**South Tyneside Homes** 

**Residential Development, Eskdale Drive, Jarrow** 

**Transport Statement** 

# January 2017



## **CONTROL SHEET**

- CLIENT: South Tyneside Homes
- PROJECT TITLE: Residential Development, Eskdale Drive, Jarrow
- REPORT TITLE: Transport Statement
- PROJECT REFERENCE: 112153
- DOCUMENT NUMBER: D/I/D/112153/01

ule	ISSUE	1		Name		Signature			Date	
al Sched	Prepared	d by		G Clark		G. Clark			Jan 17	
k Approv	Checked by		by R Craig		RepCraig		DepCraig			Jan 17
Issue 8	Approved	d by		R Craig		A	haig		Jan 17	
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This document has been prepared in accordance with procedure OP/P02 of the Fairhurst Quality and Environmental Management System

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## **1.0 INTRODUCTION**

- 1.1. Fairhurst has been appointed by South Tyneside Homes to prepare a Transport Statement (TS) to accompany a planning application for a residential development of 36 affordable dwellings, within The Lakes residential estate off Hedworth Lane, Jarrow. The purpose of the TS is to consider the proposals in transportation terms.
- 1.2. The Lakes residential estate located immediately southwest of the A19/ A194 Leam Lane junction and on the east side of Hedworth Lane, as shown on the plan in **Figure 1.1**.



## Figure 1.1 - Site Location

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1.3. The site comprises an area of existing open space within The Lakes estate to the south of Eskdale Drive, as indicated (dark blue) in Figure 1.2. The development is ultimately likely to be part of a wider future redevelopment of the estate, with circa 70 further dwellings proposed across two adjacent development plots, as indicated (light blue) in Figure 1.2.

This potential future development is not part of the current application but is referenced in this TS to place the current proposals in the context of the wider redevelopment plans. In order to facilitate the potential future development 50 existing dwellings on Eskdale Drive are to be cleared and work to do this has already commenced.





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- 1.4. The layout for the proposed development is shown on Figure 1.3 (full plan in Appendix A) and includes a mixture of bungalows, semi-detached/ terraced houses and flats, comprising a total of 36 dwellings that will be delivered as affordable homes and managed by Housing Ventures Trust Ltd.
- 1.5. The proposed development will be accessed from Eskdale Drive via an existing narrow access road that serves a garage block. The road will be upgraded to an appropriate standard to serve the development.



## Figure 1.3 - Proposed Affordable Housing Development

Source: Ian Darby Partnership

- 1.6. The scope of this TS comprises:
  - Details of the site and surrounding area;
  - Review of 5 years of accident data around the Hedworth Lane junction;
  - Description of proposed development and access arrangements;
  - Review the accessibility by sustainable modes of transport;
  - Traffic generation and impact assessment for 36 dwellings, plus a review of the potential impact of the full masterplan development of circa 106 dwellings; and
  - Consideration of potential impacts during construction.

## 2.0 SITE CONTEXT

#### The Sites

2.1 The site is shown in the context of the local highway network in **Figure 2.1**.

## Figure 2.1 - Local Highway Network



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- 2.2 The site comprises an area of open green space and a residential garage block to the south of Eskdale Drive. The site is served from Eskdale Drive via a narrow (c.3.25m wide) access road that provide access to the garage court.
- 2.3 The northern site is bounded on all sides by adjacent residential properties on Eskdale Drive, Coniston Drive, Lodore Grove, Kirkstone Avenue and Grasmere Avenue.

## The Local Highway Network

2.4 The site is accessed via the existing residential highway network that serves The Lakes estate from a single point of access on Hedworth Lane, which forms western boundary of the estate.

- 2.5 Kirkstone Avenue, Eskdale Drive and Coniston Drive effectively form a main loop road through the northern area of the estate, where the development site is located. Kirkstone Avenue is also the main access road for the southern area of the estate, which is served via Ullswater Avenue and Windermere Crescent.
- 2.6 The residential access roads generally have pedestrian footways and are lit. Kirkstone Avenue, as the central 'spine' of the estate has a c.7.3m wide carriageway, with other main access roads generally being c.5.5m wide except for some narrower access lanes, which do not generally serve a significant number of residential properties.
- 2.7 Kirkstone Avenue is a bus route and has bus stops and a bus turning circle at its east end adjacent to the A19. There is also a pedestrian footbridge over the A19 that links the east end of Kirkstone Avenue with the residential area off Perth Avenue on the east side of the A19.
- 2.8 Kirkstone Avenue meets Hedworth Lane at a simple priority T-junction, with c.9m kerb radii to facilitate access by all vehicles that would be likely to visit the estate. In the vicinity of the site Hedworth Lane is subject to a 30mph speed limit, is lit and has footways on both sides. It is understood that the junction does not generally suffer from any significant congestion, although at the time of preparing this TS there were road works on the A194/ A19 Lindisfarne roundabout which would be disrupting normal traffic patterns. The roadworks would be expected to result in higher traffic flows than normal on Hedworth Lane due to traffic diverting away from the roadworks, although during a site visit undertaken in the morning peak hour there were still no capacity issues in the vicinity of the junction.
- 2.9 Hedworth Lane runs generally north-south, between the A194 Leam Lane to the north and Boldon Colliery to the south. It crosses the A19 at the Boldon Colliery junction around 900m south of the site, where vehicles can also access the A19 in both directions.
- 2.10 Hedworth Lane links to A194 Leam Lane, around 130m north of the site. A194 Leam Lane is a main strategic route in the area running generally northeast from the A1 (initially as the A194(M)), meeting the A19 adjacent to the site then continuing northeast to South Shields. In the vicinity of the site A194 Leam Lane is a dual carriageway with two lanes in each direction and a de-restricted speed limit. The route carries c.44,000 vehicles per day in the vicinity of the site.

- 2.11 The A194 Leam Lane junction with Hedworth Lane comprises:
  - Westbound carriageway a left on/ left off arrangement with merge and diverge tapers; and
  - Eastbound carriageway Hedworth Lane passes below the A194 and links to a merge slip road for eastbound traffic as well as linking to the local road network of Monkton on the north side of the A194. Eastbound traffic leaving the A194 for Hedworth Lane would leave at the previous junction to the west and follow Roman Road or Calf Close Lane, which both link to Hedworth Lane. Alternatively, vehicles could u-turn at the A19 roundabout and access Hedworth Lane from the westbound carriageway.
- 2.12 The Hedworth Lane route below the A194 Leam Lane includes pedestrian footways. There is a further pedestrian link across the A194 via a footbridge around 350m west of Hedworth Lane, which can be reached on traffic free pedestrian paths with lighting that run through the open space area south of the A194.
- 2.13 The A194 meets the A19 dual carriageway at the signal controlled 'Lindisfarne' roundabout immediately northeast of the site. The roundabout is at-grade on the A194 and is a grade separated junction on the A19, with the roundabout accessed from merge/diverge slip roads from both carriageways of the A19 the A19 main carriageway is bridged over the junction.
- 2.14 Lindisfarne roundabout includes pedestrian facilities and there is a direct pedestrian link to Eskdale Drive at the northeast corner of The Lakes estate.
- 2.15 The A19 is a main strategic route in the region, running generally north-south between Newcastle and North Yorkshire and serving many of the main conurbations of the Northeast, including Newcastle, South Tyneside, Sunderland and Teesside.
- 2.16 Overall, the site has excellent highway connections that link to all major conurbations in the area.
- 2.17 Traffic from the residential areas around the site would take advantage of the excellent location in relation to the highway network and would disperse across a number of routes, typically comprising:
  - Hedworth Lane north for local journeys to Monkton and the surrounding areas to the north;

- Hedworth Lane south for local journeys to Hedworth, Fellgate, Boldon Colliery and the A19 south;
- Leam Lane west for journeys to Gateshead, Newcastle and the wider area to the west, including the A1;
- Leam Lane east for journeys through South Tyneside towards South Shields; and
- A19 north for journeys to Jarrow, North Tyneside, east Newcastle, and the wider area north of Newcastle.

## **Traffic Accident Review**

2.18 Injury accident data was obtained from Crashmap for the most recently available five year period (2012-2016 inclusive) for the local highway network in the vicinity of the Kirkstone Avenue/ Hedworth Lane junction, where development traffic would join the main highway network. The study area is shown in **Figure 2.2**.



Figure 2.2 – Traffic Accident Survey Location

2.19 There were two personal injury accidents reported in the study area during the assessment period, and they are summarised as follows:

- A collision between a car turning right onto Hedworth Lane from Kirkstone Avenue, and a pedal cycle turning right on to Kirkstone Avenue from Hedworth Lane.
- A collision between a car turning right at the T-junction on Hedworth Lane north of the Kirkstone Avenue junction and a car proceeding normally along the carriageway.
- 2.20 A total of two incidents in the past five years does not indicate any issues with the local highway network that could be affected by the proposed development.

## 3.0 PROPOSED DEVELOPMENT

3.1 The proposed development comprises 36 affordable dwellings. The development is ultimately intended to be part of a wider redevelopment of the estate, with around 70 further dwellings proposed across two adjacent development plots, as indicated in Figure 3.1. These future dwellings are not part of the current application but are referenced to place the proposals in the context of the wider redevelopment plans. In order to facilitate the wider development 50 existing dwellings on Eskdale Drive are to be cleared.

*Figure 3.1 - Proposed Development (Also Showing Potential Future Development)* 



Source: Ian Darby Partnership

- 3.2 The proposed 36 unit development of affordable properties comprises:
  - 7 bungalows
  - 4 flats
  - 25 houses

## 3.3 The development layout is shown in **Figure 3.2**.



### Figure 3.2 - Proposed Affordable Housing Development

Source: Ian Darby Partnership

- 3.4 All access to the development will be via Eskdale Drive utilising the existing access road that serves a garage court area, which will be cleared to facilitate the development. All properties will be served from a single cul-de-sac access road, which will have a turning head at the south end that would be of sufficient size for refuse and delivery vehicles to turn.
- 3.5 The development includes two off-street parking spaces for each 3 bed house and a single off-street parking space for all other properties. In addition, 7 parking spaces are proposed for visitors. This provision is in accordance with guidance for local authority

housing set out in South Tyneside Council's SPD6 'Parking Standards', except for the 3 bed houses, where the two spaces per property exceeds the guidance to provide a single space for all properties. However, given the cul-de-sac layout and minimal opportunities for on-street parking it would seem reasonable to provide parking for the larger houses more in line with the normal standard for private housing to ensure on-street parking is minimised. The impact on the development layout is also minimal as in most cases the second parking space is achieved through lengthening a driveway. Overall, the proposed residential parking provision is considered reasonable to serve the development.

- 3.6 Cycle parking provision is to be confirmed, but will be provided where possible to encourage cycling the SPD6 guidance requires 0 to 1 spaces per dwelling, which will be achieved.
- 3.7 Overall, the proposed development layout is considered reasonable in transportation terms.

## 4.0 ACCESSIBILITY BY SUSTAINABLE TRANSPORT

- 4.1 As the proposed residential development is at the heart of an existing well established residential estate that is to be redeveloped, then the location is clearly reasonable in terms of the 'principle' of residential development. This section will therefore focus in more detail on the current situation in terms of day-to-day accessibility by sustainable transport.
- 4.2 There is a range of local facilities and amenities in the vicinity of the site, which are shown on **Figure 4.1**, including:
  - Bus stops;
  - Metro/ Rail services;
  - Schools;
  - Local shops;
  - Community Centre/ Children's Centre;
  - Playing fields;
  - Open Space;
  - Pubs;
  - Doctor's surgery;
  - Community Hopital;
  - Jarrow town centre; and
  - Employment areas.

## Figure 4.1 – Local Amenities



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## Walking

- 4.3 IHT's 'Providing for Journeys on Foot' states for walking trips an average walking speed of 1.4m per sec can be assumed, which equates to approximately 400m in 5 mins or 3 miles per hour. For the purposes of this review an acceptable maximum walk distance of 2km has been adopted, i.e. approximately a 25 min walk. Accessibility on foot to and from the proposed development has been assessed.
- 4.4 The highway network surrounding the site is reasonable for journeys on foot, with footbridge crossings of both the A19 and A194 close to the site and further a route below the A194 on Hedworth Lane. There are also pedestrian crossing facilities at Lindisfarne roundabout.
- 4.5 There are several schools within an accessible walking distance of the proposed development. St Mary's RC Primary School and Simonside Primary School are 10-12 mins walk away the site is within the catchment of Simonside Primary.
- 4.6 Hedworth Lane, Hedworthfield, St Joseph's and Fellgate primary schools are also within a reasonable 25 minute walking distance.

- 4.7 Jarrow School is the nearest secondary school and around a 25 minute walk to the north of the site. The school incorporates a community swimming pool.
- 4.8 Within the Lakes estate there is a food takeaway on Kirkstone Avenue. A wider range of local amenities are located in the Primrose area east of the site, within 10-12 minutes walk of the site, including:
  - A good range of local shops;
  - Pharmacy;
  - Food takeaways;
  - Children's play area;
  - Pub;
  - Social club;
  - Community centre/ children's centre;
  - Youth club; and
  - Sports pitches.
- 4.9 Further local shops, a doctor's surgery and a pub are located approximately 10-12 mins walk to the south adjacent to the Hedworth Lane/ Calf Close Lane junction.
- 4.10 There is a large area of public open space on the west side of Hedworth Lane, which is within easy walking distance of the site and includes a good network of traffic free paths that link to adjacent residential areas north and south of A194 Leam Lane. There is a further extensive area of open space on the north side of A194 Leam Lane.
- 4.11 Primrose Hill Community Hospital is around 15 mins walk from the site to the north.
- 4.12 Jarrow town centre is around a 35 min walk to the north and can be accessed on a reasonable walking route, although it is beyond the typical distance for day to day journeys. It offers a wide range of shops and other facilities as well as a bus interchange. The shops include a Morrisons, Argos, other small shops, public houses, takeaways, pharmacies, bookmakers, a post office, a doctors' surgery, Barclays bank, newsagent, and travel agent.
- 4.13 Main local employment areas are located east of Jarrow and south of Boldon. These can be accessed on foot but are both beyond the normal 2km walking catchment.
- 4.14 In summary, there is a range of local facilities within walking distance that can be reached on reasonable routes.

## Cycling

- 4.15 A distance of up to 5km is normally considered reasonable for day to day cycling trips, i.e. approximately a 25 min ride at a typical cycling speed of 200m per min or 1km per 5 mins.
- 4.16 The site is well located for the local cycle network, which is shown is **Figure 4.2**. Kirkstone Avenue is an advisory cycle route that links to Perth Avenue to the east (via the A19 footbridge) and a traffic free cycle route to the west that runs through the open space north and south of A194 Leam Lane. Overall, the site is well linked in to the local network and the majority of local facilities surrounding the site can be reached on good routes.

## Figure 4.2 - Local Cycle Map



Source: South Tyneside Council Cycling Map

- 4.17 A 10 min bike ride would reach all of those destinations which are within a 25 min walk.
- 4.18 Jarrow centre and the employment areas just east of Jarrow and just south of Boldon Colliery can also be reached within a 15 min cycle ride of the site.
- 4.19 South Shields centre can be reached within a 20 25 min cycle ride from the site.

4.20 In summary the site is well related to the local cycling network and the many key facilities are accessible by bike.

## **Public Transport**

- 4.21 The IHT's Guidelines for Providing for Public Transport in New Developments suggests a development should ideally be within 400m (5 min walk) of a bus stop.
- 4.22 The nearest bus stops are located on Kirkstone Avenue, as discussed at Section 2 above and shown at **Figure 4.3**. These bus stops are within 400m of the site. There are further stops on Hedworth Lane where it passes below A194 Leam Lane around 600m from the site, and on Leam Lane west of Lindisfarne roundabout, around 350m walking distance from the site via the pedestrian link to the roundabout from Eskdale Drive. Local bus services are summarised in **Table 4.1**.



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## Table 4.1Local Bus Services

Service	Route Monday - Friday		Saturday	Sunday						
	Bus Services on Kirkstone Avenue									
5	Jarrow – Fellgate – Boldon – South Shields	Every 30min (0739-2148)	Every 30min (0748-2248)	Every 60min (0959-2248)						
ŀ	Hedworth Lane - As Kirks	stone Avenue plus service	es below (northbound	d only)						
10/10A/ 10B	South Shields – South Tyneside Hospital - Jarrow	Every 30 - 60mins (0635-2340)	Every 30min (0822-2340)	Every 30mins (1000-2340)						
X20	South Shields – Chichester – Fellgate Estate –South Shields	Every 30min (0652-2334)	Every 30 min (0722-2334)	Every 60min (0756-2334)						
88/88A	South Shields – Luke Lanes Estate	Every 30min (0624-1545)	Every 30min (0624-2335)	Every 30min (0750-2336)						
Leam Lane - As Hedworth Lane northbound plus service below										
11/11A/ 11B	South Shields – Horsley Hill – South Tyneside Hospital – Biddick Hall – Leam Lane - Jarrow	Every 30 - 60mins (0635-2340)	Every 30min (0822-2340)	Every 30mins (1000-2340)						

- 4.23 Fellgate Metro is approximately 1.4km way (17-18 min walk) and offers an easy way to travel to a range of destinations further afield, including Newcastle, Gateshead and Sunderland. The Fellgate Metro timetable can be found in **Appendix B**.
- 4.24 In summary, the site is well served by public transport, which provides access to facilities in the local and wider areas.

## Summary

4.25 The development is within a reasonable walking and cycling distance of a good range of local facilities and has public transport connections to the wider area. Overall, the site is accessible by sustainable modes of transport and is considered an appropriate location for residential development in transportation terms.

## 5.0 TRAFFIC GENERATION AND IMPACT ASSESSMENT

- 5.1 In order to assess the impact of development traffic on the surrounding highway network TRICS 7.3.4 has been used to derive typical figures for the vehicle trips generated by the proposal. In line with standard practice, TRICS surveys have been excluded from the sample set for Greater London, Ireland and the Isle of Man.
- 5.2 Only weekday surveys were included from the dataset for 'affordable/ local authority housing'.
- 5.3 'Suburban Area' and 'Edge of Town' and 'Neighbourhood Centre' datasets were specified to give the most representative survey locations. The parameters selected are considered reasonable to give an indication of anticipated trip levels. Mean trip rates were adopted for assessment purposes.
- 5.4 Full trip rate data can be found in **Appendix C**.

## **Proposed Development - Affordable Housing**

5.5 The peak periods derived from TRICS were 0800-0900 in the morning and 1700-1800 in the evening. Table 5.1 details the predicted AM and PM peak hour trip rates and Table 5.2 details the predicted AM and PM peak hour trips from the proposed development.

Affordable Residential - Weekday Trip Rates							
		AM Peak Hour (0800-0900)		PM Peak Hour (1700-1800)			
	Arrival	Departure	Total	Arrival	Departure	Total	
Vehicles	0.154	0.278	0.432	0.315	0.200	0.515	

## Table 5.1Affordable Housing Trip Rates

## Table 5.2 Affordable Housing Proposed Trips

Affordable Residential - Weekday Trips							
36 Dwellings		AM Peak Hour (0800-0900)		PM Peak Hour (1700-1800)			
50 Dweinings	Arrival	Departure	Total	Arrival	Departure	Total	
Vehicles	6	10	16	11	7	18	

5.6 From TRICS, the proposed development is predicted to generate a total of only 16 vehicle trips in the AM peak hour and 18 vehicle trips in the PM peak hour, which equates to less than a single vehicle trip every three minutes.

## Potential Future Development - Private Housing

5.7 To give an indication of the potential future traffic generation of the full redevelopment of the estate, assuming future housing could be private market housing, a further TRICS assessment was undertaken. The future development would replace 50 existing dwellings with circa 70 new dwellings, resulting in a net increase of 20 dwellings. Table 5.3 details the predicted AM and PM peak hour trip rates (based on mean values) and Table 5.4 details the predicted AM and PM peak hour trips from the potential future development.

		<b>y</b> 1					
Private Residential - Weekday Trip Rates							
	AM Peak Hour (0800-0900)			PM Peak Hour (1700-1800)			
	Arrival	Departure	Total	Arrival	Departure	Total	
Vehicles	0.141	0.377	0.518	0.335	0.189	0.524	

## Table 5.3Private Housing Trip Rates

## Table 5.4 Future Private Housing – Additional Vehicle Trips

Private Residential - Weekday Trips						
20 Additional		AM Peak Hour (0800-0900)		PM Peak Hour (1700-1800)		
Dwellings	Arrival	Departure	Total	Arrival	Departure	Total
Vehicles	3	8	11	7	4	11

5.8 The analysis shows that the potential future development would be expected to generate few additional peak hour vehicle trips in comparison to the existing properties that are to be cleared – less than a single additional vehicle movement every five minutes.

## Traffic Impact

- 5.9 The analysis predicts that the proposed development would generate 18 vehicle movements in the peak hour (2-way), which would disperse quickly across numerous routes on the local highway network. This is well below the normal minimum significance threshold of 30 vehicle movements per hour that is commonly used to determine whether detailed capacity assessments of junctions could be needed. No capacity analysis is therefore considered necessary, particularly as the development access on Hedworth Lane is understood to operate without significant capacity issues at present.
- 5.10 Even if the future development proceeds on the adjacent sites then the totall additional peak hour traffic generation would be less than 30 vehicles (2-way).

5.11 Overall, traffic generation of the proposed development is considered to be insignificant in the context of the surrounding highway network.

## 6.0 CONSTRUCTION PHASE IMPACT

- 6.1 The construction period for the development is expected to be in the order of 2 years.
- 6.2 Given the modest scale of development it is not anticipated that traffic generation during construction, which is temporary, would have any significant impact on the surrounding highway network.
- 6.3 Access to the development for construction traffic is yet to be finalised, but is likely to be from Eskdale Drive. Appropriate arrangements would therefore need to be put in place prior to commencement to ensure that construction operations do not impact significantly on adjacent residents or the local highway network.
- 6.4 It is expected that all construction traffic and operative parking could be accommodated on site or within the adjacent area of housing that is being cleared. A turning area would be provided to allow construction vehicles to enter and leave the site in a forward gear.
- 6.5 Overall, construction activities would not be *expected* to cause any significant issues on the surrounding highway network. Details of construction management measures to control access to the site, and traffic movements within the site, would be agreed with the Council prior to commencement when full details are known.

## 7.0 SUMMARY AND CONCLUSIONS

- 7.1 South Tyneside Homes proposes a residential development at Eskdale Drive on The Lakes residential estate in Hedworth. The development includes a mixture of bungalows, semi-detached/ terraced houses and flats, comprising a total of 36 dwellings that will be delivered as affordable homes and managed by Housing Ventures Trust Ltd. A future development of approximately 70 further units, facilitated by demolition of 50 existing units, is being considered for adjacent sites, but is not part of the current application.
- 7.2 The development is within a reasonable walking and cycling distance of a good range of local facilities and has public transport connections to the wider area. Overall, the site is accessible by sustainable modes of transport and is considered an appropriate location for residential development.
- 7.3 The site has excellent highway connections that link to all major conurbations in the area, via numerous highway routes that link to the estate access on Hedworth Lane. Traffic from the estate would therefore typically disperse quickly across a number of routes.
- 7.4 A review of traffic injury accidents in the vicinity of the estate access over the last five years does not indicate any issues that could be affected by the proposed development.
- 7.5 All access to the development will be via Eskdale Drive and involves improvement to an existing access road that serves a garage court area, which will be cleared to facilitate the development. The highway and parking arrangements withing the site are considered appropriate to serve the development.
- 7.6 The potential traffic generation of the proposed development has been assessed and is considered to be insignificant in the context of the surrounding highway network.
- 7.7 Construction activities would not be expected to cause any significant issues on the surrounding highway network. Details of construction management measures to control access to the site, and traffic movements within the site, would be agreed prior to commencement.
- 7.8 Overall, the development is reasonably located in relation to local facilities, would be accessible by sustainable modes of transport and the new trips produced would not have any significant impact on the surrounding highway and transportation network. In conclusion, the proposals are considered to be satisfactory in transportation terms.

**APPENDIX A** 



**APPENDIX B** 

# Metro timetable Fellgate

# METRO

# Platform 1 to South Hylton





# Metro timetable Fellgate

METRO

Platform 2 to Airport





**APPENDIX C** 

#### TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use	:	03 - RESIDENTIAL
Category	:	B - AFFORDABLE/LOCAL AUTHORITY HOUSES
VEHICLES		

Selec	ted regi	ons and areas:	
06	WEST	MIDLANDS	
	WM	WEST MIDLANDS	1 days
07	YORK	SHIRE & NORTH LINCOLNSHIRE	
	WY	WEST YORKSHIRE	2 days
80	NORT	H WEST	
	СН	CHESHIRE	1 days
	GM	GREATER MANCHESTER	1 days
	MS	MERSEYSIDE	1 days
09	NORT	Н	
	NB	NORTHUMBERLAND	1 days
11	SCOTI	LAND	
	HI	HIGHLAND	2 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:	16 to 126 (units: )
Range Selected by User:	11 to 516 (units: )

Public Transport Provision:

Selection by:

Include all surveys

Date Range: 01/01/08 to 21/10/15

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.

<u>Selected survey days:</u>	
Monday	3 days
Tuesday	3 days
Wednesday	1 days
Thursday	2 days

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

Selected survey types:	
Manual count	9 days
Directional ATC Count	0 days

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

Selected Locations:	
Suburban Area (PPS6 Out of Centre)	2
Edge of Town	5
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.

7 1 1

Selected Location Sub Categories:	
Residential Zone	
Built-Up Zone	
No Sub Category	

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories

#### Secondary Filtering selection:

<u>Use Class:</u> C3

9 days

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

Population within 1 mile:	
1,001 to 5,000	1 days
5,001 to 10,000	2 days
10,001 to 15,000	1 days
15,001 to 20,000	2 days
25,001 to 50,000	3 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	2 days
75,001 to 100,000	3 days
125,001 to 250,000	2 days
250,001 to 500,000	2 days

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

Car ownership within 5 miles:	
0.6 to 1.0	6 days
1.1 to 1.5	3 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.

<u>Travel Plan:</u> No

9 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating: No PTAL Present

9 days

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

LIST OF SITES relevant to selection parameters

1	CH-03-B-01 HOUSES & FLATS WORDSWORTH CRES. BLACON CHESTER Edge of Town		CHESHIRE
2	Residential Zone Total Number of dwellings: Survey date: MONDAY GM-03-B-01 TERRACED HOUSES NEWBOLD	80 17/11/14	Survey Type: MANUAL GREATER MANCHESTER
3	ROCHDALE Suburban Area (PPS6 Out of Centre) No Sub Category Total Number of dwellings: <i>Survey date: WEDNESDAY</i> HI-03-B-05 PLANTATION ESTATE KENNEDY ROAD	43 21/10/15	Survey Type: MANUAL HIGHLAND
4	FORT WILLIAM Neighbourhood Centre (PPS6 Local Centre) Residential Zone Total Number of dwellings: <i>Survey date: TUESDAY</i> <b>HI-03-B-06</b> CARNARC CRESCENT	126 <i>19/05/09</i>	Survey Type: MANUAL HIGHLAND
5	INVERNESS Neighbourhood Centre (PPS6 Local Centre) Residential Zone Total Number of dwellings: <i>Survey date: THURSDAY</i> <b>MS-03-B-01 TERRACED</b> TARBOCK ROAD SPEKE LIVERPOOL	108 <i>21/05/09</i>	Survey Type: MANUAL MERSEYSIDE
6	Edge of Town Residential Zone Total Number of dwellings: <i>Survey date: TUESDAY</i> <b>NB-03-B-01 SEMI DET. &amp; TERRAC</b> WESTLEA	16 <i>18/06/13</i> ED	Survey Type: MANUAL NORTHUMBERLAND
7	BEDLINGTON Edge of Town Residential Zone Total Number of dwellings: <i>Survey date: MONDAY</i> WM-03-B-01 SEMI DET./TERRACE YORKMINSTER DRIVE CHELMSLEY WOOD BIDMINGHAM	97 19/11/12 D	Survey Type: MANUAL WEST MIDLANDS
	Edge of Town Residential Zone Total Number of dwellings: Survey date: MONDAY	97 17/10/11	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

8	WY-03-B-02 MIXED HOUSES WHITEACRE STREET DEIGHTON HUDDERSFIELD Edge of Town Residential Zone		WEST YORKSHIRE
	lotal Number of dwellings:	54	SURVEY TUDE, MANUAL
0		17/09/13	Survey Type: MANUAL
9	LINCOLN GREEN ROAD		WEST FORKSHIRE
	LEEDS Suburban Area (PPS6 Out of Centre) Built-Up Zone		
	Total Number of dwellings: Survey date: THURSDAY	29 19/09/13	Survey Type: MANUAL

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

Thursday 12/01/17 Page 5 Licence No: 109302

#### W A FAIRHURST AND PARTNERS BARRACK ROAD NEWCASTLE

#### TRIP RATE for Land Use 03 - RESIDENTIAL/B - AFFORDABLE/LOCAL AUTHORITY HOUSES VEHICLES Calculation factor: 1 DWELLS Estimated TRIP rate value per 38 DWELLS shown in shaded columns BOLD print indicates peak (busiest) period

	ARRIVALS					DEPARTURES				TOTALS			
	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated	
Time Range	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate	
00:00 - 01:00													
01:00 - 02:00													
02:00 - 03:00													
03:00 - 04:00													
04:00 - 05:00													
05:00 - 06:00													
06:00 - 07:00													
07:00 - 08:00	9	72	0.069	2.631	9	72	0.160	6.080	9	72	0.229	8.711	
08:00 - 09:00	9	72	0.154	5.846	9	72	0.278	10.582	9	72	0.432	16.428	
09:00 - 10:00	9	72	0.197	7.483	9	72	0.205	7.775	9	72	0.402	15.258	
10:00 - 11:00	9	72	0.166	6.314	9	72	0.177	6.723	9	72	0.343	13.037	
11:00 - 12:00	9	72	0.155	5.905	9	72	0.188	7.132	9	72	0.343	13.037	
12:00 - 13:00	9	72	0.200	7.600	9	72	0.209	7.951	9	72	0.409	15.551	
13:00 - 14:00	9	72	0.158	6.022	9	72	0.145	5.495	9	72	0.303	11.517	
14:00 - 15:00	9	72	0.215	8.185	9	72	0.228	8.652	9	72	0.443	16.837	
15:00 - 16:00	9	72	0.272	10.348	9	72	0.225	8.535	9	72	0.497	18.883	
16:00 - 17:00	9	72	0.294	11.166	9	72	0.214	8.126	9	72	0.508	19.292	
17:00 - 18:00	9	72	0.315	11.985	9	72	0.200	7.600	9	72	0.515	19.585	
18:00 - 19:00	9	72	0.202	7.658	9	72	0.172	6.548	9	72	0.374	14.206	
19:00 - 20:00													
20:00 - 21:00													
21:00 - 22:00													
22:00 - 23:00													
23:00 - 24:00													
Total Rates:			2.397	91.143			2.401	91.199			4.798	182.342	

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

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

#### **Parameter summary**

16 - 126 (units: )
01/01/08 - 21/10/15
9
0
0
0
0

Thursday 12/01/17 Page 6 Licence No: 109302

#### W A FAIRHURST AND PARTNERS BARRACK ROAD NEWCASTLE

#### TRIP RATE for Land Use 03 - RESIDENTIAL/B - AFFORDABLE/LOCAL AUTHORITY HOUSES **TAXIS Calculation factor: 1 DWELLS** Estimated TRIP rate value per 38 DWELLS shown in shaded columns

BOLD print indicates peak (busiest) period

	ARRIVALS				DEPARTURES				TOTALS			
	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated
Time Range	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate
00:00 - 01:00												
01:00 - 02:00												
02:00 - 03:00												
03:00 - 04:00												
04:00 - 05:00												
05:00 - 06:00												
06:00 - 07:00												
07:00 - 08:00	9	72	0.006	0.234	9	72	0.006	0.234	9	72	0.012	0.468
08:00 - 09:00	9	72	0.009	0.351	9	72	0.009	0.351	9	72	0.018	0.702
09:00 - 10:00	9	72	0.012	0.468	9	72	0.011	0.409	9	72	0.023	0.877
10:00 - 11:00	9	72	0.014	0.526	9	72	0.017	0.643	9	72	0.031	1.169
11:00 - 12:00	9	72	0.011	0.409	9	72	0.011	0.409	9	72	0.022	0.818
12:00 - 13:00	9	72	0.012	0.468	9	72	0.011	0.409	9	72	0.023	0.877
13:00 - 14:00	9	72	0.006	0.234	9	72	0.008	0.292	9	72	0.014	0.526
14:00 - 15:00	9	72	0.009	0.351	9	72	0.008	0.292	9	72	0.017	0.643
15:00 - 16:00	9	72	0.014	0.526	9	72	0.014	0.526	9	72	0.028	1.052
16:00 - 17:00	9	72	0.009	0.351	9	72	0.008	0.292	9	72	0.017	0.643
17:00 - 18:00	9	72	0.008	0.292	9	72	0.008	0.292	9	72	0.016	0.584
18:00 - 19:00	9	72	0.005	0.175	9	72	0.005	0.175	9	72	0.010	0.350
19:00 - 20:00												
20:00 - 21:00												
21:00 - 22:00												
22:00 - 23:00												
23:00 - 24:00												
Total Rates:			0.115	4.385			0.116	4.324			0.231	8.709

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

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

#### **Parameter summary**

16 - 126 (units: )
01/01/08 - 21/10/15
9
0
0
0
0

Thursday 12/01/17 Page 7 Licence No: 109302

#### W A FAIRHURST AND PARTNERS BARRACK ROAD NEWCASTLE

#### TRIP RATE for Land Use 03 - RESIDENTIAL/B - AFFORDABLE/LOCAL AUTHORITY HOUSES OGVS Calculation factor: 1 DWELLS Estimated TRIP rate value per 38 DWELLS shown in shaded columns

BOLD print indicates peak (busiest) period

	ARRIVALS					DEPARTURES				TOTALS			
	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated	
Time Range	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate	
00:00 - 01:00													
01:00 - 02:00													
02:00 - 03:00													
03:00 - 04:00													
04:00 - 05:00													
05:00 - 06:00													
06:00 - 07:00													
07:00 - 08:00	9	72	0.000	0.000	9	72	0.002	0.058	9	72	0.002	0.058	
08:00 - 09:00	9	72	0.003	0.117	9	72	0.002	0.058	9	72	0.005	0.175	
09:00 - 10:00	9	72	0.002	0.058	9	72	0.003	0.117	9	72	0.005	0.175	
10:00 - 11:00	9	72	0.003	0.117	9	72	0.003	0.117	9	72	0.006	0.234	
11:00 - 12:00	9	72	0.000	0.000	9	72	0.000	0.000	9	72	0.000	0.000	
12:00 - 13:00	9	72	0.000	0.000	9	72	0.000	0.000	9	72	0.000	0.000	
13:00 - 14:00	9	72	0.002	0.058	9	72	0.002	0.058	9	72	0.004	0.116	
14:00 - 15:00	9	72	0.002	0.058	9	72	0.002	0.058	9	72	0.004	0.116	
15:00 - 16:00	9	72	0.000	0.000	9	72	0.000	0.000	9	72	0.000	0.000	
16:00 - 17:00	9	72	0.000	0.000	9	72	0.000	0.000	9	72	0.000	0.000	
17:00 - 18:00	9	72	0.002	0.058	9	72	0.000	0.000	9	72	0.002	0.058	
18:00 - 19:00	9	72	0.002	0.058	9	72	0.003	0.117	9	72	0.005	0.175	
19:00 - 20:00													
20:00 - 21:00													
21:00 - 22:00													
22:00 - 23:00													
23:00 - 24:00													
Total Rates:			0.016	0.524			0.017	0.583			0.033	1.107	

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

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

#### **Parameter summary**

16 - 126 (units: )
01/01/08 - 21/10/15
9
0
0
0
0

Thursday 12/01/17 Page 8 Licence No: 109302

#### W A FAIRHURST AND PARTNERS BARRACK ROAD NEWCASTLE

#### TRIP RATE for Land Use 03 - RESIDENTIAL/B - AFFORDABLE/LOCAL AUTHORITY HOUSES **PSVS Calculation factor: 1 DWELLS**

Estimated TRIP rate value per 38 DWELLS shown in shaded columns BOLD print indicates peak (busiest) period

	ARRIVALS					DEPARTURES				TOTALS			
	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated	
Time Range	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate	
00:00 - 01:00													
01:00 - 02:00													
02:00 - 03:00													
03:00 - 04:00													
04:00 - 05:00													
05:00 - 06:00													
06:00 - 07:00													
07:00 - 08:00	9	72	0.003	0.117	9	72	0.003	0.117	9	72	0.006	0.234	
08:00 - 09:00	9	72	0.003	0.117	9	72	0.003	0.117	9	72	0.006	0.234	
09:00 - 10:00	9	72	0.003	0.117	9	72	0.003	0.117	9	72	0.006	0.234	
10:00 - 11:00	9	72	0.005	0.175	9	72	0.005	0.175	9	72	0.010	0.350	
11:00 - 12:00	9	72	0.003	0.117	9	72	0.003	0.117	9	72	0.006	0.234	
12:00 - 13:00	9	72	0.002	0.058	9	72	0.005	0.175	9	72	0.007	0.233	
13:00 - 14:00	9	72	0.005	0.175	9	72	0.002	0.058	9	72	0.007	0.233	
14:00 - 15:00	9	72	0.003	0.117	9	72	0.003	0.117	9	72	0.006	0.234	
15:00 - 16:00	9	72	0.003	0.117	9	72	0.003	0.117	9	72	0.006	0.234	
16:00 - 17:00	9	72	0.005	0.175	9	72	0.003	0.117	9	72	0.008	0.292	
17:00 - 18:00	9	72	0.002	0.058	9	72	0.003	0.117	9	72	0.005	0.175	
18:00 - 19:00	9	72	0.002	0.058	9	72	0.002	0.058	9	72	0.004	0.116	
19:00 - 20:00													
20:00 - 21:00													
21:00 - 22:00													
22:00 - 23:00													
23:00 - 24:00													
Total Rates:			0.039	1.401			0.038	1.402			0.077	2.803	

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

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

#### **Parameter summary**

16 - 126 (units: )
01/01/08 - 21/10/15
9
0
0
0
0

Thursday 12/01/17 Page 9 Licence No: 109302

#### W A FAIRHURST AND PARTNERS BARRACK ROAD NEWCASTLE

#### TRIP RATE for Land Use 03 - RESIDENTIAL/B - AFFORDABLE/LOCAL AUTHORITY HOUSES CYCLISTS Calculation factor: 1 DWELLS Estimated TRIP rate value per 38 DWELLS shown in shaded columns BOLD print indicates peak (busiest) period

	ARRIVALS				DEPARTURES					TOTALS			
	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated	No.	Ave.	Trip	Estimated	
Time Range	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate	Days	DWELLS	Rate	Trip Rate	
00:00 - 01:00				•				•				•	
01:00 - 02:00													
02:00 - 03:00													
03:00 - 04:00													
04:00 - 05:00													
05:00 - 06:00													
06:00 - 07:00													
07:00 - 08:00	9	72	0.003	0.117	9	72	0.005	0.175	9	72	0.008	0.292	
08:00 - 09:00	9	72	0.011	0.409	9	72	0.014	0.526	9	72	0.025	0.935	
09:00 - 10:00	9	72	0.003	0.117	9	72	0.008	0.292	9	72	0.011	0.409	
10:00 - 11:00	9	72	0.008	0.292	9	72	0.002	0.058	9	72	0.010	0.350	
11:00 - 12:00	9	72	0.006	0.234	9	72	0.008	0.292	9	72	0.014	0.526	
12:00 - 13:00	9	72	0.006	0.234	9	72	0.000	0.000	9	72	0.006	0.234	
13:00 - 14:00	9	72	0.009	0.351	9	72	0.006	0.234	9	72	0.015	0.585	
14:00 - 15:00	9	72	0.005	0.175	9	72	0.009	0.351	9	72	0.014	0.526	
15:00 - 16:00	9	72	0.011	0.409	9	72	0.011	0.409	9	72	0.022	0.818	
16:00 - 17:00	9	72	0.011	0.409	9	72	0.012	0.468	9	72	0.023	0.877	
17:00 - 18:00	9	72	0.003	0.117	9	72	0.008	0.292	9	72	0.011	0.409	
18:00 - 19:00	9	72	0.002	0.058	9	72	0.003	0.117	9	72	0.005	0.175	
19:00 - 20:00													
20:00 - 21:00													
21:00 - 22:00													
22:00 - 23:00													
23:00 - 24:00													
Total Rates:			0.078	2.922			0.086	3.214			0.164	6.136	

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

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

#### **Parameter summary**

16 - 126 (units: )
01/01/08 - 21/10/15
9
0
0
0
0



Aberdeen Birmingham Bristol Dundee

Inverness Leeds London Manchester Edinburgh Newcastle upon Tyne Elgin Sheffield Glasgow Watford



CIVIL ENGINEERING • STRUCTURAL ENGINEERING • TRANSPORTATION • ROADS & BRIDGES PORTS & HARBOURS • GEOTECHNICAL & ENVIRONMENTAL ENGINEERING • PLANNING & DEVELOPMENT • WATER SERVICES • CDM COORDINATOR SERVICES