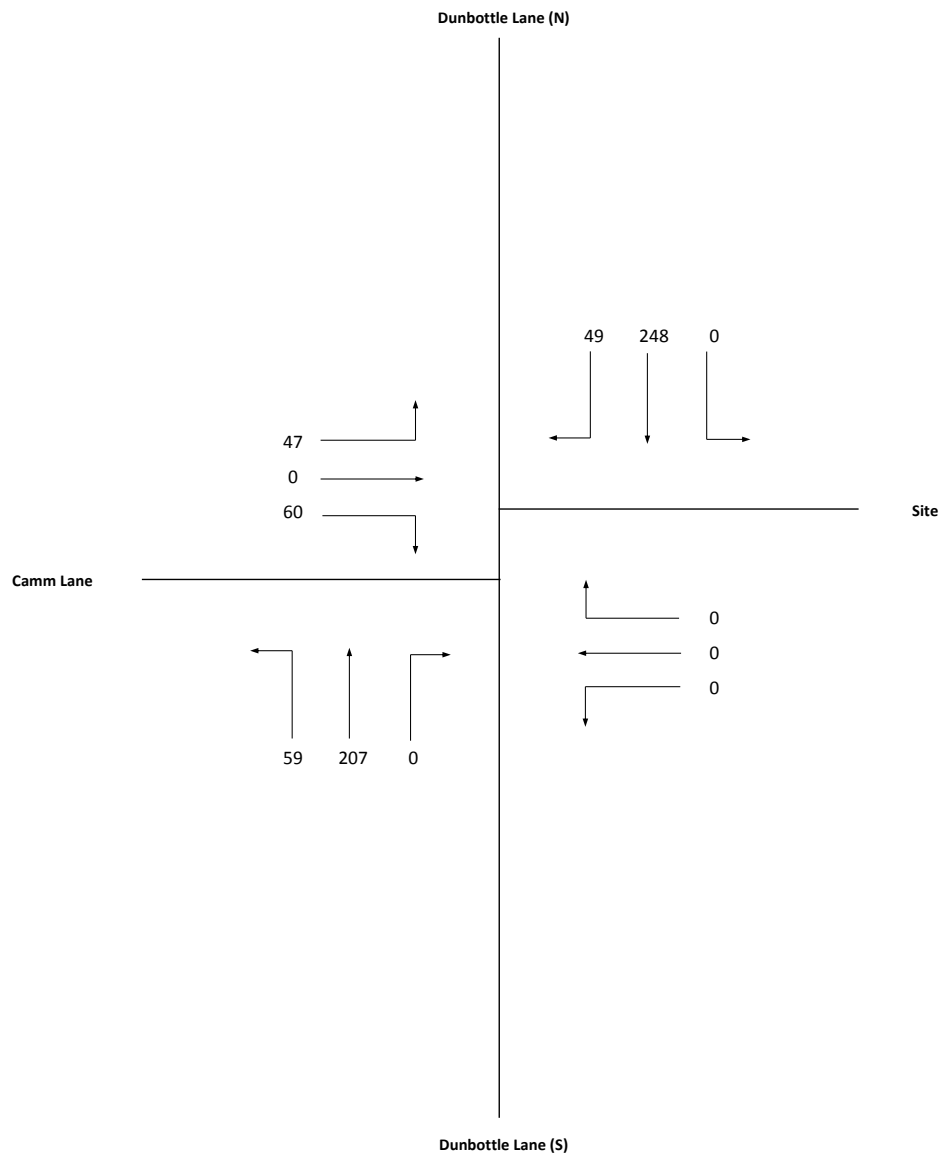
7.1.3 In conclusion, the proposals for a residential development will provide a sustainable development in transport terms and planning permission should be granted in accordance with the Framework.

FIGURES



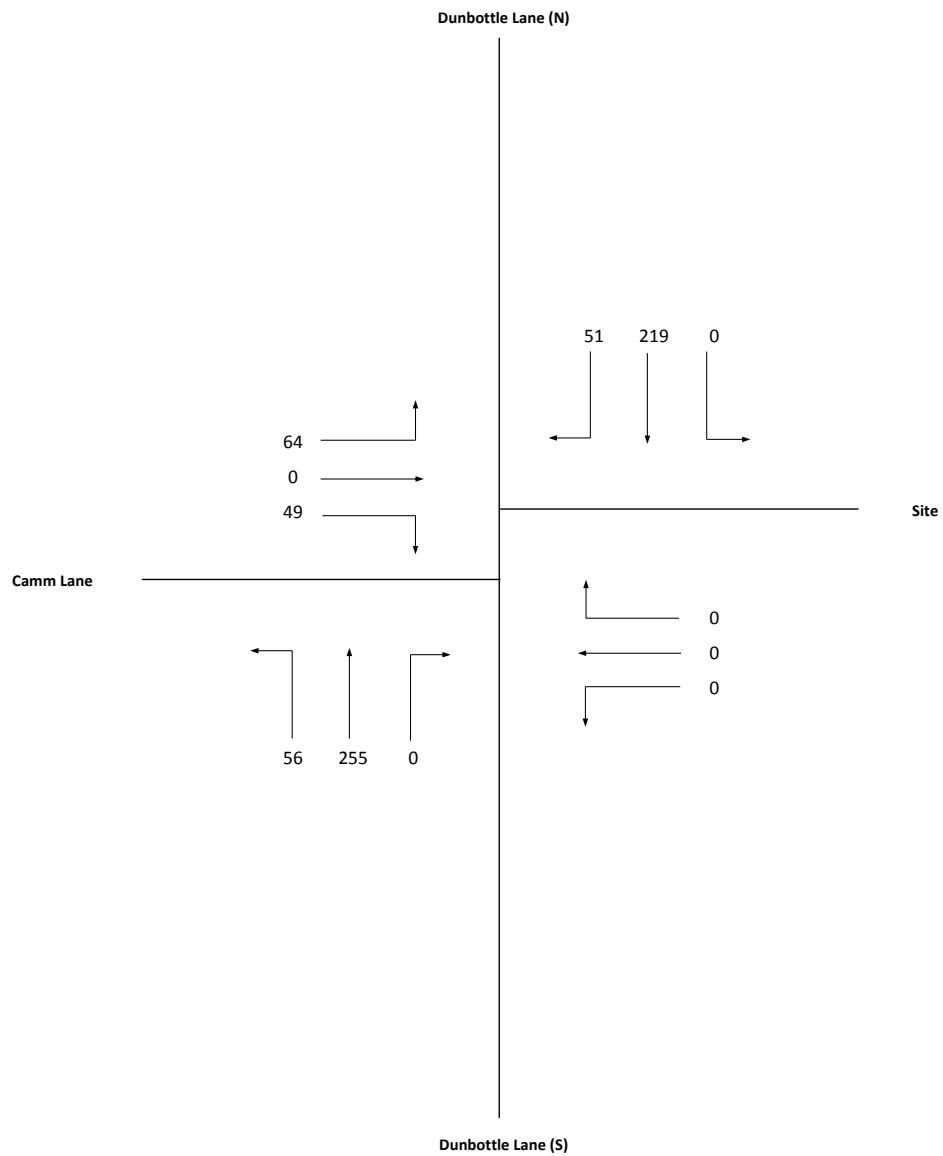
Flows in PCUs

Figure 1 - 2017 Surveyed Flows - AM Peak (0745 to 0845)



Flows in PCUs

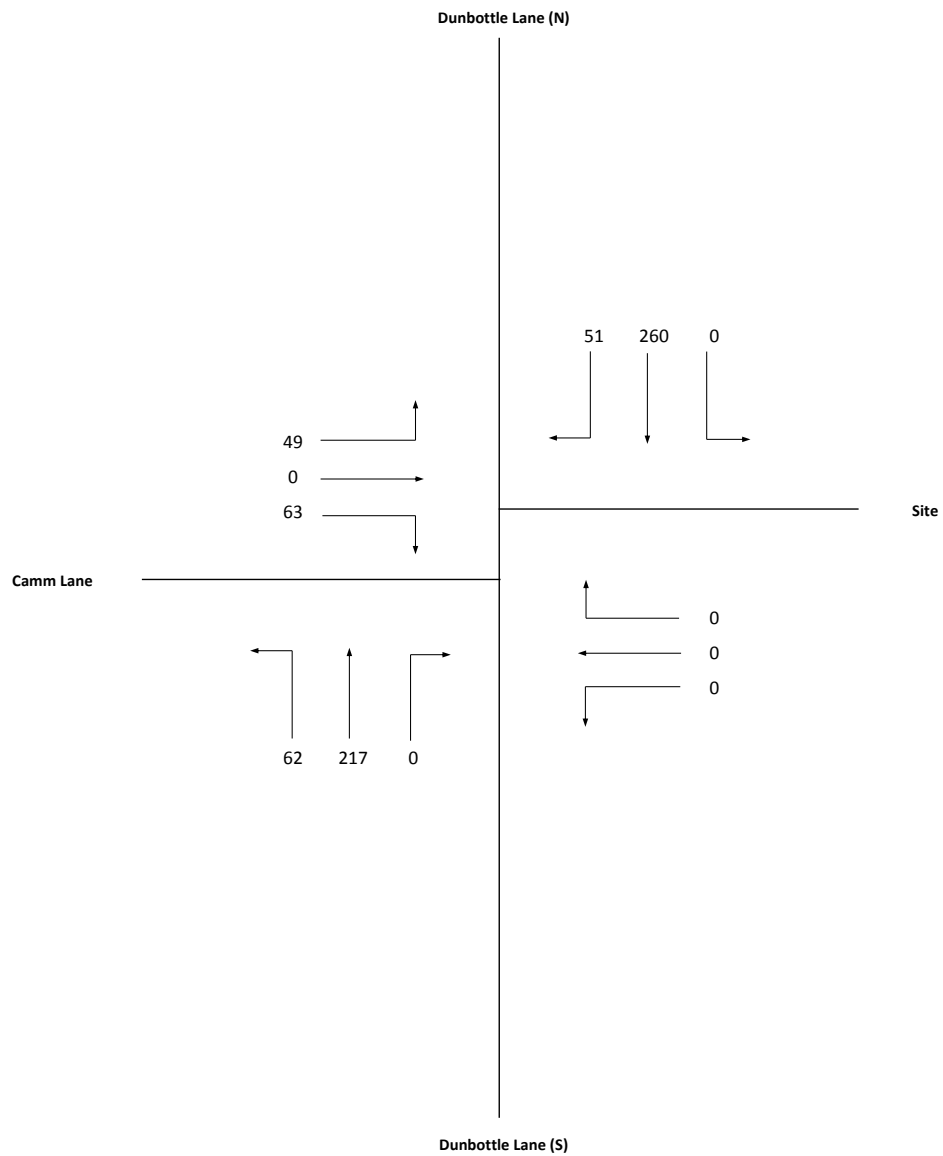
Figure 2 - 2017 Surveyed Flows - PM Peak (1645 to 1745)



NTEM AM PEAK FACTOR 2017-2021 =

1.048

Figure 3 - 2021 Growthed Flows - AM Peak (0745 to 0845)



NTEM PM PEAK FACTOR 2017-2021 =

1.047

Figure 4 - 2021 Growth Flows - PM Peak (1645 to 1745)

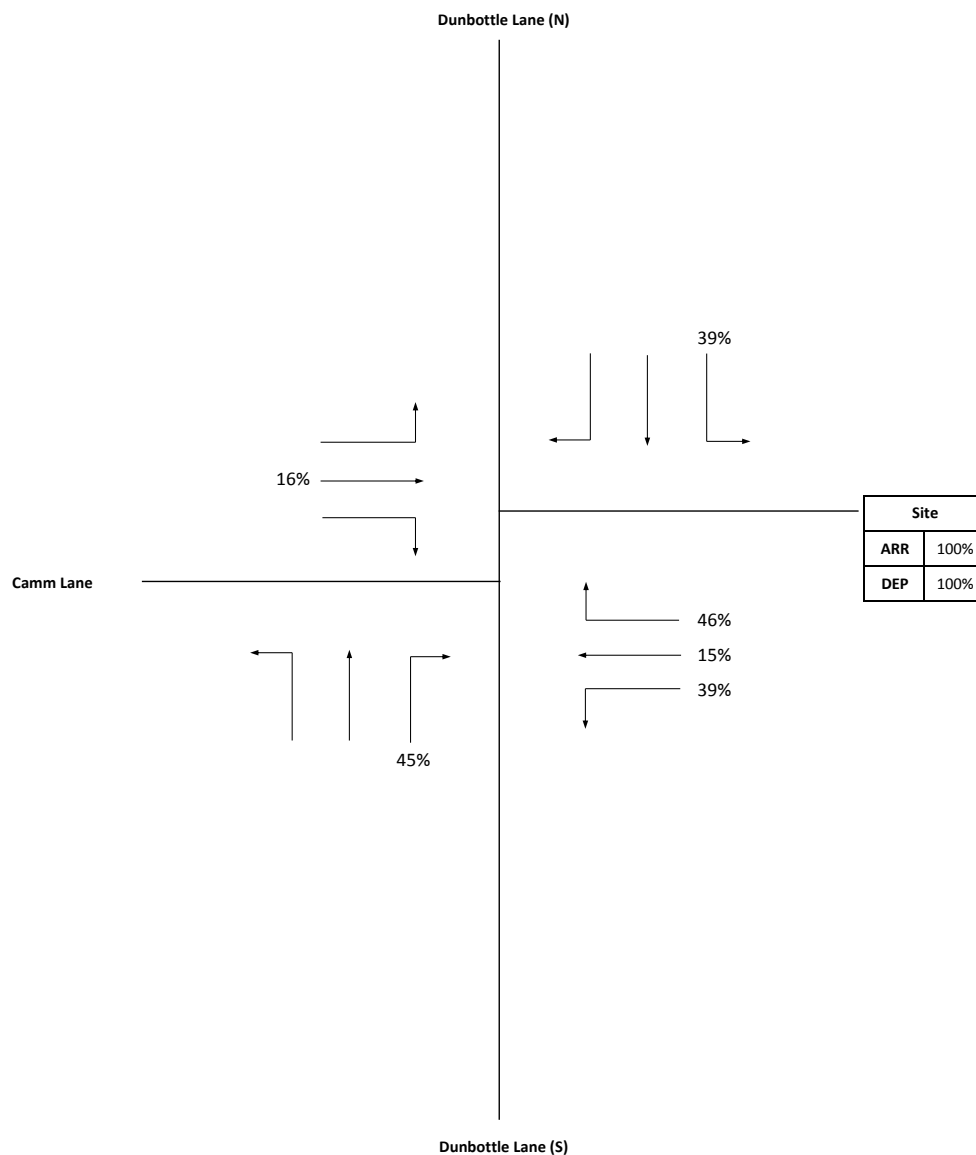


Figure 5 - Proposed Distribution - AM Peak (0745 to 0845)

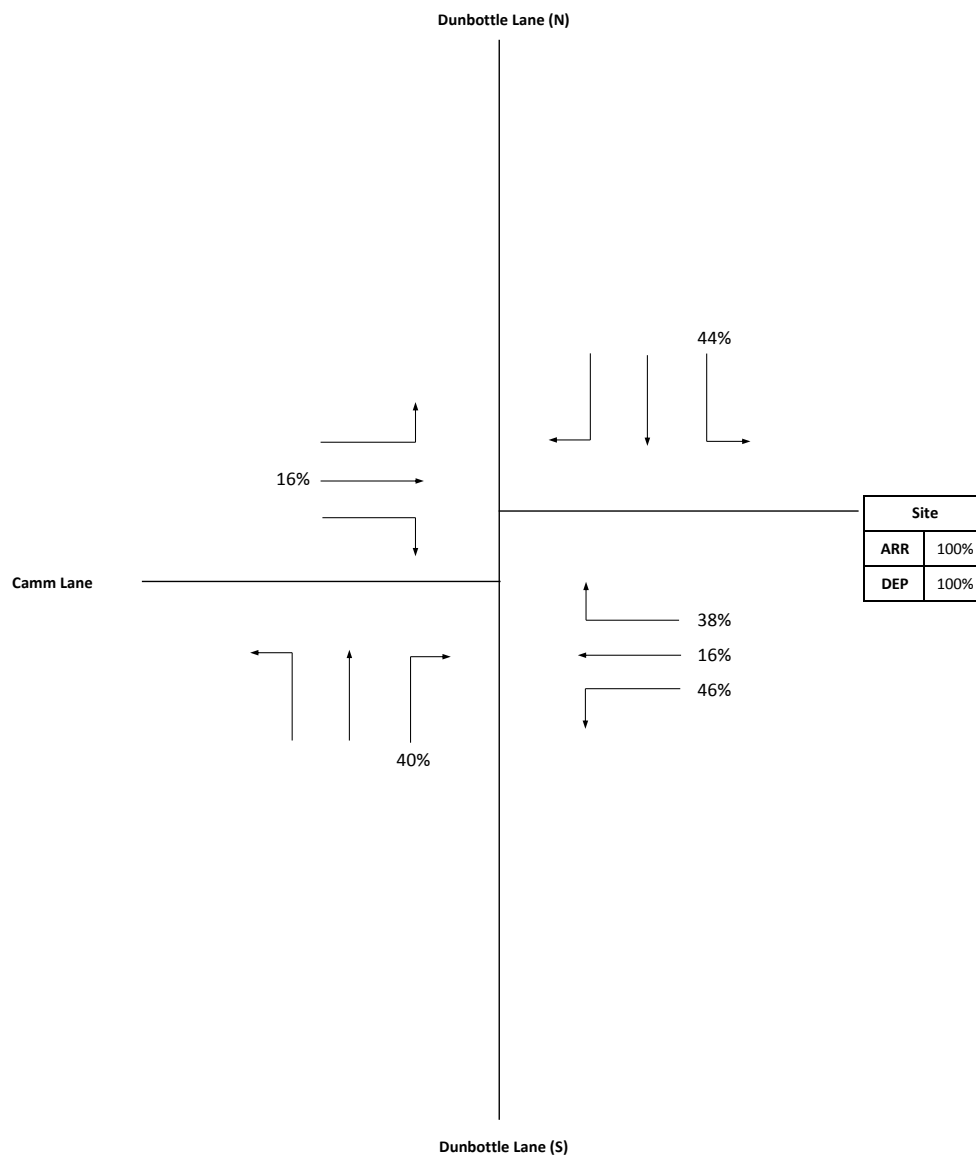


Figure 6 - Proposed Distribution - PM Peak (1645 to 1745)

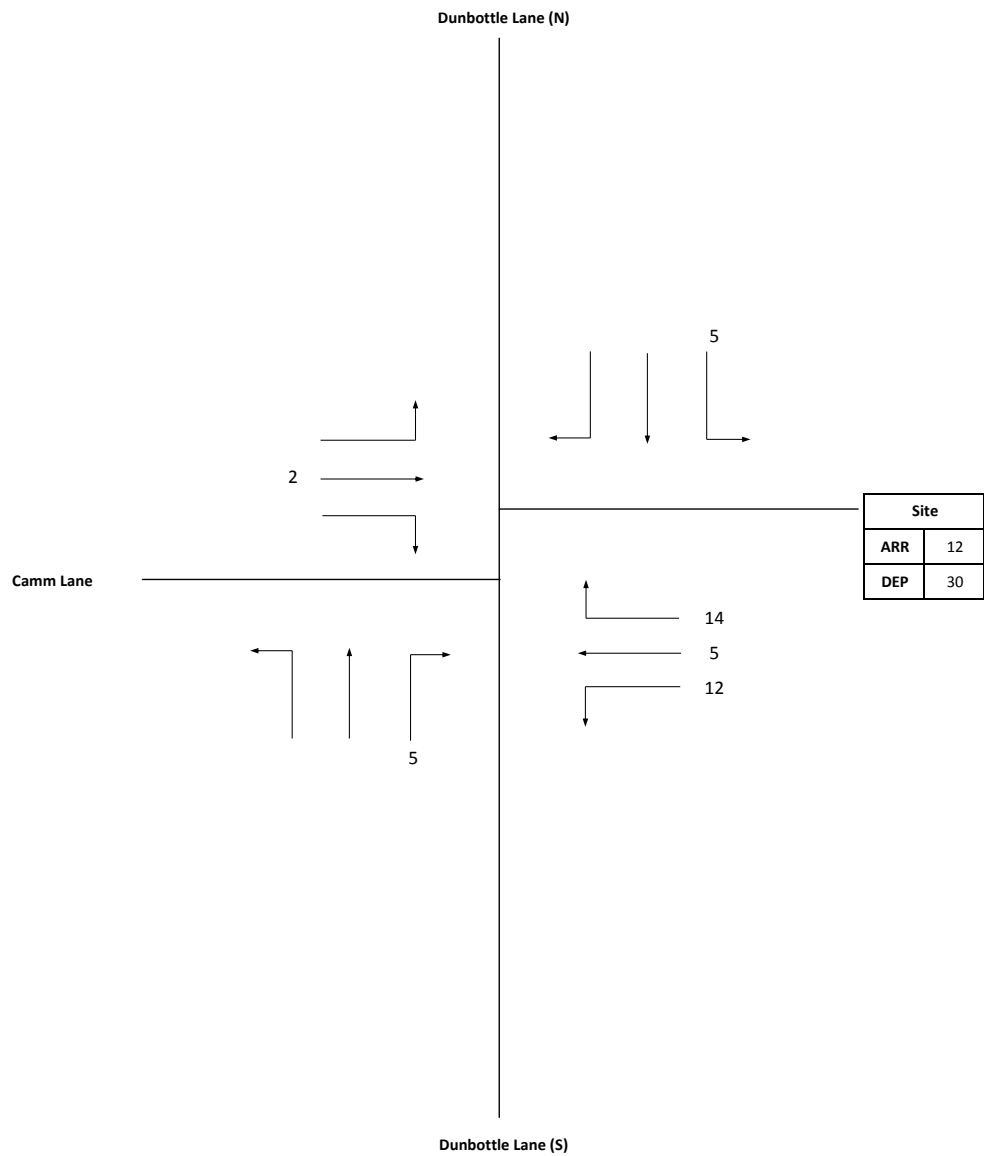


Figure 7 - Proposed Development Flows - AM Peak (0745 to 0845)

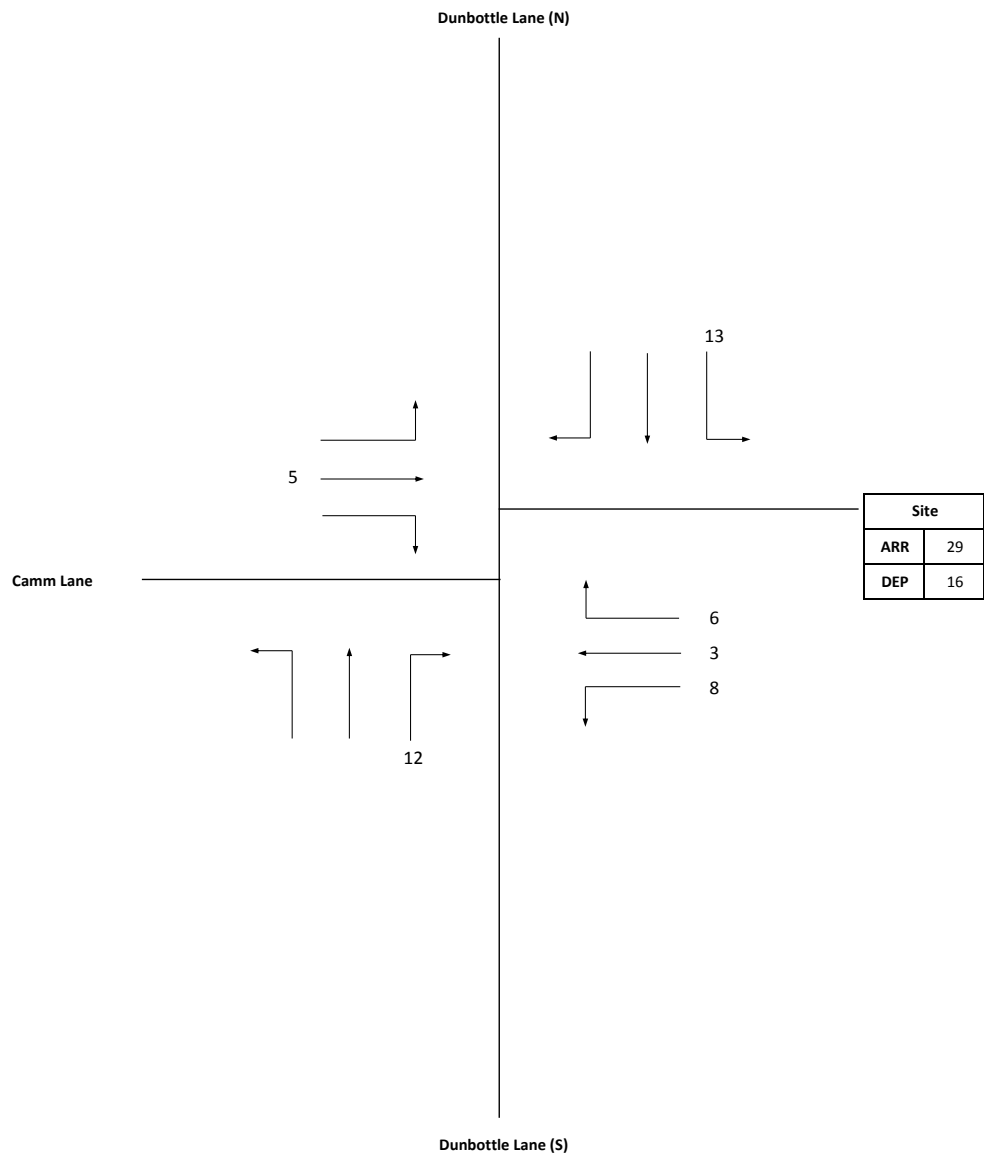


Figure 8 - Proposed Development Flows - PM Peak (1645 to 1745)

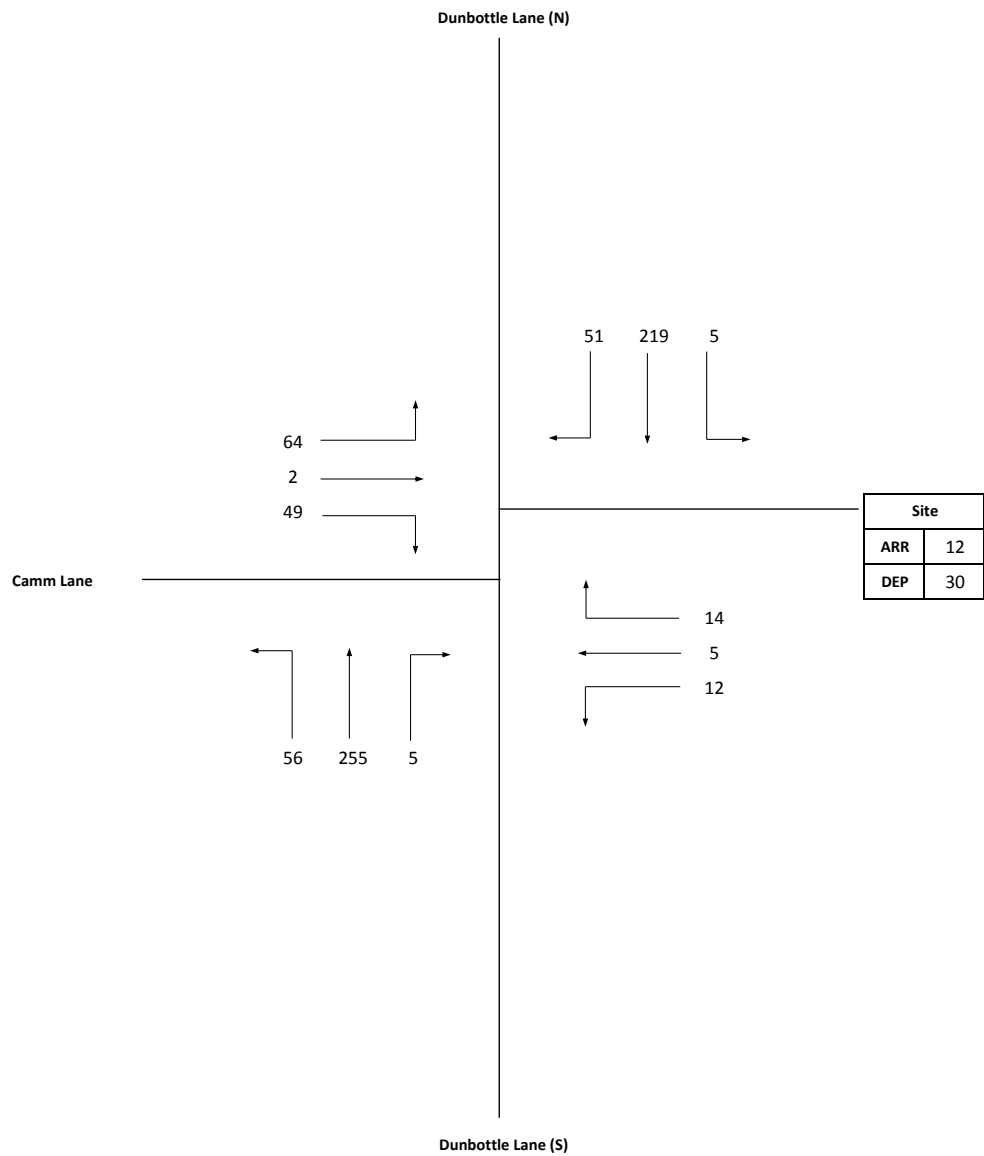


Figure 9 - 2021 With Development Flows - AM Peak (0745 to 0845)

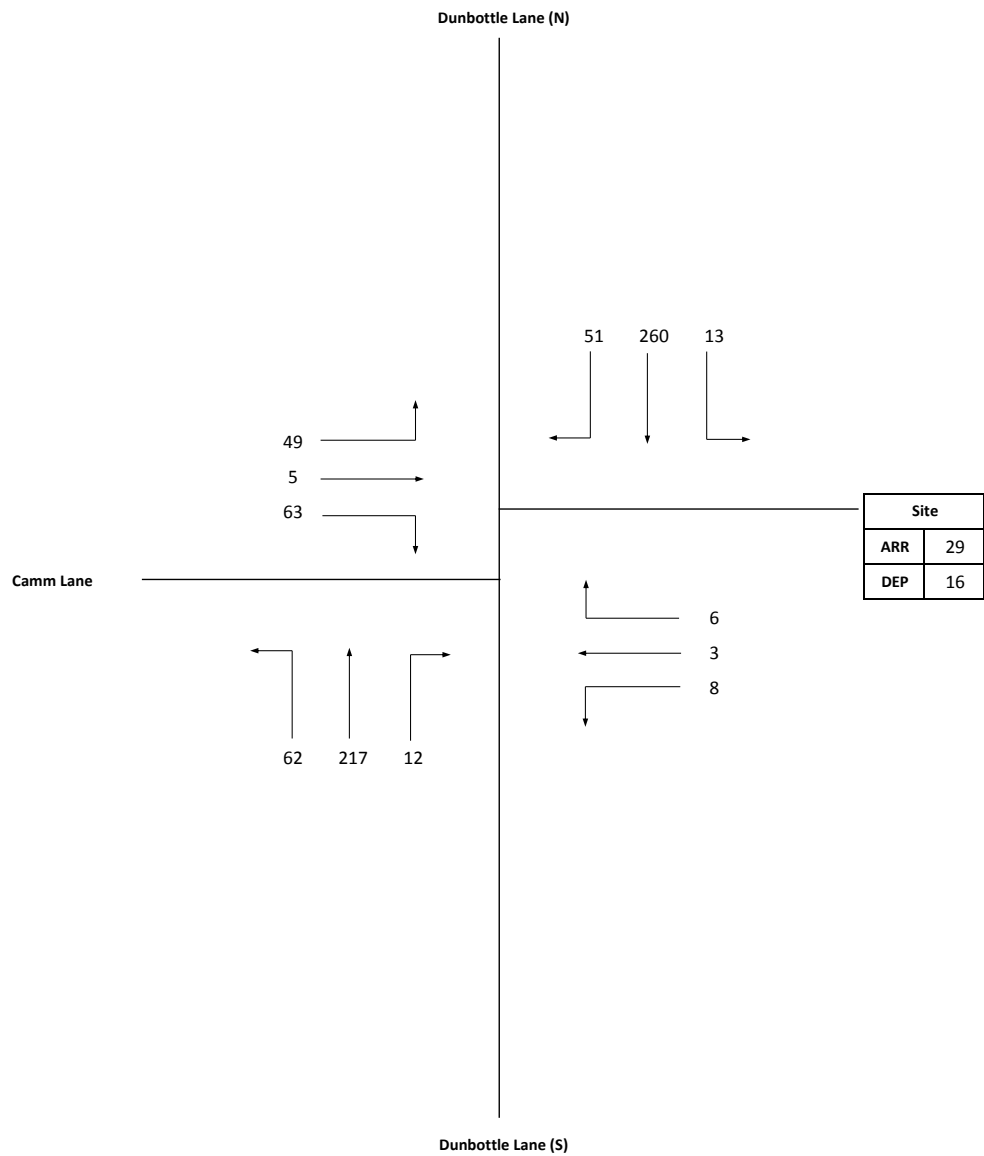


Figure 10 - 2021 With Development Flows - PM Peak (1645 to 1745)

PLANS



KIRKLEES COUNCIL

PROPOSED RESIDENTIAL DEVELOPMENT
DUNBOTTLE LANE, MIRFIELD
SITE LOCATION PLAN

croft
Transport Solutions

Email: info@crofts.co.uk
Tel: 0161 667 3746
Web: www.crofts.co.uk

9 Jordan Street,
Manchester
M15 4PY

DRAWN:	DATE:	CHECKED:	DATE:	SCALE:	DRAWING NUMBER:	REVISION:
GM	04.09.17	SM	04.09.17	N.T.S	1982-01	.



GROSS AREA - 5.67 acres / 2.29 ha

NETT AREA - 4.73 acres / 1.91 ha



CLIENT:	SAVILLS	DRAWING NUMBER:	P17 5114 SK01
PROJECT:	FLASH LANE, MIRFIELD	SCALE @ A3:	1:1250
DRAWING:	ILLUSTRATIVE MASTERPLAN	DRAWN:	JRP / KA
		CHECKED:	LM
		DATE:	AUG 2017

14 MARINER COURT / CALDER PARK / WAKEFIELD / WF4 3FL
01924 383322 / www.jrpassoc.co.uk / info@jrpassoc.co.uk
jrpassociates is a trading style of John R Paley Associates Limited

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NORTH SOUTH AERIAL VIEW



NOTES
DRAWING IS INDICATIVE ONLY AND WILL BE SUBJECT TO
CHANGE AS DESIGN IS PROGRESSED WITH LOCAL AUTHORITY



SITE LAYOUT NTS

REV.	DETAILS	DRAWN	CHECKED	DATE

CLIENT:
KIRKLEES COUNCIL

PROJECT:
DUNBOTTLE LANE

DRAWING TITLE:
**PROPOSED ACCESS
ARRANGEMENT**

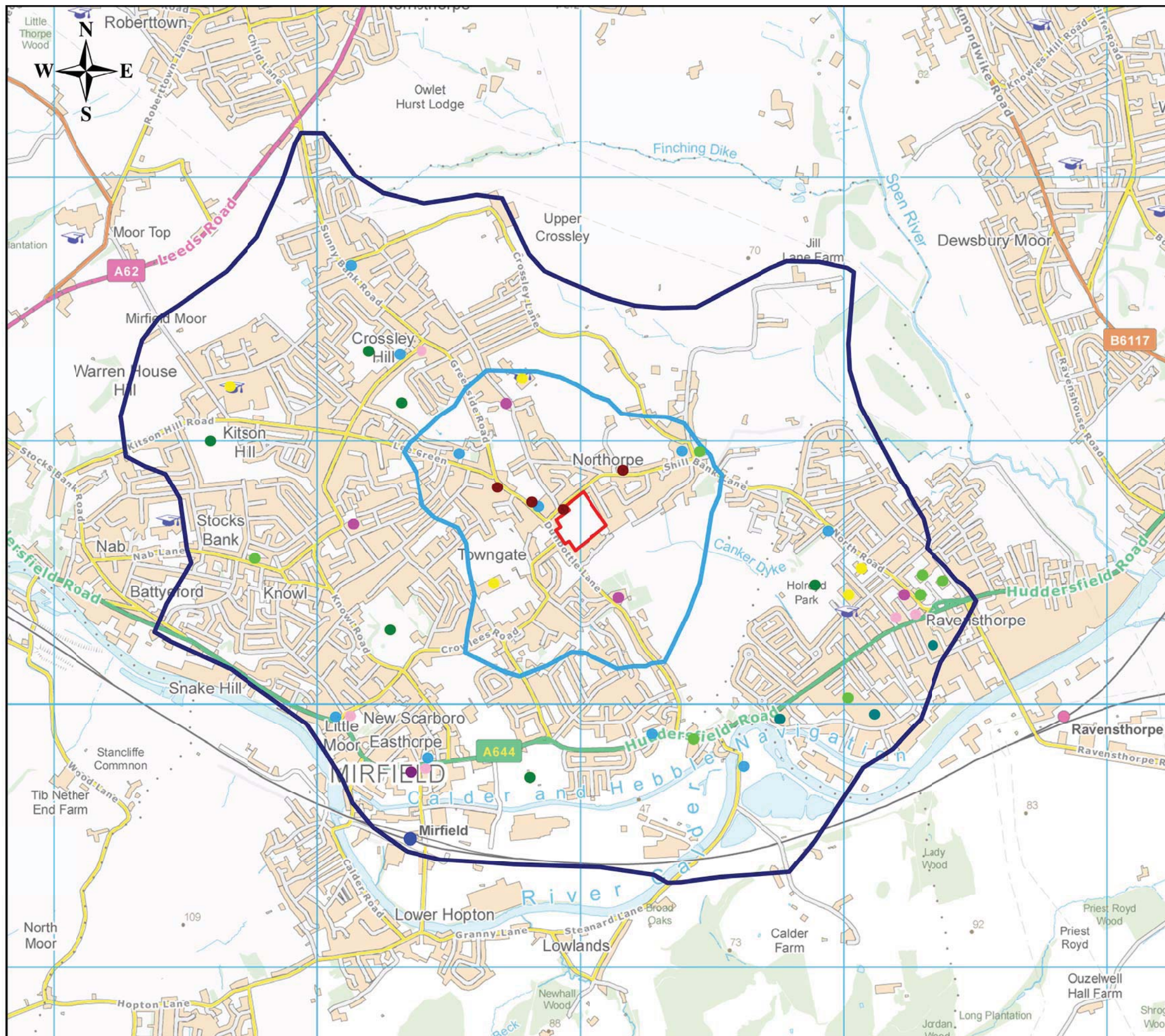
SCALES:
1:500 @ A3

DRAWN:	MC	CHECKED:	MC	DATE:	AUG 2017
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9 Jordan St
Manchester
M15 4PY
Email: info@crofts.co.uk
Tel: 0161 667 3746
Web: www.crofts.co.uk



DRAWING NUMBER:	1982-F01	REVISION:	-
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NOTES

- Site Location
- 800m Pedestrian Catchment
- 2km Pedestrian Catchment
- Bus Stops within 400m
- Train Station
- Business/Industrial/Employment
- Education
- Community Facilities
- Cafe/Takeaway/Public House
- Leisure/Sport
- Medical/Healthcare
- Library
- Retail

PLAN 4

REV.	DETAILS	DRAWN	CHECKED	DATE
CLIENT: KIRKLEES COUNCIL				
PROJECT: PROPOSED RESIDENTIAL DEVELOPMENT DUNBOTTLE LANE, MIRFIELD				
DRAWING TITLE: 800M & 2KM PEDESTRIAN CATCHMENT WITH AMENITIES				
SCALE: 15000 @ A3				
DRAWN: GM		CHECKED: SM		DATE: 04.09.17
9 Jordan Street, Manchester, M15 4PY				
Email: info@crofts.co.uk Tel: 0161 667 3746 Web: www.crofts.co.uk				
DRAWING NUMBER: 1982-03				REVISION: .

APPENDICES

APPENDIX 1

Traffic Survey Data

Mirfield - Manual Traffic Survey, Wednesday 6th September 2017

Produced by Road Data Services Ltd.

Junction: Dunbottle Lane / Camm Lane

Approach: Dunbottle Lane (North)

TIME	Ahead to Dunbottle Lane (South)								Right to Camm Lane							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
0730 - 0745	1	0	41	4	0	0	0	46	0	0	6	2	0	0	0	8
0745 - 0800	0	0	43	7	0	0	0	50	0	0	3	1	0	0	0	4
Hourly Total	1	0	84	11	0	0	0	96	0	0	9	3	0	0	0	12
0800 - 0815	0	0	55	6	0	1	0	62	0	0	15	0	0	0	0	15
0815 - 0830	0	0	46	4	0	0	0	50	0	0	15	0	0	0	0	15
0830 - 0845	0	0	43	2	0	0	0	45	0	0	14	1	0	0	0	15
0845 - 0900	0	0	48	3	0	0	0	51	0	0	9	0	0	0	0	9
Hourly Total	0	0	192	15	0	1	0	208	0	0	53	1	0	0	0	54
0900 - 0915	0	0	29	1	0	0	0	30	0	0	11	0	0	0	0	11
0915 - 0930	0	0	31	3	0	0	0	34	0	0	12	0	0	0	0	12
Hourly Total	0	0	60	4	0	0	0	64	0	0	23	0	0	0	0	23
Session Total	1	0	336	30	0	1	0	368	0	0	85	4	0	0	0	89
1630 - 1645	0	0	45	2	0	0	0	47	0	0	8	0	0	0	0	8
1645 - 1700	0	0	50	2	0	0	0	52	0	0	7	1	0	0	0	8
Hourly Total	0	0	95	4	0	0	0	99	0	0	15	1	0	0	0	16
1700 - 1715	1	1	50	5	0	0	0	57	0	0	13	0	0	0	0	13
1715 - 1730	0	0	68	6	0	0	0	74	0	0	11	0	0	0	0	11
1730 - 1745	0	0	62	4	0	0	0	66	0	0	17	0	0	0	0	17
1745 - 1800	0	0	44	1	0	0	0	45	0	0	13	0	0	0	0	13
Hourly Total	1	1	224	16	0	0	0	242	0	0	54	0	0	0	0	54
1800 - 1815	0	0	35	3	0	0	0	38	0	0	8	0	0	0	0	8
1815 - 1830	0	0	39	3	0	0	0	42	0	0	6	0	0	0	0	6
Hourly Total	0	0	74	6	0	0	0	80	0	0	14	0	0	0	0	14
Session Total	1	1	393	26	0	0	0	421	0	0	83	1	0	0	0	84

Mirfield - Manual Traffic Survey, Wednesday 6th September 2017

Produced by Road Data Services Ltd.

Junction: Dunbottle Lane / Camm Lane

Approach: Dunbottle Lane (South)

TIME	Left to Camm Lane								Ahead to Dunbottle Lane (North)							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
0730 - 0745	0	0	4	0	0	0	0	4	0	0	46	5	0	0	0	51
0745 - 0800	0	0	7	1	0	0	0	8	0	0	55	1	0	1	0	57
Hourly Total	0	0	11	1	0	0	0	12	0	0	101	6	0	1	0	108
0800 - 0815	0	0	14	1	0	0	0	15	0	0	52	4	0	0	0	56
0815 - 0830	0	0	12	0	0	0	0	12	0	1	55	6	0	0	0	62
0830 - 0845	0	0	17	1	0	0	0	18	0	0	57	6	0	1	0	64
0845 - 0900	0	0	8	0	0	0	0	8	0	0	56	5	0	0	0	61
Hourly Total	0	0	51	2	0	0	0	53	0	1	220	21	0	1	0	243
0900 - 0915	0	0	8	0	0	0	0	8	0	1	56	4	0	1	0	62
0915 - 0930	0	0	8	1	0	0	0	9	0	0	50	2	0	0	0	52
Hourly Total	0	0	16	1	0	0	0	17	0	1	106	6	0	1	0	114
Session Total	0	0	78	4	0	0	0	82	0	2	427	33	0	3	0	465
1630 - 1645	0	0	18	2	0	0	0	20	0	0	43	5	0	0	0	48
1645 - 1700	0	0	15	1	0	0	0	16	0	0	38	3	0	0	0	41
Hourly Total	0	0	33	3	0	0	0	36	0	0	81	8	0	0	0	89
1700 - 1715	0	0	16	1	0	0	0	17	0	0	54	4	0	0	0	58
1715 - 1730	0	0	13	2	0	0	0	15	0	0	52	5	0	0	0	57
1730 - 1745	0	0	10	1	0	0	0	11	0	0	48	3	0	0	0	51
1745 - 1800	0	0	11	0	0	0	0	11	0	0	41	3	0	0	0	44
Hourly Total	0	0	50	4	0	0	0	54	0	0	195	15	0	0	0	210
1800 - 1815	0	0	9	1	0	0	0	10	0	0	41	2	0	0	0	43
1815 - 1830	0	0	9	0	0	0	0	9	0	0	33	1	0	0	0	34
Hourly Total	0	0	18	1	0	0	0	19	0	0	74	3	0	0	0	77
Session Total	0	0	101	8	0	0	0	109	0	0	350	26	0	0	0	376

Mirfield - Manual Traffic Survey, Wednesday 6th September 2017

Produced by Road Data Services Ltd.

Junction: Dunbottle Lane / Camm Lane

Approach: Camm Lane

TIME	Left to Dunbottle Lane (North)								Right to Dunbottle Lane (South)							
	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
0730 - 0745	0	0	8	1	0	0	0	9	0	0	11	1	0	0	0	12
0745 - 0800	0	0	18	0	0	0	0	18	0	0	13	0	0	0	0	13
Hourly Total	0	0	26	1	0	0	0	27	0	0	24	1	0	0	0	25
0800 - 0815	0	0	17	0	0	0	0	17	0	0	12	0	0	0	0	12
0815 - 0830	0	0	16	0	0	0	0	16	0	0	12	0	0	0	0	12
0830 - 0845	0	0	10	0	0	0	0	10	0	0	10	0	0	0	0	10
0845 - 0900	0	0	8	0	0	0	0	8	0	0	11	0	0	0	0	11
Hourly Total	0	0	51	0	0	0	0	51	0	0	45	0	0	0	0	45
0900 - 0915	0	0	10	1	0	0	0	11	0	0	6	1	0	0	0	7
0915 - 0930	0	0	7	0	0	0	0	7	0	0	7	0	0	0	0	7
Hourly Total	0	0	17	1	0	0	0	18	0	0	13	1	0	0	0	14

Session Total	0	0	94	2	0	0	0	96	0	0	82	2	0	0	0	84
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1630 - 1645	0	0	13	0	0	0	0	13	0	0	16	0	0	0	0	16
1645 - 1700	0	0	11	0	0	0	0	11	0	0	14	0	0	0	0	14
Hourly Total	0	0	24	0	0	0	0	24	0	0	30	0	0	0	0	30
1700 - 1715	0	0	13	1	0	0	0	14	0	0	19	0	0	0	0	19
1715 - 1730	0	0	11	0	0	0	0	11	0	0	12	0	0	0	0	12
1730 - 1745	0	0	11	0	0	0	0	11	0	0	14	1	0	0	0	15
1745 - 1800	0	0	8	0	0	0	0	8	0	0	9	0	0	0	0	9
Hourly Total	0	0	43	1	0	0	0	44	0	0	54	1	0	0	0	55
1800 - 1815	0	0	8	1	0	0	0	9	0	0	10	0	0	0	0	10
1815 - 1830	0	0	10	0	0	0	0	10	0	0	7	0	0	0	0	7
Hourly Total	0	0	18	1	0	0	0	19	0	0	17	0	0	0	0	17

Session Total	0	0	85	2	0	0	0	87	0	0	101	1	0	0	0	102
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APPENDIX 2

TRICS Output for Residential Use

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	SOUTH EAST	
	ES EAST SUSSEX	1 days
	HC HAMPSHIRE	1 days
	SC SURREY	1 days
	WS WEST SUSSEX	1 days
03	SOUTH WEST	
	DC DORSET	1 days
	DV DEVON	2 days
	SM SOMERSET	1 days
04	EAST ANGLIA	
	NF NORFOLK	3 days
	SF SUFFOLK	1 days
05	EAST MIDLANDS	
	LN LINCOLNSHIRE	2 days
06	WEST MIDLANDS	
	SH SHROPSHIRE	3 days
	ST STAFFORDSHIRE	1 days
	WK WARWICKSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	6 days
	SY SOUTH YORKSHIRE	1 days
	WY WEST YORKSHIRE	1 days
08	NORTH WEST	
	CH CHESHIRE	2 days
	GM GREATER MANCHESTER	1 days
	LC LANCASHIRE	1 days
	MS MERSEYSIDE	1 days
09	NORTH	
	CB CUMBRIA	1 days
	DH DURHAM	1 days
	TW TYNE & WEAR	2 days
10	WALES	
	PS POWYS	2 days
11	SCOTLAND	
	FA FALKIRK	1 days
	HI HIGHLAND	1 days
	PK PERTH & KINROSS	1 days

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

Secondary Filtering selection:

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

Parameter: Number of dwellings
Actual Range: 10 to 98 (units:)
Range Selected by User: 10 to 100 (units:)

Public Transport Provision:

Selection by: Include all surveys

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

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

Selected survey days:

Monday	10 days
Tuesday	8 days
Wednesday	10 days
Thursday	6 days
Friday	7 days

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

Selected survey types:

Manual count	41 days
Directional ATC Count	0 days

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

Selected Locations:

Edge of Town Centre	5
Suburban Area (PPS6 Out of Centre)	18
Edge of Town	16
Neighbourhood Centre (PPS6 Local Centre)	2

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

Selected Location Sub Categories:

Residential Zone	35
Village	1
No Sub Category	5

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

Secondary Filtering selection:

Use Class:

C1	1 days
C3	40 days

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

Secondary Filtering selection (Cont.):

Population within 1 mile:

1,001 to 5,000	4 days
5,001 to 10,000	14 days
10,001 to 15,000	9 days
15,001 to 20,000	6 days
20,001 to 25,000	2 days
25,001 to 50,000	6 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	6 days
25,001 to 50,000	6 days
50,001 to 75,000	4 days
75,001 to 100,000	9 days
100,001 to 125,000	2 days
125,001 to 250,000	6 days
250,001 to 500,000	7 days
500,001 or More	1 days

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

Car ownership within 5 miles:

0.5 or Less	1 days
0.6 to 1.0	14 days
1.1 to 1.5	26 days

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

Travel Plan:

Yes	3 days
No	38 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	41 days
-----------------	---------

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

LIST OF SITES relevant to selection parameters

1	CB-03-A-04 SEMI DETACHED MOORCLOSE ROAD SALTERBACK WORKINGTON Edge of Town No Sub Category Total Number of dwellings: 82 Survey date: FRIDAY 24/04/09	CUMBRIA	Survey Type: MANUAL
2	CH-03-A-08 DETACHED WHITCHURCH ROAD BOUGHTON HEATH CHESTER Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 11 Survey date: TUESDAY 22/05/12	CHESHIRE	Survey Type: MANUAL
3	CH-03-A-09 TERRACED HOUSES GREYSTOKE ROAD HURDSFIELD MACCLESFIELD Edge of Town Residential Zone Total Number of dwellings: 24 Survey date: MONDAY 24/11/14	CHESHIRE	Survey Type: MANUAL
4	DC-03-A-08 BUNGALOWS HURSTDENE ROAD CASTLE LANE WEST BOURNEMOUTH Edge of Town Residential Zone Total Number of dwellings: 28 Survey date: MONDAY 24/03/14	DORSET	Survey Type: MANUAL
5	DH-03-A-01 SEMI DETACHED GREENFIELDS ROAD BISHOP AUCKLAND Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 50 Survey date: TUESDAY 28/03/17	DURHAM	Survey Type: MANUAL
6	DV-03-A-01 TERRACED HOUSES BRONSHILL ROAD TORQUAY Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 37 Survey date: WEDNESDAY 30/09/15	DEVON	Survey Type: MANUAL
7	DV-03-A-03 TERRACED & SEMI DETACHED LOWER BRAND LANE HONITON Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 70 Survey date: MONDAY 28/09/15	DEVON	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

8	ES-03-A-02	PRIVATE HOUSING	EAST SUSSEX
	SOUTH COAST ROAD		
	PEACEHAVEN		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	37	
	Survey date: FRIDAY	18/11/11	Survey Type: MANUAL
9	FA-03-A-01	SEMI -DETACHED/TERRACED	FALKIRK
	MANDELA AVENUE		
	FALKIRK		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	37	
	Survey date: THURSDAY	30/05/13	Survey Type: MANUAL
10	GM-03-A-10	DETACHED/SEMI	GREATER MANCHESTER
	BUTT HILL DRIVE		
	PRESTWICH		
	MANCHESTER		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	29	
	Survey date: WEDNESDAY	12/10/11	Survey Type: MANUAL
11	HC-03-A-18	HOUSES & FLATS	HAMPSHIRE
	CANADA WAY		
	LIPHOOK		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	62	
	Survey date: TUESDAY	29/11/16	Survey Type: MANUAL
12	HI-03-A-14	SEMI -DETACHED & TERRACED	HIGHLAND
	KING BRUDE ROAD		
	SCORGUIE		
	INVERNESS		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	40	
	Survey date: WEDNESDAY	23/03/16	Survey Type: MANUAL
13	LC-03-A-30	SEMI -DETACHED	LANCASHIRE
	WATSON ROAD		
	BLACKPOOL		
	Edge of Town Centre		
	Residential Zone		
	Total Number of dwellings:	24	
	Survey date: FRIDAY	14/06/13	Survey Type: MANUAL
14	LN-03-A-03	SEMI DETACHED	LINCOLNSHIRE
	ROOKERY LANE		
	BOULTHAM		
	LINCOLN		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	22	
	Survey date: TUESDAY	18/09/12	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

15	LN-03-A-04	DETACHED & SEMI -DETACHED	LINCOLNSHIRE
	EGERTON ROAD		
	LINCOLN		
	Edge of Town Centre		
	Residential Zone		
	Total Number of dwellings:	30	
	Survey date: MONDAY	29/06/15	Survey Type: MANUAL
16	MS-03-A-03	DETACHED	MERSEYSIDE
	BEMPTON ROAD		
	OTTERSPOOL		
	LIVERPOOL		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	15	
	Survey date: FRIDAY	21/06/13	Survey Type: MANUAL
17	NF-03-A-01	SEMI DET. & BUNGALOWS	NORFOLK
	YARMOUTH ROAD		
	CAISTER-ON-SEA		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	27	
	Survey date: TUESDAY	16/10/12	Survey Type: MANUAL
18	NF-03-A-02	HOUSES & FLATS	NORFOLK
	DEREHAM ROAD		
	NORWICH		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	98	
	Survey date: MONDAY	22/10/12	Survey Type: MANUAL
19	NF-03-A-03	DETACHED HOUSES	NORFOLK
	HALING WAY		
	THETFORD		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	10	
	Survey date: WEDNESDAY	16/09/15	Survey Type: MANUAL
20	NY-03-A-07	DETACHED & SEMI DET.	NORTH YORKSHIRE
	CRAVEN WAY		
	BOROUGHBRIDGE		
	Edge of Town		
	No Sub Category		
	Total Number of dwellings:	23	
	Survey date: TUESDAY	18/10/11	Survey Type: MANUAL
21	NY-03-A-08	TERRACED HOUSES	NORTH YORKSHIRE
	NICHOLAS STREET		
	YORK		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	21	
	Survey date: MONDAY	16/09/13	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

22	NY-03-A-09	MIXED HOUSING			NORTH YORKSHIRE
		GRAMMAR SCHOOL LANE			
		NORTHALLERTON			
		Suburban Area (PPS6 Out of Centre)			
		Residential Zone			
		Total Number of dwellings:	52		
		Survey date: MONDAY	16/09/13		Survey Type: MANUAL
23	NY-03-A-10	HOUSES AND FLATS			NORTH YORKSHIRE
		BOROUGHBRIDGE ROAD			
		RIPON			
		Edge of Town			
		No Sub Category			
		Total Number of dwellings:	71		
		Survey date: TUESDAY	17/09/13		Survey Type: MANUAL
24	NY-03-A-11	PRIVATE HOUSING			NORTH YORKSHIRE
		HORSEFAIR			
		BOROUGHBRIDGE			
		Edge of Town			
		Residential Zone			
		Total Number of dwellings:	23		
		Survey date: WEDNESDAY	18/09/13		Survey Type: MANUAL
25	NY-03-A-12	TOWN HOUSES			NORTH YORKSHIRE
		RACECOURSE LANE			
		NORTHALLERTON			
		Edge of Town Centre			
		Residential Zone			
		Total Number of dwellings:	47		
		Survey date: TUESDAY	27/09/16		Survey Type: MANUAL
26	PK-03-A-01	DETAC. & BUNGALOWS			PERTH & KINROSS
		TULLYLUMB TERRACE			
		GORNHILL			
		PERTH			
		Suburban Area (PPS6 Out of Centre)			
		Residential Zone			
		Total Number of dwellings:	36		
		Survey date: WEDNESDAY	11/05/11		Survey Type: MANUAL
27	PS-03-A-01	MIXED HOUSES			POWYS
		BRYN GLAS			
		WELSHPOOL			
		Edge of Town Centre			
		Residential Zone			
		Total Number of dwellings:	16		
		Survey date: MONDAY	11/05/15		Survey Type: MANUAL
28	PS-03-A-02	DETACHED/SEMI -DETACHED			POWYS
		GUNROG ROAD			
		WELSHPOOL			
		Suburban Area (PPS6 Out of Centre)			
		Residential Zone			
		Total Number of dwellings:	28		
		Survey date: MONDAY	11/05/15		Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

29	SC-03-A-04 HIGH ROAD	DETACHED & TERRACED		SURREY
	BYFLEET Edge of Town Residential Zone Total Number of dwellings: 71 Survey date: THURSDAY 23/01/14			Survey Type: MANUAL
30	SF-03-A-05 VALE LANE	DETACHED HOUSES		SUFFOLK
	BURY ST EDMUNDS Edge of Town Residential Zone Total Number of dwellings: 18 Survey date: WEDNESDAY 09/09/15			Survey Type: MANUAL
31	SH-03-A-03 SOMERBY DRIVE BICTON HEATH SHREWSBURY Edge of Town No Sub Category Total Number of dwellings: 10 Survey date: FRIDAY 26/06/09	DETACHED		SHROPSHIRE
32	SH-03-A-05 SANDCROFT SUTTON HILL TELFORD Edge of Town Residential Zone Total Number of dwellings: 54 Survey date: THURSDAY 24/10/13	SEMI-DETACHED/TERRACED		SHROPSHIRE
33	SH-03-A-06 ELLESMERE ROAD	BUNGALOWS		SHROPSHIRE
	SHREWSBURY Edge of Town Residential Zone Total Number of dwellings: 16 Survey date: THURSDAY 22/05/14			Survey Type: MANUAL
34	SM-03-A-01 WEMBDON ROAD NORTHFIELD BRIDGWATER Edge of Town Residential Zone Total Number of dwellings: 33 Survey date: THURSDAY 24/09/15	DETACHED & SEMI		SOMERSET
35	ST-03-A-06 STANFORD ROAD BLAKENHALL WOLVERHAMPTON Edge of Town Centre No Sub Category Total Number of dwellings: 17 Survey date: FRIDAY 09/05/14	SEMI-DET. & TERRACED		STAFFORDSHIRE
				Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

36	SY-03-A-01	SEMI DETACHED HOUSES	SOUTH YORKSHIRE
	A19 BENTLEY ROAD		
	BENTLEY RISE		
	DONCASTER		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	54	
	Survey date: WEDNESDAY	18/09/13	Survey Type: MANUAL
37	TW-03-A-02	SEMI -DETACHED	TYNE & WEAR
	WEST PARK ROAD		
	GATESHEAD		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	16	
	Survey date: MONDAY	07/10/13	Survey Type: MANUAL
38	TW-03-A-03	MIXED HOUSES	TYNE & WEAR
	STATION ROAD		
	BACKWORTH		
	NEAR NEWCASTLE		
	Neighbourhood Centre (PPS6 Local Centre)		
	Village		
	Total Number of dwellings:	33	
	Survey date: FRIDAY	13/11/15	Survey Type: MANUAL
39	WK-03-A-02	BUNGALOWS	WARWICKSHIRE
	NARBERTH WAY		
	POTTERS GREEN		
	COVENTRY		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	17	
	Survey date: THURSDAY	17/10/13	Survey Type: MANUAL
40	WS-03-A-05	TERRACED & FLATS	WEST SUSSEX
	UPPER SHOREHAM ROAD		
	SHOREHAM BY SEA		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	48	
	Survey date: WEDNESDAY	18/04/12	Survey Type: MANUAL
41	WY-03-A-01	MIXED HOUSING	WEST YORKSHIRE
	SPRING VALLEY CRESCENT		
	BRAMLEY		
	LEEDS		
	Neighbourhood Centre (PPS6 Local Centre)		
	Residential Zone		
	Total Number of dwellings:	46	
	Survey date: WEDNESDAY	21/09/16	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
AN-03-A-07	Ire/Ldn
CC-03-A-01	Ire/Ldn
CV-03-A-01	Ire/Ldn
DL-03-A-07	Ire/Ldn
DL-03-A-08	Ire/Ldn
DN-03-A-03	Ire/Ldn
DN-03-A-04	Ire/Ldn
DO-03-A-03	Ire/Ldn
GA-03-A-04	Ire/Ldn

MANUALLY DESELECTED SITES (Cont.)

Site Ref	Reason for Deselection
HO-03-A-01	Ire/Ldn
HO-03-A-02	Ire/Ldn
KD-03-A-02	Ire/Ldn
KI-03-A-01	Ire/Ldn
KI-03-A-02	Ire/Ldn
LT-03-A-01	Ire/Ldn
MA-03-A-01	Ire/Ldn
RO-03-A-01	Ire/Ldn
RO-03-A-02	Ire/Ldn
RO-03-A-03	Ire/Ldn
RO-03-A-04	Ire/Ldn
WE-03-A-01	Ire/Ldn
WX-03-A-01	Ire/Ldn

RANK ORDER for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
 VEHICLES

Ranking Type: TOTALS Time Range: 08:00-09:00

15th Percentile = No. 35 HC-03-A-18 Tot: 0.339

85th Percentile = No. 7 SH-03-A-03 Tot: 0.700

Median Values

Arrivals: 0.130

Departures: 0.370

Totals: 0.500

Mean Values

Arrivals: 0.172

Departures: 0.376

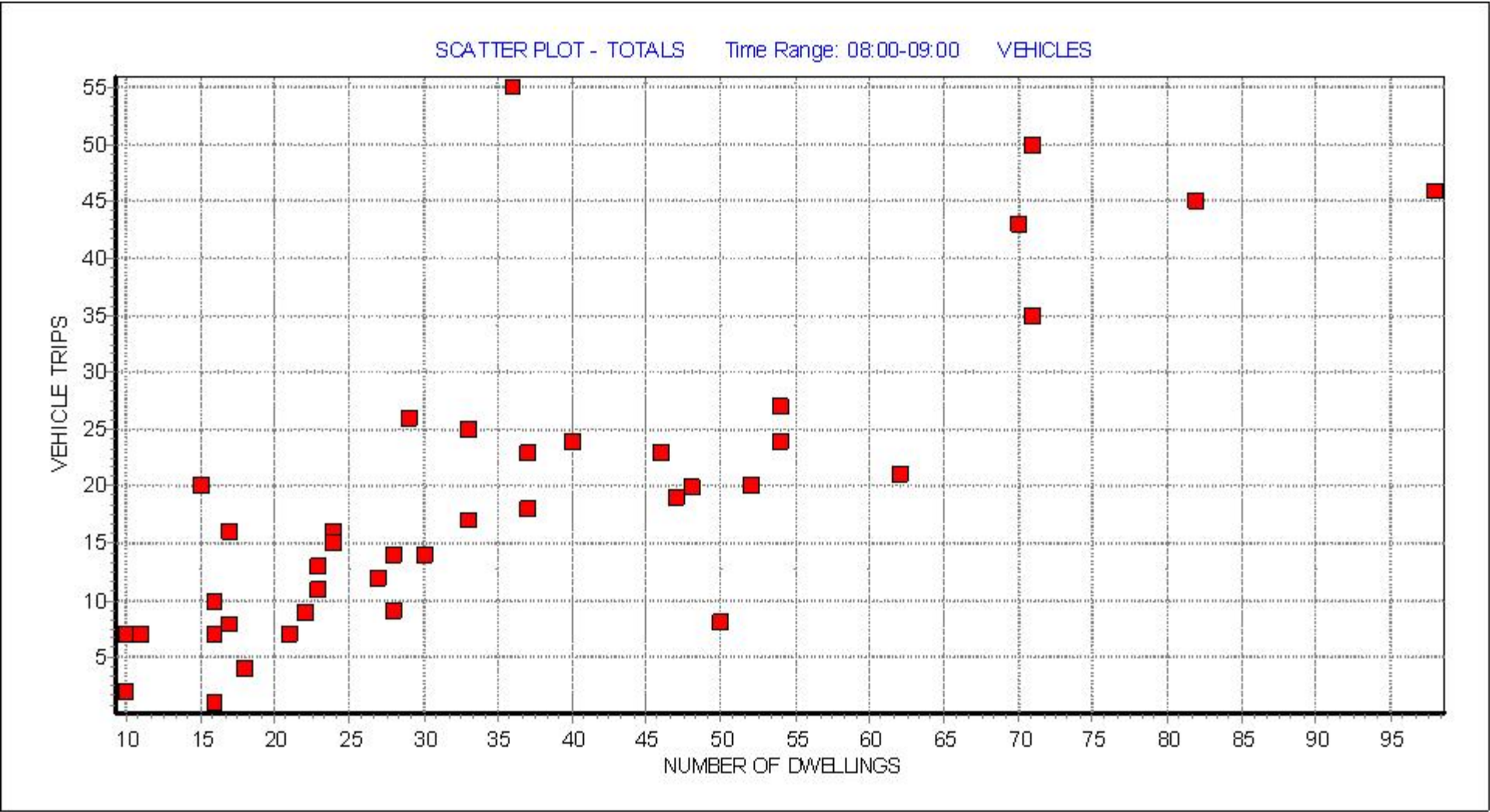
Totals: 0.547

Rank	Site-Ref	Description	Town/City	Area	DWELLS	Day	Date	Trip Rate (Sorted by Totals)			Park Spaces Per Dwelling
								Arrivals	Departures	Totals	
1	PK-03-A-01	DETAC. & BUNGA	PERTH	PERTH & KINROSS	36	Wed	11/05/11	0.861	0.667	1.528	3.36
2	MS-03-A-03	DETACHED	LIVERPOOL	MERSEYSIDE	15	Fri	21/06/13	0.400	0.933	1.333	3.00
3	WK-03-A-02	BUNGALOWS	COVENTRY	WARWICKSHIRE	17	Thu	17/10/13	0.588	0.353	0.941	2.06
4	GM-03-A-10	DETACHED/SEMI	MANCHESTER	GREATER MANCHESTER	29	Wed	12/10/11	0.138	0.759	0.897	2.79
5	TW-03-A-03	MIXED HOUSES	NEAR NEWCASTLE	TYNE & WEAR	33	Fri	13/11/15	0.212	0.545	0.757	4.00
6	NY-03-A-10	HOUSES AND FLA	RIPON	NORTH YORKSHIRE	71	Tue	17/09/13	0.183	0.521	0.704	0.83
7	SH-03-A-03	DETATCHED	SHREWSBURY	SHROPSHIRE	10	Fri	26/06/09	0.200	0.500	0.700	3.00
8	CH-03-A-09	TERRACED HOUSE	MACCLESFIELD	CHESHIRE	24	Mon	24/11/14	0.250	0.417	0.667	1.33
9	CH-03-A-08	DETACHED	CHESTER	CHESHIRE	11	Tue	22/05/12	0.182	0.455	0.637	4.73
10	TW-03-A-02	SEMI-DETACHED	GATESHEAD	TYNE & WEAR	16	Mon	07/10/13	0.188	0.438	0.626	2.38
11	LC-03-A-30	SEMI-DETACHED	BLACKPOOL	LANCASHIRE	24	Fri	14/06/13	0.167	0.458	0.625	1.67
12	FA-03-A-01	SEMI-DETACHED/	FALKIRK	FALKIRK	37	Thu	30/05/13	0.189	0.432	0.621	1.41
13	DV-03-A-01	TERRACED HOUSE	TORQUAY	DEVON	37	Wed	30/09/15	0.162	0.459	0.621	2.78
14	DV-03-A-03	TERRACED & SEM	HONITON	DEVON	70	Mon	28/09/15	0.086	0.529	0.615	1.66
15	HI-03-A-14	SEMI-DETACHED	INVERNESS	HIGHLAND	40	Wed	23/03/16	0.125	0.475	0.600	2.23
16	NY-03-A-11	PRIVATE HOUSIN	BOROUGHBRIDGE	NORTH YORKSHIRE	23	Wed	18/09/13	0.000	0.565	0.565	6.26
17	CB-03-A-04	SEMI DETACHED	WORKINGTON	CUMBRIA	82	Fri	24/04/09	0.183	0.366	0.549	1.74
18	SM-03-A-01	DETACHED & SEM	BRIDGWATER	SOMERSET	33	Thu	24/09/15	0.182	0.333	0.515	3.97
19	WY-03-A-01	MIXED HOUSING	LEEDS	WEST YORKSHIRE	46	Wed	21/09/16	0.217	0.283	0.500	1.26
20	PS-03-A-02	DETACHED/SEMI-	WELSHPOOL	POWYS	28	Mon	11/05/15	0.179	0.321	0.500	2.32
21	SH-03-A-05	SEMI-DETACHED/	TELFORD	SHROPSHIRE	54	Thu	24/10/13	0.130	0.370	0.500	1.17
22	SC-03-A-04	DETACHED & TER	BYFLEET	SURREY	71	Thu	23/01/14	0.141	0.352	0.493	2.49
23	ES-03-A-02	PRIVATE HOUSIN	PEACEHAVEN	EAST SUSSEX	37	Fri	18/11/11	0.081	0.405	0.486	1.59
24	NY-03-A-07	DETACHED & SEM	BOROUGHBRIDGE	NORTH YORKSHIRE	23	Tue	18/10/11	0.087	0.391	0.478	1.96
25	ST-03-A-06	SEMI-DET. & TE	WOLVERHAMPTON	STAFFORDSHIRE	17	Fri	09/05/14	0.235	0.235	0.470	1.12
26	NF-03-A-02	HOUSES & FLATS	NORWICH	NORFOLK	98	Mon	22/10/12	0.122	0.347	0.469	2.24
27	LN-03-A-04	DETACHED & SEM	LINCOLN	LINCOLNSHIRE	30	Mon	29/06/15	0.233	0.233	0.466	2.20
28	SY-03-A-01	SEMI DETACHED	DONCASTER	SOUTH YORKSHIRE	54	Wed	18/09/13	0.056	0.389	0.445	1.13
29	NF-03-A-01	SEMI DET. & BU	CAISTER-ON-SEA	NORFOLK	27	Tue	16/10/12	0.148	0.296	0.444	2.37
30	PS-03-A-01	MIXED HOUSES	WELSHPOOL	POWYS	16	Mon	11/05/15	0.188	0.250	0.438	1.63
31	WS-03-A-05	TERRACED & FLA	SHOREHAM BY SEA	WEST SUSSEX	48	Wed	18/04/12	0.104	0.313	0.416	2.75
32	LN-03-A-03	SEMI DETACHED	LINCOLN	LINCOLNSHIRE	22	Tue	18/09/12	0.045	0.364	0.409	1.09

Rank	Site-Ref	Description	Town/City	Area	DWELLS	Day	Date	Trip Rate (Sorted by Totals)			Park Spaces Per Dwelling
								Arrivals	Departures	Totals	
33	NY-03-A-12	TOWN HOUSES	NORTHALLERTON	NORTH YORKSHIRE	47	Tue	27/09/16	0.170	0.234	0.404	1.66
34	NY-03-A-09	MIXED HOUSING	NORTHALLERTON	NORTH YORKSHIRE	52	Mon	16/09/13	0.173	0.212	0.385	2.60
35	HC-03-A-18	HOUSES & FLATS	LIPHOOK	HAMPSHIRE	62	Tue	29/11/16	0.081	0.258	0.339	2.19
36	NY-03-A-08	TERRACED HOUSE	YORK	NORTH YORKSHIRE	21	Mon	16/09/13	0.048	0.286	0.334	1.14
37	DC-03-A-08	BUNGALOWS	BOURNEMOUTH	DORSET	28	Mon	24/03/14	0.179	0.143	0.322	4.68
38	SF-03-A-05	DETACHED HOUSE	BURY ST EDMUNDS	SUFFOLK	18	Wed	09/09/15	0.000	0.222	0.222	4.17
39	NF-03-A-03	DETACHED HOUSE	THETFORD	NORFOLK	10	Wed	16/09/15	0.100	0.100	0.200	3.70
40	DH-03-A-01	SEMI DETACHED	BISHOP AUCKLAND	DURHAM	50	Tue	28/03/17	0.020	0.140	0.160	1.74
41	SH-03-A-06	BUNGALOWS	SHREWSBURY	SHROPSHIRE	16	Thu	22/05/14	0.000	0.063	0.062	2.00

This section displays actual (not average) trip rates for each of the survey days in the selected set, and ranks them in order of relative trip rate intensity, for a given time period (or peak period irrespective of time) selected by the user. The count type and direction are both displayed just above the table, along with the rows within the table representing the 85th and 15th percentile trip rate figures (highlighted in bold within the table itself).

The table itself displays details of each individual survey, alongside arrivals, departures and totals trip rates, sorted by whichever of the three directional options has been chosen by the user. As with the preceeding trip rate calculation results table, the trip rates shown are per the calculation factor (e.g. per 100m2 GFA, per employee, per hectare, etc). Note that if the peak period option has been selected (as opposed to a specific chosen time period), the peak period for each individual survey day in the table is also displayed.



This graph is a visual representation of the correlation between the selected trip rate calculation parameter and the rank order trip rates generated by each individual survey day in the selected set. The range of the trip rate parameter is shown along the x axis, with the level of trips shown on the y axis. The selected time range used to create the rank order list from which the graph is derived is displayed at the top of the graph (unless the peak period irrespective of time range has been selected). A line of best fit is sometimes displayed in the graph, should it be selected for inclusion by the user.

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	SOUTH EAST	
	ES EAST SUSSEX	1 days
	HC HAMPSHIRE	1 days
	SC SURREY	1 days
	WS WEST SUSSEX	1 days
03	SOUTH WEST	
	DC DORSET	1 days
	DV DEVON	2 days
	SM SOMERSET	1 days
04	EAST ANGLIA	
	NF NORFOLK	3 days
	SF SUFFOLK	1 days
05	EAST MIDLANDS	
	LN LINCOLNSHIRE	2 days
06	WEST MIDLANDS	
	SH SHROPSHIRE	3 days
	ST STAFFORDSHIRE	1 days
	WK WARWICKSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	6 days
	SY SOUTH YORKSHIRE	1 days
	WY WEST YORKSHIRE	1 days
08	NORTH WEST	
	CH CHESHIRE	2 days
	GM GREATER MANCHESTER	1 days
	LC LANCASHIRE	1 days
	MS MERSEYSIDE	1 days
09	NORTH	
	CB CUMBRIA	1 days
	DH DURHAM	1 days
	TW TYNE & WEAR	2 days
10	WALES	
	PS POWYS	2 days
11	SCOTLAND	
	FA FALKIRK	1 days
	HI HIGHLAND	1 days
	PK PERTH & KINROSS	1 days

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

Secondary Filtering selection:

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

Parameter: Number of dwellings
Actual Range: 10 to 98 (units:)
Range Selected by User: 10 to 100 (units:)

Public Transport Provision:

Selection by: Include all surveys

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

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

Selected survey days:

Monday	10 days
Tuesday	8 days
Wednesday	10 days
Thursday	6 days
Friday	7 days

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

Selected survey types:

Manual count	41 days
Directional ATC Count	0 days

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

Selected Locations:

Edge of Town Centre	5
Suburban Area (PPS6 Out of Centre)	18
Edge of Town	16
Neighbourhood Centre (PPS6 Local Centre)	2

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

Selected Location Sub Categories:

Residential Zone	35
Village	1
No Sub Category	5

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

Secondary Filtering selection:

Use Class:

C1	1 days
C3	40 days

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

Secondary Filtering selection (Cont.):

Population within 1 mile:

1,001 to 5,000	4 days
5,001 to 10,000	14 days
10,001 to 15,000	9 days
15,001 to 20,000	6 days
20,001 to 25,000	2 days
25,001 to 50,000	6 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	6 days
25,001 to 50,000	6 days
50,001 to 75,000	4 days
75,001 to 100,000	9 days
100,001 to 125,000	2 days
125,001 to 250,000	6 days
250,001 to 500,000	7 days
500,001 or More	1 days

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

Car ownership within 5 miles:

0.5 or Less	1 days
0.6 to 1.0	14 days
1.1 to 1.5	26 days

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

Travel Plan:

Yes	3 days
No	38 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	41 days
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This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	CB-03-A-04 SEMI DETACHED MOORCLOSE ROAD SALTERBACK WORKINGTON Edge of Town No Sub Category Total Number of dwellings: 82 Survey date: FRIDAY 24/04/09	CUMBRIA	Survey Type: MANUAL
2	CH-03-A-08 DETACHED WHITCHURCH ROAD BOUGHTON HEATH CHESTER Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 11 Survey date: TUESDAY 22/05/12	CHESHIRE	Survey Type: MANUAL
3	CH-03-A-09 TERRACED HOUSES GREYSTOKE ROAD HURDSFIELD MACCLESFIELD Edge of Town Residential Zone Total Number of dwellings: 24 Survey date: MONDAY 24/11/14	CHESHIRE	Survey Type: MANUAL
4	DC-03-A-08 BUNGALOWS HURSTDENE ROAD CASTLE LANE WEST BOURNEMOUTH Edge of Town Residential Zone Total Number of dwellings: 28 Survey date: MONDAY 24/03/14	DORSET	Survey Type: MANUAL
5	DH-03-A-01 SEMI DETACHED GREENFIELDS ROAD BISHOP AUCKLAND Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 50 Survey date: TUESDAY 28/03/17	DURHAM	Survey Type: MANUAL
6	DV-03-A-01 TERRACED HOUSES BRONSHILL ROAD TORQUAY Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 37 Survey date: WEDNESDAY 30/09/15	DEVON	Survey Type: MANUAL
7	DV-03-A-03 TERRACED & SEMI DETACHED LOWER BRAND LANE HONITON Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 70 Survey date: MONDAY 28/09/15	DEVON	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

8	ES-03-A-02	PRIVATE HOUSING	EAST SUSSEX
	SOUTH COAST ROAD		
	PEACEHAVEN		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	37	
	Survey date: FRIDAY	18/11/11	Survey Type: MANUAL
9	FA-03-A-01	SEMI -DETACHED/TERRACED	FALKIRK
	MANDELA AVENUE		
	FALKIRK		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	37	
	Survey date: THURSDAY	30/05/13	Survey Type: MANUAL
10	GM-03-A-10	DETACHED/SEMI	GREATER MANCHESTER
	BUTT HILL DRIVE		
	PRESTWICH		
	MANCHESTER		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	29	
	Survey date: WEDNESDAY	12/10/11	Survey Type: MANUAL
11	HC-03-A-18	HOUSES & FLATS	HAMPSHIRE
	CANADA WAY		
	LIPHOOK		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	62	
	Survey date: TUESDAY	29/11/16	Survey Type: MANUAL
12	HI-03-A-14	SEMI -DETACHED & TERRACED	HIGHLAND
	KING BRUDE ROAD		
	SCORGUIE		
	INVERNESS		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	40	
	Survey date: WEDNESDAY	23/03/16	Survey Type: MANUAL
13	LC-03-A-30	SEMI -DETACHED	LANCASHIRE
	WATSON ROAD		
	BLACKPOOL		
	Edge of Town Centre		
	Residential Zone		
	Total Number of dwellings:	24	
	Survey date: FRIDAY	14/06/13	Survey Type: MANUAL
14	LN-03-A-03	SEMI DETACHED	LINCOLNSHIRE
	ROOKERY LANE		
	BOULTHAM		
	LINCOLN		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	22	
	Survey date: TUESDAY	18/09/12	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

15	LN-03-A-04	DETACHED & SEMI -DETACHED	LINCOLNSHIRE
	EGERTON ROAD		
	LINCOLN		
	Edge of Town Centre		
	Residential Zone		
	Total Number of dwellings:	30	
	Survey date: MONDAY	29/06/15	Survey Type: MANUAL
16	MS-03-A-03	DETACHED	MERSEYSIDE
	BEMPTON ROAD		
	OTTERSPOOL		
	LIVERPOOL		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	15	
	Survey date: FRIDAY	21/06/13	Survey Type: MANUAL
17	NF-03-A-01	SEMI DET. & BUNGALOWS	NORFOLK
	YARMOUTH ROAD		
	CAISTER-ON-SEA		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	27	
	Survey date: TUESDAY	16/10/12	Survey Type: MANUAL
18	NF-03-A-02	HOUSES & FLATS	NORFOLK
	DEREHAM ROAD		
	NORWICH		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	98	
	Survey date: MONDAY	22/10/12	Survey Type: MANUAL
19	NF-03-A-03	DETACHED HOUSES	NORFOLK
	HALING WAY		
	THETFORD		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	10	
	Survey date: WEDNESDAY	16/09/15	Survey Type: MANUAL
20	NY-03-A-07	DETACHED & SEMI DET.	NORTH YORKSHIRE
	CRAVEN WAY		
	BOROUGHBRIDGE		
	Edge of Town		
	No Sub Category		
	Total Number of dwellings:	23	
	Survey date: TUESDAY	18/10/11	Survey Type: MANUAL
21	NY-03-A-08	TERRACED HOUSES	NORTH YORKSHIRE
	NICHOLAS STREET		
	YORK		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	21	
	Survey date: MONDAY	16/09/13	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

22	NY-03-A-09	MIXED HOUSING			NORTH YORKSHIRE
		GRAMMAR SCHOOL LANE			
		NORTHALLERTON			
		Suburban Area (PPS6 Out of Centre)			
		Residential Zone			
		Total Number of dwellings:	52		
		Survey date: MONDAY	16/09/13		Survey Type: MANUAL
23	NY-03-A-10	HOUSES AND FLATS			NORTH YORKSHIRE
		BOROUGHBRIDGE ROAD			
		RIPON			
		Edge of Town			
		No Sub Category			
		Total Number of dwellings:	71		
		Survey date: TUESDAY	17/09/13		Survey Type: MANUAL
24	NY-03-A-11	PRIVATE HOUSING			NORTH YORKSHIRE
		HORSEFAIR			
		BOROUGHBRIDGE			
		Edge of Town			
		Residential Zone			
		Total Number of dwellings:	23		
		Survey date: WEDNESDAY	18/09/13		Survey Type: MANUAL
25	NY-03-A-12	TOWN HOUSES			NORTH YORKSHIRE
		RACECOURSE LANE			
		NORTHALLERTON			
		Edge of Town Centre			
		Residential Zone			
		Total Number of dwellings:	47		
		Survey date: TUESDAY	27/09/16		Survey Type: MANUAL
26	PK-03-A-01	DETAC. & BUNGALOWS			PERTH & KINROSS
		TULLYLUMB TERRACE			
		GORNHILL			
		PERTH			
		Suburban Area (PPS6 Out of Centre)			
		Residential Zone			
		Total Number of dwellings:	36		
		Survey date: WEDNESDAY	11/05/11		Survey Type: MANUAL
27	PS-03-A-01	MIXED HOUSES			POWYS
		BRYN GLAS			
		WELSHPOOL			
		Edge of Town Centre			
		Residential Zone			
		Total Number of dwellings:	16		
		Survey date: MONDAY	11/05/15		Survey Type: MANUAL
28	PS-03-A-02	DETACHED/SEMI -DETACHED			POWYS
		GUNROG ROAD			
		WELSHPOOL			
		Suburban Area (PPS6 Out of Centre)			
		Residential Zone			
		Total Number of dwellings:	28		
		Survey date: MONDAY	11/05/15		Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

29	SC-03-A-04 HIGH ROAD	DETACHED & TERRACED		SURREY
	BYFLEET Edge of Town Residential Zone Total Number of dwellings: 71 Survey date: THURSDAY 23/01/14			Survey Type: MANUAL
30	SF-03-A-05 VALE LANE	DETACHED HOUSES		SUFFOLK
	BURY ST EDMUNDS Edge of Town Residential Zone Total Number of dwellings: 18 Survey date: WEDNESDAY 09/09/15			Survey Type: MANUAL
31	SH-03-A-03 SOMERBY DRIVE BICTON HEATH SHREWSBURY Edge of Town No Sub Category Total Number of dwellings: 10 Survey date: FRIDAY 26/06/09	DETACHED		SHROPSHIRE
32	SH-03-A-05 SANDCROFT SUTTON HILL TELFORD Edge of Town Residential Zone Total Number of dwellings: 54 Survey date: THURSDAY 24/10/13	SEMI-DETACHED/TERRACED		SHROPSHIRE
33	SH-03-A-06 ELLESMERE ROAD	BUNGALOWS		SHROPSHIRE
	SHREWSBURY Edge of Town Residential Zone Total Number of dwellings: 16 Survey date: THURSDAY 22/05/14			Survey Type: MANUAL
34	SM-03-A-01 WEMBDON ROAD NORTHFIELD BRIDGWATER Edge of Town Residential Zone Total Number of dwellings: 33 Survey date: THURSDAY 24/09/15	DETACHED & SEMI		SOMERSET
35	ST-03-A-06 STANFORD ROAD BLAKENHALL WOLVERHAMPTON Edge of Town Centre No Sub Category Total Number of dwellings: 17 Survey date: FRIDAY 09/05/14	SEMI-DET. & TERRACED		STAFFORDSHIRE
				Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

36	SY-03-A-01	SEMI DETACHED HOUSES	SOUTH YORKSHIRE
	A19 BENTLEY ROAD		
	BENTLEY RISE		
	DONCASTER		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	54	
	Survey date: WEDNESDAY	18/09/13	Survey Type: MANUAL
37	TW-03-A-02	SEMI -DETACHED	TYNE & WEAR
	WEST PARK ROAD		
	GATESHEAD		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	16	
	Survey date: MONDAY	07/10/13	Survey Type: MANUAL
38	TW-03-A-03	MIXED HOUSES	TYNE & WEAR
	STATION ROAD		
	BACKWORTH		
	NEAR NEWCASTLE		
	Neighbourhood Centre (PPS6 Local Centre)		
	Village		
	Total Number of dwellings:	33	
	Survey date: FRIDAY	13/11/15	Survey Type: MANUAL
39	WK-03-A-02	BUNGALOWS	WARWICKSHIRE
	NARBERTH WAY		
	POTTERS GREEN		
	COVENTRY		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	17	
	Survey date: THURSDAY	17/10/13	Survey Type: MANUAL
40	WS-03-A-05	TERRACED & FLATS	WEST SUSSEX
	UPPER SHOREHAM ROAD		
	SHOREHAM BY SEA		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	48	
	Survey date: WEDNESDAY	18/04/12	Survey Type: MANUAL
41	WY-03-A-01	MIXED HOUSING	WEST YORKSHIRE
	SPRING VALLEY CRESCENT		
	BRAMLEY		
	LEEDS		
	Neighbourhood Centre (PPS6 Local Centre)		
	Residential Zone		
	Total Number of dwellings:	46	
	Survey date: WEDNESDAY	21/09/16	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
AN-03-A-07	Ire/Ldn
CC-03-A-01	Ire/Ldn
CV-03-A-01	Ire/Ldn
DL-03-A-07	Ire/Ldn
DL-03-A-08	Ire/Ldn
DN-03-A-03	Ire/Ldn
DN-03-A-04	Ire/Ldn
DO-03-A-03	Ire/Ldn
GA-03-A-04	Ire/Ldn

MANUALLY DESELECTED SITES (Cont.)

Site Ref	Reason for Deselection
HO-03-A-01	Ire/Ldn
HO-03-A-02	Ire/Ldn
KD-03-A-02	Ire/Ldn
KI-03-A-01	Ire/Ldn
KI-03-A-02	Ire/Ldn
LT-03-A-01	Ire/Ldn
MA-03-A-01	Ire/Ldn
RO-03-A-01	Ire/Ldn
RO-03-A-02	Ire/Ldn
RO-03-A-03	Ire/Ldn
RO-03-A-04	Ire/Ldn
WE-03-A-01	Ire/Ldn
WX-03-A-01	Ire/Ldn

Licence No: 851401

RANK ORDER for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
 VEHICLES

Ranking Type: TOTALS Time Range: 17:00-18:00

15th Percentile = No. 35 LN-03-A-03 Tot: 0.318

85th Percentile = No. 7 NY-03-A-07 Tot: 0.739

Median Values

Arrivals: 0.333

Departures: 0.152

Totals: 0.485

Mean Values

Arrivals: 0.339

Departures: 0.167

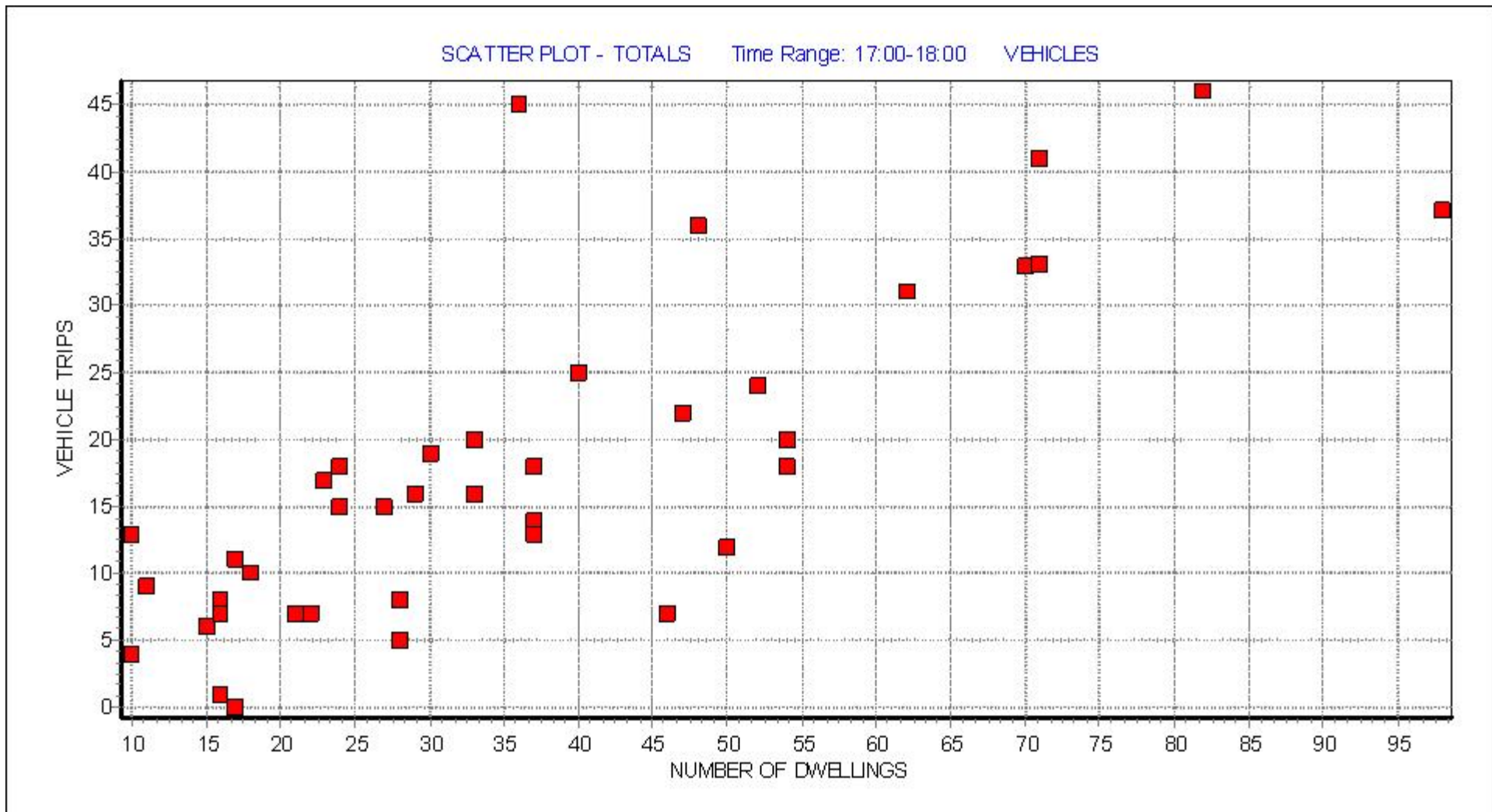
Totals: 0.506

Rank	Site-Ref	Description	Town/City	Area	DWELLS	Day	Date	Trip Rate (Sorted by Totals)			Park Spaces Per Dwelling
								Arrivals	Departures	Totals	
1	SH-03-A-03	DETACHED	SHREWSBURY	SHROPSHIRE	10	Fri	26/06/09	0.700	0.600	1.300	3.00
2	PK-03-A-01	DETAC. & BUNGA	PERTH	PERTH & KINROSS	36	Wed	11/05/11	0.639	0.611	1.250	3.36
3	CH-03-A-08	DETACHED	CHESTER	CHESHIRE	11	Tue	22/05/12	0.545	0.273	0.818	4.73
4	CH-03-A-09	TERRACED HOUSE	MACCLESFIELD	CHESHIRE	24	Mon	24/11/14	0.500	0.250	0.750	1.33
5	WS-03-A-05	TERRACED & FLA	SHOREHAM BY SEA	WEST SUSSEX	48	Wed	18/04/12	0.458	0.292	0.750	2.75
6	NY-03-A-11	PRIVATE HOUSIN	BOROUGHBRIDGE	NORTH YORKSHIRE	23	Wed	18/09/13	0.609	0.130	0.739	6.26
7	NY-03-A-07	DETACHED & SEM	BOROUGHBRIDGE	NORTH YORKSHIRE	23	Tue	18/10/11	0.478	0.261	0.739	1.96
8	ST-03-A-06	SEMI-DET. & TE	WOLVERHAMPTON	STAFFORDSHIRE	17	Fri	09/05/14	0.353	0.294	0.647	1.12
9	LN-03-A-04	DETACHED & SEM	LINCOLN	LINCOLNSHIRE	30	Mon	29/06/15	0.333	0.300	0.633	2.20
10	HI-03-A-14	SEMI-DETACHED	INVERNESS	HIGHLAND	40	Wed	23/03/16	0.425	0.200	0.625	2.23
11	LC-03-A-30	SEMI-DETACHED	BLACKPOOL	LANCASHIRE	24	Fri	14/06/13	0.417	0.208	0.625	1.67
12	TW-03-A-03	MIXED HOUSES	NEAR NEWCASTLE	TYNE & WEAR	33	Fri	13/11/15	0.333	0.273	0.606	4.00
13	NY-03-A-10	HOUSES AND FLA	RIPON	NORTH YORKSHIRE	71	Tue	17/09/13	0.479	0.099	0.578	0.83
14	CB-03-A-04	SEMI DETACHED	WORKINGTON	CUMBRIA	82	Fri	24/04/09	0.354	0.207	0.561	1.74
15	SF-03-A-05	DETACHED HOUSE	BURY ST EDMUNDS	SUFFOLK	18	Wed	09/09/15	0.389	0.167	0.556	4.17
16	NF-03-A-01	SEMI DET. & BU	CAISTER-ON-SEA	NORFOLK	27	Tue	16/10/12	0.407	0.148	0.555	2.37
17	GM-03-A-10	DETACHED/SEMI	MANCHESTER	GREATER MANCHESTER	29	Wed	12/10/11	0.448	0.103	0.551	2.79
18	TW-03-A-02	SEMI-DETACHED	GATESHEAD	TYNE & WEAR	16	Mon	07/10/13	0.438	0.063	0.500	2.38
19	HC-03-A-18	HOUSES & FLATS	LIPHOOK	HAMPSHIRE	62	Tue	29/11/16	0.355	0.145	0.500	2.19
20	DV-03-A-01	TERRACED HOUSE	TORQUAY	DEVON	37	Wed	30/09/15	0.297	0.189	0.486	2.78
21	SM-03-A-01	DETACHED & SEM	BRIDGWATER	SOMERSET	33	Thu	24/09/15	0.333	0.152	0.485	3.97
22	DV-03-A-03	TERRACED & SEM	HONITON	DEVON	70	Mon	28/09/15	0.371	0.100	0.471	1.66
23	NY-03-A-12	TOWN HOUSES	NORTHALLERTON	NORTH YORKSHIRE	47	Tue	27/09/16	0.362	0.106	0.468	1.66
24	SC-03-A-04	DETACHED & TER	BYFLEET	SURREY	71	Thu	23/01/14	0.366	0.099	0.465	2.49
25	NY-03-A-09	MIXED HOUSING	NORTHALLERTON	NORTH YORKSHIRE	52	Mon	16/09/13	0.269	0.192	0.461	2.60
26	PS-03-A-01	MIXED HOUSES	WELSHPOOL	POWYS	16	Mon	11/05/15	0.250	0.188	0.438	1.63
27	NF-03-A-03	DETACHED HOUSE	THETFORD	NORFOLK	10	Wed	16/09/15	0.400	0.000	0.400	3.70
28	MS-03-A-03	DETACHED	LIVERPOOL	MERSEYSIDE	15	Fri	21/06/13	0.200	0.200	0.400	3.00
29	FA-03-A-01	SEMI-DETACHED/	FALKIRK	FALKIRK	37	Thu	30/05/13	0.243	0.135	0.378	1.41
30	NF-03-A-02	HOUSES & FLATS	NORWICH	NORFOLK	98	Mon	22/10/12	0.235	0.143	0.378	2.24
31	SH-03-A-05	SEMI-DETACHED/	TELFORD	SHROPSHIRE	54	Thu	24/10/13	0.241	0.130	0.371	1.17
32	ES-03-A-02	PRIVATE HOUSIN	PEACEHAVEN	EAST SUSSEX	37	Fri	18/11/11	0.351	0.000	0.351	1.59

Rank	Site-Ref	Description	Town/City	Area	DWELLS	Day	Date	Trip Rate (Sorted by Totals)			Park Spaces Per Dwelling
								Arrivals	Departures	Totals	
33	NY-03-A-08	TERRACED HOUSE	YORK	NORTH YORKSHIRE	21	Mon	16/09/13	0.286	0.048	0.334	1.14
34	SY-03-A-01	SEMI DETACHED	DONCASTER	SOUTH YORKSHIRE	54	Wed	18/09/13	0.278	0.056	0.334	1.13
35	LN-03-A-03	SEMI DETACHED	LINCOLN	LINCOLNSHIRE	22	Tue	18/09/12	0.273	0.045	0.318	1.09
36	DC-03-A-08	BUNGALOWS	BOURNEMOUTH	DORSET	28	Mon	24/03/14	0.107	0.179	0.286	4.68
37	DH-03-A-01	SEMI DETACHED	BISHOP AUCKLAND	DURHAM	50	Tue	28/03/17	0.220	0.020	0.240	1.74
38	PS-03-A-02	DETACHED/SEMI-	WELSHPOOL	POWYS	28	Mon	11/05/15	0.107	0.071	0.178	2.32
39	WY-03-A-01	MIXED HOUSING	LEEDS	WEST YORKSHIRE	46	Wed	21/09/16	0.043	0.109	0.152	1.26
40	SH-03-A-06	BUNGALOWS	SHREWSBURY	SHROPSHIRE	16	Thu	22/05/14	0.000	0.063	0.062	2.00
41	WK-03-A-02	BUNGALOWS	COVENTRY	WARWICKSHIRE	17	Thu	17/10/13	0.000	0.000	0.000	2.06

This section displays actual (not average) trip rates for each of the survey days in the selected set, and ranks them in order of relative trip rate intensity, for a given time period (or peak period irrespective of time) selected by the user. The count type and direction are both displayed just above the table, along with the rows within the table representing the 85th and 15th percentile trip rate figures (highlighted in bold within the table itself).

The table itself displays details of each individual survey, alongside arrivals, departures and totals trip rates, sorted by whichever of the three directional options has been chosen by the user. As with the preceeding trip rate calculation results table, the trip rates shown are per the calculation factor (e.g. per 100m2 GFA, per employee, per hectare, etc). Note that if the peak period option has been selected (as opposed to a specific chosen time period), the peak period for each individual survey day in the table is also displayed.



This graph is a visual representation of the correlation between the selected trip rate calculation parameter and the rank order trip rates generated by each individual survey day in the selected set. The range of the trip rate parameter is shown along the x axis, with the level of trips shown on the y axis. The selected time range used to create the rank order list from which the graph is derived is displayed at the top of the graph (unless the peak period irrespective of time range has been selected). A line of best fit is sometimes displayed in the graph, should it be selected for inclusion by the user.

APPENDIX 3

PICADY Output

Junctions 9			
PICADY 9 - Priority Intersection Module			
Version: 9.0.0.4211 [] © Copyright TRL Limited, 2017			
For sales and distribution information, program advice and maintenance, contact TRL: Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk			
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution			

Filename: Import of Site Access_Dunbottle Lane_Camm Lane.j9
Path: Z:\projects\1982 Dunbottle Lane, Mirfield\Picady
Report generation date: 14/11/2017 09:32:16

»Proposed Site Access - 2021 With Dev Flows, AM
 »Proposed Site Access - 2021 With Dev Flows, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
Proposed Site Access - 2021 With Dev Flows								
Stream B-ACD	0.1	8.57	0.08	A	0.0	8.08	0.04	A
Stream A-B								
Stream A-C								
Stream A-D								
Stream AB-CD	0.1	6.60	0.10	A	0.1	6.48	0.10	A
Stream AB-C								
Stream D-ABC	0.3	9.45	0.25	A	0.4	9.99	0.26	A
Stream C-D								
Stream C-A								
Stream C-B								
Stream CD-AB	0.0	5.70	0.01	A	0.0	5.93	0.03	A
Stream CD-A								

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle.

File summary

File Description

Title	Site Access/Dunbottle Lane/Camm Lane
Location	Mirfield
Site number	
Date	02/10/2017
Version	
Status	TIA
Identifier	
Client	
Jobnumber	1982
Enumerator	Cadworkstation4"Kyle
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	s	-Min	perMin

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
2021 With Dev Flows	AM	ONE HOUR	07:30	09:00	15	✓
2021 With Dev Flows	PM	ONE HOUR	16:30	18:00	15	✓

Proposed Site Access - 2021 With Dev Flows, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Proposed Site Access	✓	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Site Access/Dunbottle Lane/Camm Lane	Left-Right Stagger	Two-way	1.31	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Dunbottle Lane (N)		Major
B	Site Access		Minor
C	Dunbottle Lane (S)		Major
D	Camm Lane		Minor

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
A	7.00		✓	3.00	112.0	✓	2.00
C	7.50		✓	3.00	150.0	✓	2.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B	One lane	2.75	31	19
D	One lane	4.00	30	15

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-C	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-A	Slope for D-B
1	AB-D	694.444	-	-	-	-	-	0.257	0.257	0.257	-	-
1	B-A	484.528	0.082	0.209	0.209	-	-	0.131	0.298	-	0.131	0.298
1	B-CD	619.982	0.089	0.225	0.225	-	-	-	-	-	-	-
1	CD-B	718.366	0.260	0.260	0.260	-	-	-	-	-	-	-
1	D-AB	696.792	-	-	-	-	-	0.258	0.258	0.102	-	-
1	D-C	544.205	-	0.151	0.342	0.151	0.342	0.240	0.240	0.095	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2021 With Dev Flows	AM	ONE HOUR	07:30	09:00	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	275.00	100.000
B		ONE HOUR	✓	31.00	100.000
C		ONE HOUR	✓	316.00	100.000
D		ONE HOUR	✓	115.00	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
	A	B	C	D
From	A	0.000	5.000	219.000
	B	14.000	0.000	12.000
	C	255.000	5.000	0.000
	D	64.000	2.000	49.000

Proportions

	To			
	A	B	C	D
From	A	0.00	0.02	0.80
	B	0.45	0.00	0.39
	C	0.81	0.02	0.18
	D	0.56	0.02	0.43

Vehicle Mix

Heavy Vehicle proportion

	To				
		A	B	C	D
	A	0	0	0	0
	B	0	0	0	0
	C	0	0	0	0
	D	0	0	0	0

Average PCU Per Veh

	To				
		A	B	C	D
	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-ACD	0.08	8.57	0.1	A	28.45	42.67
A-B					4.59	6.88
A-C					200.96	301.44
A-D					46.80	70.20
AB-CD	0.10	6.60	0.1	A	51.52	77.29
AB-C					211.81	317.72
D-ABC	0.25	9.45	0.3	A	105.53	158.29
C-D					51.39	77.08
C-A					233.99	350.99
C-B					4.59	6.88
CD-AB	0.01	5.70	0.0	A	6.42	9.63
CD-A					292.65	438.97

Proposed Site Access - 2021 With Dev Flows, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Proposed Site Access	✓	100.000	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Site Access/Dunbottle Lane/Camm Lane	Left-Right Stagger	Two-way	1.30	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Major Arm Geometry

[same as above]

Minor Arm Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2021 With Dev Flows	PM	ONE HOUR	16:30	18:00	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	324.00	100.000
B		ONE HOUR	✓	17.00	100.000
C		ONE HOUR	✓	291.00	100.000
D		ONE HOUR	✓	117.00	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
From		A	B	C	D
	A	0.000	13.000	260.000	51.000
	B	6.000	0.000	8.000	3.000
	C	217.000	12.000	0.000	62.000
	D	49.000	5.000	63.000	0.000

Proportions

	To				
From		A	B	C	D
	A	0.00	0.04	0.80	0.16
	B	0.35	0.00	0.47	0.18
	C	0.75	0.04	0.00	0.21
	D	0.42	0.04	0.54	0.00

Vehicle Mix

Heavy Vehicle proportion

	To				
From		A	B	C	D
	A	0	0	0	0
	B	0	0	0	0
	C	0	0	0	0
	D	0	0	0	0

Average PCU Per Veh

	To				
From		A	B	C	D
	A	1.000	1.000	1.000	1.000
	B	1.000	1.000	1.000	1.000
	C	1.000	1.000	1.000	1.000
	D	1.000	1.000	1.000	1.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-ACD	0.04	8.08	0.0	A	15.60	23.40
A-B					11.93	17.89
A-C					238.58	357.87
A-D					46.80	70.20
AB-CD	0.10	6.48	0.1	A	49.69	74.54
AB-C					245.77	368.65
D-ABC	0.26	9.99	0.4	A	107.36	161.04
C-D					56.89	85.34
C-A					199.12	298.68
C-B					11.01	16.52
CD-AB	0.03	5.93	0.0	A	15.60	23.40
CD-A					244.03	366.04

APPENDIX 4

Framework Travel Plan

KIRKLEES COUNCIL

**PROPOSED RESIDENTIAL DEVELOPMENT
DUNBOTTLE LANE
MIRFIELD**

Residential Travel Plan Framework

November 2017

REPORT CONTROL

Document: Residential Travel Plan Framework

Project: Proposed Residential Development, Dunbottle Lane, Mirfield

Client: Kirklees Council

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2			
3			
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Contents

1	INTRODUCTION.....	2
1.2	Development Site and its Location	2
1.3	Development Proposals	3
1.4	The Travel Plan.....	3
1.5	Residents Travel Pack	3
2	ACCESSIBILITY BY NON CAR MODES	4
2.1	Introduction	4
2.2	Access by Foot.....	5
2.3	Access by Cycle.....	10
2.4	Access by Bus	10
2.5	Accessibility by Rail	12
2.6	Accessibility Summary	12
3	MANAGEMENT MEASURES	14
3.1	Introduction	14
3.2	Management Measures	14
4	TRAVEL PLAN TARGETS	17
4.1	Introduction	17
4.2	Potential Targets	17
4.3	Plan Monitoring and Assessment	18

(See Transport Assessment for Plans)

1 INTRODUCTION

1.1.1 Croft have been commissioned by Kirklees Council to produce a Transport Statement and Travel Plan to support a planning application relating to proposals to develop a site for residential use on land at Dunbottle Lane in the Mirfield area of Kirklees.

1.1.2 This document will set out the principle strategies that will be put in place once the development is open and residents are occupying the dwellings, to encourage sustainable travel to the development.

1.1.3 The Government has produced the National Planning Practice Guidance (NPPG) on the preparation of travel plans. Within the NPPG, there is specific section clarifying the overarching principles on Travel Plans, Transport Assessments and Transport Statements. There are also sections advising further on each of the three documents discussed.

1.1.4 The NPPG guidance on Travel Plans reinforces the requirement for a Travel Plan, the scope of the document, and need for monitoring to continue the strategy into the future. The NPPG has been considered in the production of this Framework Travel Plan.

1.1.5 The Department for Transport has also issued two separate guides on the preparation of travel plans, which although now superseded, still provide good practice guidance which is of relevance to this proposed development. These documents are as follows;

- Making Residential Travel Plans Work - Published in September 2005.
- Good Practice Guidelines: Delivering Travel Plans through the Planning Process – Published in April 2009.

1.2 Development Site and its Location

1.2.1 The application site is located around a kilometre to the north-east of Mirfield village centre. The location of the application site is shown within **Plan 1** of the accompanying Transport Statement.

- 1.2.2 The site is bordered to the north by residential properties on Flash Lane, to the east by residential properties on St Mary's Avenue, to the south by residential properties on Dunbottle Way and to the west by Dunbottle Lane.

1.3 Development Proposals

- 1.3.1 It is proposed to develop the site to provide up to 60 residential dwellings, with associated car parking, landscaping and vehicular access. The proposed site masterplan is shown, in illustrative form, in **Plan 2** of the accompanying Transport Statement.
- 1.3.2 The internal layout of the site will be designed to provide a safe environment for pedestrians and cyclists with clearly defined walkways, crossing points and speed reducing features where appropriate.
- 1.3.3 Vehicular access is proposed via a new formal access off Dunbottle Lane.

1.4 The Travel Plan

- 1.4.1 The aims of the Travel Plans are as follows:
- To encourage residents and visitors to use alternatives to the private car;
 - To increase the awareness of the advantages and potential for travel by more environmentally friendly modes, and
 - To introduce a package of management measures that will facilitate travel by modes of transport other than the private car;

1.5 Residents Travel Pack

- 1.5.1 The principle measure will consist of a Residents Travel Pack containing relevant material to promote non-car modes of travel and the provision of certain physical measures. This will be discussed further in Section 3.

2 ACCESSIBILITY BY NON CAR MODES

2.1 Introduction

2.1.1 In order to accord with the aspirations of the National Planning Policy Framework (NPPF), any new proposals should extend the choice in transport and secure mobility in a way that supports sustainable development.

2.1.2 The presumption in favour of sustainable development is a central theme running through the framework and transport planning policies are seen as a key element of delivering sustainable development as well as contributing to wider sustainability and health objectives. To achieve these objectives, paragraph 30 states when making decisions, local authorities should:-

“Support a pattern of development which, where reasonable to do so, facilitates the use of sustainable modes of transport.”

2.1.3 One of the core principles of the NPPF is to '*actively manage patterns of growth to make the fullest use of public transport, walking and cycling and focus significant development in locations which are or can be made sustainable*'.

2.1.4 New proposals should therefore attempt to influence the mode of travel to the development in terms of gaining a shift in modal split towards non-car modes, thus assisting in meeting the aspirations of current national and local planning policy.

2.1.5 The accessibility of the site has been considered by the following modes of transport:

- Accessibility on foot.
- Accessibility by cycle.
- Accessibility by bus.
- Accessibility by rail.

2.2 Access by Foot

- 2.2.1 It is important to create a choice of direct, safe and attractive routes between where people live and where they need to travel in their day-to-day life. This philosophy clearly encourages the opportunity to walk whatever the journey purpose and also helps to create more active streets and a more vibrant neighbourhood.
- 2.2.2 An existing pedestrian footway of around 2 metres in width is located to the west of the site on both sides of Dunbottle Lane, this provides pedestrian links throughout Mirfield and provides direct linkages to the nearby day to day amenities within the village.
- 2.2.3 The CIHT document ‘Planning for Walking’ from 2015 states, in paragraph 2.1, that in 2012 that 79% of all journeys made in the UK of less than a mile (1.6 kilometres) are carried out on foot.
- 2.2.4 Within the Institution of Highways and Transportation (IHT) document, entitled “Guidelines for Providing for Journeys on Foot”, Table 2.2 suggests distances for desirable, acceptable and preferred maximum walks to ‘town centres’, ‘commuting/schools’ and ‘elsewhere’. The ‘preferred maximum’ distances are shown below in Table 2.1.

Suggested Preferred Maximum Walk		
Town Centre	Commuting/School	Elsewhere
800m	2,000m	1,200m

Table 2.1 – IHT ‘Providing for Journeys on Foot’ Walk Distances

- 2.2.5 Reference to the 2,000 metre walk distance is also made in the now superseded Planning Policy Guidance (PPG) Note 13 which advised 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 2km’.

2.2.6 Manual for Streets (MfS) continues the theme of the acceptability of the 2,000 metre distance in paragraph 4.4.1. This states that *‘walkable neighbourhoods are typically characterised by having a range of facilities within 10 minutes’ (up to about 800m) walking distance of residential areas which residents may access comfortably on foot. However, this is not an upper limit and PPS13 states that walking offers the greatest potential to replace short car trips, particularly those under 2 km’.*

2.2.7 Table 2.2 below summarises this guidance in tabular form.

‘Comfortable’ Walk	‘Preferred Maximum’ Walk
800m	2,000m

Table 2.2 – Manual for Streets Walk Distances

2.2.8 More specific guidance on the distances that children will walk to school is found in the July 2014 document published by the Department for Education (DfE) entitled ‘Home to School Travel and Transport’ statutory guidance document. This suggests that the maximum walking distance to schools is 2 miles (3.2 kilometres) for children under 8 and 3 miles (4.8 kilometres) for children over the age of 8. This is summarised below in Table 2.3.

Children under 8 Walk Distance	Children over 8 Walk Distance
3,200m	4,800m

Table 2.3 – DfE Walk Distances to Schools

2.2.9 Further evidence that people will walk further than the suggested ‘preferred maximum’ distances in the IHT ‘Providing for Journeys on Foot’ is contained in a WYG Report entitled ‘Accessibility – How Far Do People Walk and Cycle’. This report refers to National Travel Survey (NTS) data for the UK as a whole, excluding London, that the 85th percentile walk distance for:

- All journey purposes – 1,930 metres.
- Commuting – 2, 400 metres.
- Shopping – 1,600 metres.
- Education – 3,200 or 4,800 metres.
- Personal business – 1,600 metres.

2.2.10 Overall, in Table 5.1, the document states that 1,950 square metres is the 85th percentile distance for walking as the main mode of travel. Table 2.4 below summarises the various 85th percentile walk distances suggested as guidelines in the WYG Study.

85 th Percentile Walk Distances					Overall Recommen ded Preferred
All Journeys	Commuting	Shopping	Education	Personal	
1,950m	2,100m	1,600m	3,200/ 4,800m	1,600m	1,950m

Table 2.4 – WYG Report/NTS Data Walk Distances

2.2.11 In summary, the distance of 1,950 metres, or around 2 kilometres, represents an acceptable maximum walking distance for the majority of land uses although clearly the DfE guidance for walking to school is up to 3.2 kilometres.

- 2.2.12 Section 3.1 of the CIHT guidance 'Planning for Walking' mentioned earlier in this report provides a useful reminder of the health benefits of walking. This states that:
- 'A brisk 20 minute walk each day could be enough to reduce an individual's risk of an early death'.*
- 2.2.13 A 20 minute walk equates to a walking distance of around 1,600 metres.
- 2.2.14 In light of the above review, a pedestrian catchment of 2 kilometres from the centre of the site, using all usable pedestrian routes, has been provided in **Plan 4** of the Transport Statement and provides an illustrative indication of the areas that can be reached based on a leisurely walk from the site.
- 2.2.15 In addition, to the pedestrian catchment plan, a review of the proximity of local facilities has been undertaken and the location of these is also shown in Plan 4.
- 2.2.16 The 2,000-metre pedestrian catchment illustrates that the majority of Mirfield can be accessed along various amenities such as The Old Colonial and The Shoulder of Mutton public houses, Shillbank stores, Mirfield Evangelical Church, Crossley Fields Junior and Infant School, Knowl Park, Boots Pharmacy, a Co-operative food store, The Station Hotel and Ravensthorpe Retail Park.
- 2.2.17 Table 2.5 below, shows the walking distance from the centre of the site to the local amenities in the vicinity of the site. The table also confirms whether or not the particular amenity is within the 'preferred maximum' walk distances using the above guideline criteria:

Local Amenity	Distance	Guidance Criteria	Meets with Guidance?
The Old Colonial	240m	1,600m	YES
The Shoulder of Mutton Public House	590m	1,600m	YES
Shillbank Stores	640m	1,600m	YES
Mirfield Evangelical Church	710m	1,600m	YES
Crossley Fields Junior and Infant School	760m	3,200m	YES
Knowl Park	960m	1,600m	YES
Boots Pharmacy	1,060m	1,600m	YES
The Co-operative food store	1,080m	1,600m	YES
The Station Hotel	1,180m	1,600m	YES
Ravensthorpe Retail Park	1,770m	1,950m	YES

Table 2.5 - Distance from Site to Local Facilities

- 2.2.18 As can be seen in the above table, the site is located within close proximity to a number of local amenities including shops and schools.
- 2.2.19 All of the day to day amenities are well within the 'preferred maximum' walk distances described earlier in this section and indeed many, including the nearest convenience store and nearest primary school, are around the 800 metres 'comfortable walk' from the site as contained within MfS guidance.
- 2.2.20 It is therefore considered that the existing pedestrian infrastructure will facilitate safe and direct pedestrian linkages between the site and local destinations.

2.3 Access by Cycle

- 2.3.1 An alternative mode of travel to the site could be achieved by bicycle.
- 2.3.2 A distance of 5 kilometres is generally accepted as a distance where cycling has the potential to replace short car journeys. This distance equates to a journey of around 25 minutes based on a leisurely cycle speed of 12 kilometres per hour and would encompass Liversedge Heckmondwike, Ravensthorpe and Dewsbury.
- 2.3.3 National cycle route 62 is located approximately 860 metres from the centre of the site, this cycle route runs from central Manchester to Spurn via Bradford, Leeds, York, Beverley and Kingston upon Hull.
- 2.3.4 The site can therefore be considered as being accessible by cycle.

2.4 Access by Bus

- 2.4.1 The nearest bus stops to the site are located to the north-west of the site on Dunbottle Lane approximately 100 metres from the centre of the site consisting of a bus stop pole with passing services shown and a bus service timetable.
- 2.4.2 A summary of the services available from the nearest bus stops from the development site is provided in Table 2.6 below.

Service No	Route	Monday – Friday Frequency per hour				Sat	Sun
		AM Peak	Midday	PM Peak	Eve		
202	Leeds City Centre – Huddersfield Town Centre	2	2	2	1	2	1
205	Dewsbury – Ings Grove Park Huddersfield Road	1	1	1	0	1	0

Table 2.6 - Existing Bus Services Operating Past the Site

- 2.4.3 As can be seen from Table 2.6, the nearest bus stops to the site provides up to 3 services in peak periods to Leeds, Dewsbury and Huddersfield.
- 2.4.4 It is noted that the above services provide a choice of how people travel with the bus services operating from around 6.00am to around midnight, making travel by public transport a real alternative to travelling by car for commuting trips in particular.
- 2.4.5 In order to demonstrate the level of accessibility some example journey times by bus are presented below Table 2.7 below.

Destination	Duration
Dewsbury	13 Minutes
Huddersfield	32 Minutes

Table 2.7 - Example Bus Journey Times from the Site

- 2.4.6 The above table demonstrates that Dewsbury is just a 13-minute bus journey from the site and Huddersfield is just a 32-minute bus journey.

2.4.7 It is therefore concluded that the proposed development site is accessible by bus.

2.5 Accessibility by Rail

2.5.1 The nearest train station to the site is Mirfield, this is situated approximately 1.8 kilometres from the centre of the site, which is around a 20 minute walk.

2.5.2 This train station is managed by Northern and has 3 platforms, offering 7 services per hour to destinations such as Leeds and London Kings Cross.

2.5.3 These services increase the opportunity for residents to travel further afield by public transport, with access to Huddersfield and Leeds, journeys of around 11 and 26 minutes respectively, which in turn provide frequent services to destinations throughout the UK.

2.5.4 This provides opportunities for commuting/leisure opportunities from the site via rail.

2.6 Accessibility Summary

2.6.1 The proposals have been considered in terms of accessibility by non-car modes for the proposed residential development.

2.6.2 The following conclusions can be drawn from this section of the Report:

- The site is accessible on foot and these connections will be improved as part of the works on the development site.
- The services from the bus stops within a very short walk of the site provide direct access to Dewsbury and Huddersfield shows that the proposed development can be accessed by bus.
- The site is accessible via rail with Mirfield located just 1.8 kilometres, around a 20 minute walk, from the centre of the site.

- 2.6.3 In light of the above, it is considered the site is highly accessible by non-car modes and will cater for needs of the development's residents and assist in promoting a choice of travel modes other than the private car.

3 MANAGEMENT MEASURES

3.1 Introduction

3.1.1 The following Travel Plan measures will be considered:

- i) Residents Travel Pack
- ii) Travel awareness and Information
- iii) Promotion of Lift Share Scheme
- iv) Encouraging Walking/Cycling

3.2 Management Measures

Residents Travel Pack

- 3.2.1 It is an important and emerging principle in residential developments that where appropriate the implementation of travel plan type measures can establish a pattern of travel behaviour favouring sustainable modes from the inception of the development.
- 3.2.2 The proposed development is well placed for encouraging access on foot or by cycle to a wide range of facilities. Similarly the existence of a local bus service will encourage choice of public transport as a primary means of travel for the development.
- 3.2.3 However in order to build on these locational advantages it is recommended that a Residents Travel Pack is provided for the occupants of each new residential unit. Prior to the occupation of the first unit.
- 3.2.4 The contents of such a travel pack would include information relating to walking and cycling routes in the area and the provision of up to date bus and rail timetable information in addition an identification of the location of nearby amenity facilities as part of the information supplied to prospective purchasers.

- 3.2.5 The adoption of such travel packs is recognised as being an important element in ensuring that access by non-car modes is promoted from the earliest occupation of a residential development.
- 3.2.6 It is also proposed that the Travel Plan Co-ordinator will investigate the potential to provide discounted bus and rail season tickets for new residents.
- 3.2.7 Within the Residents Welcome Pack, residents will be encouraged to consider ways in which to reduce their need to travel such as Home delivery for shopping and working from home. The first issue of the Residents Travel Pack will be the responsibility of the house builder.
- 3.2.8 The provision of a Residents Travel Pack will form part of the terms of the sale or occupancy of the dwellings and therefore they are aware in advance of what is required of them within the Travel Plan framework.

Travel Awareness and Information

- 3.2.9 Residents will be made aware of the existence of the Travel Plan and a copy of the plan will be made available to residents on purchasing a property.
- 3.2.10 As mentioned previously, Residents Travel Packs will be issued for new residents moving into the development and prospective buyers will be made aware of the travel plan when viewing properties.

Promotion of Car Share Scheme

- 3.2.11 The Travel Plan Co-ordinator will promote the use of car sharing via registering on the Liftshare website. It allows users to register their details, where they are travelling to in the Mirfield area if they are offering a lift or need a lift to their destination.
- 3.2.12 The website can be found at the following location www.liftshare.com.

- 3.2.13 Travel Plan Co-ordinator will also investigate the viability of establishing a Car Sharing Club for the residential development, however, it is likely that the promotion of the lift share scheme will be more beneficial to local residents.

Encouraging Walking/Cycling

- 3.2.14 Residents will be provided with information and advice concerning safe pedestrian and cycle routes to the site through the WalkBUDi/BikeBUDi schemes. Information on these schemes is available on the following websites www.walkbudi.com/www.bikebudi.com.
- 3.2.15 The WalkBUDi/BikeBUDi schemes are part of the National Lift Share Network and are simple and free to use. They simply match individuals with others walking or cycling the same way so they can walk or cycle together. The matches are displayed in both table and map format, allowing the user to easily find the most suitable people.
- 3.2.16 The WalkBUDi/BikeBUDi schemes aim to help individuals to meet others wanting to travel the same way. They can be used for regular trips such as walking or cycling to the office or going to the station as well as making a journey safer.

4 TRAVEL PLAN TARGETS

4.1 Introduction

- 4.1.1 This section of the Travel Plan will provide details of the targets against which the success of the Plan in achieving its objectives will be measured.
- 4.1.2 The targets are designed to be quantifiable, be relevant to both measures and objectives identified in the Plan and to include timescale.
- 4.1.3 In order to set the targets further information (e.g. through a travel survey) may have to be obtained in order to establish against which to set the targets. This information will be related to existing patterns of movement (i.e. the proportion of residents who travel to their workplace by non-car mode) and may be obtained from sources such as the National Travel Survey and the National Census.
- 4.1.4 Suitable targets for reducing the need to travel by private car will be set and agreed with Kirklees Council and included in the final Travel Plan for the development.

4.2 Potential Targets

- 4.2.1 Targets which according to the DfT may potentially be included in the Travel Plan include the following:
- Car trips per household - targets set on the basis of predicted trip rates for the development.
 - Uptake of alternatives - Targets for bus patronage, membership and use of car clubs, registration and participation in car share scheme, cycle counts and pedestrian counts.
 - Car ownership and mode of travel - trip based targets may be supplemented by targets related to car ownership, travel to work by mode and travel to school by mode.

- Travel Plan awareness targets - for example, a target can be established to ensure a significant percentage of residents are aware of the travel plan and its purpose.

4.3 Plan Monitoring and Assessment

4.3.1 DfT best practice guidelines state that monitoring of the travel plan should normally take place on the following basis:

- Early on in the occupation period of the site - for example, triggered by 75% occupancy to provide the information base for the review of the plan;
- Annually or at least every two years thereafter to provide ongoing information on the impact of the plan. Monitoring should take place over a wide range of time periods to reflect the different pattern of journeys that can be generated by residential development.

4.3.2 The monitoring could include items such as:

- Full residential surveys to be completed between every 2 to 3 years and snap shot surveys to be completed every 6 to 12 months.
- Feedback from bus operators to establish demand for local bus services.

4.3.3 Consideration will be given on how best to monitor and measure the success of the Travel Plan measures when preparing the final Travel Plan for the development. Appropriate monitoring arrangements will be discussed and agreed with Kirklees Council.



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