Transport Assessment
Hanson Garden Centre, Barrow

For Hanson Garden Centre

By Curtins Ltd
July 2013

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Transport Assessment
Hanson Garden Centre, Barrow

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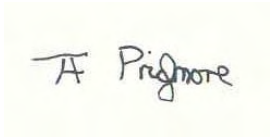
Tom Pridmore Engineer		July 2013

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Keith York Associate		July 2013

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For and on behalf of **Curtins Ltd**

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1.0 Introduction

Introduction

1.1 Curtins has been appointed on behalf of Hanson Garden Centre (HGC) to provide traffic and transportation advice in relation to an outline application for a proposed residential development off Whalley Road to the north of Barrow.

1.2 The indicative development proposals are for 62 residential dwellings on an existing brownfield site.

Purpose of this Report

1.3 This Transport Assessment (TA) has been prepared to inform Highways Officers at Lancashire County Council (LCC) on all traffic and transportation matters associated with the development proposals.

Scope of the Report

1.4 Scoping discussions have been held with Highways Officer Trevor Lewis of LCC in which it was agreed that a Transport Assessment would be appropriate to support any planning application. A Transport Statement is normally satisfactory for the level of development but due to the nature of development in the Ribble Valley and the existing situation, a more detailed assessment has been provided. This TA contains:

- A review of the existing situation on the highway network in the vicinity of the site;
- An appraisal of the public transport connectivity to the site, i.e. by bus, walk and cycle;
- An appraisal of the accident records in the vicinity of the site;
- Determination of the traffic generation of the proposed development;
- A discussion on the traffic associated with the present land use; and
- Consideration of the highway impact associated with the proposals.

1.5 Following this introduction, Section 2 of the report will describe the existing site and its location followed by Section 3 which will present the development proposals. Section 4 considers the site's accessibility by sustainable modes of travel and Section 5 will outline the likely traffic generation associated with the development proposals and any potential highway impact. Finally, Section 6 will present a summary of the findings of this report along with a set of conclusions.

2.0 Site Location and Existing Situation

Site Location and Existing Use

2.1 The development site is on Whalley Road to the north of the village of Barrow. The site is bound by farmland to the north and south; Whalley Road to the east (with dwellings beyond) and Clitheroe Golf Course to the west.

2.2 The site is located to the north of the village centre of Barrow which has a number of local services including a school and is readily accessible by foot or cycle.

2.3 The site is currently used by Hanson Garden Centre which covers the site of 1.9 hectares in size. This is an active land use and therefore must be considered when assessing the traffic impact of any proposed development.

2.4 The site is shown from a regional perspective in Plan 1 and from a local perspective in Plan 2.

Access

2.5 The site's primary access for both vehicles and pedestrians is off Whalley Road and takes the form of a simple priority junction. Due to its nature the junction already copes with larger delivery vehicles serving the garden centre.

2.6 The site currently has a car park located to the east of the existing buildings with approximately 50 parking spaces. There is a connector road to the south of the buildings that accesses the service yard and staff parking areas to the rear of the garden centre.

Highway Network

2.7 Whalley Road is a north south route through Barrow that connects Clitheroe in the north to Whalley in the south. The A59 passes to the east of Barrow and can be accessed by travelling north to the junction with the A671 and thenceforth on to the A59. This road links the Wirral with North Yorkshire and is a strategic east – west link.

2.8 The A59 links in to the motorway network with the M6 close to Preston and with the M65 close to Blackburn via the A666 and A6119.

Highway Safety Record

2.9 Lancashire County Council operates an online GIS system called Maps and Related Information Online (MARIO). This database contains a record of all accidents on the highway network in the last five years.

2.0 Site Location and Existing Situation

2.10 A review of the database indicates that there has been up to two vehicle only accidents on Whalley Road within the vicinity of the site. This single accident plot location is to the north of the site and could in fact be a single accident but the MARIO database is not specific on the accident information.

2.11 The number of accidents recorded during the five year study period is not considered to be unusual for this type of road. Furthermore, site observations during the peak and off-peak periods have not indicated any highway safety concerns.

3.0 Development Proposals

Introduction

3.1 The indicative proposed development layout is for 62 residential dwellings on an existing brownfield site, currently used as a garden centre.

3.2 The development proposal will be accessed from Whalley Road via a simple priority junction with a ghost island for right turning traffic if required at the reserve matters ad detailed planning stage.

3.3 The proposed development is shown in Drawing SK_01, appended to this report.

Parking Provision

3.4 The indicative layout shows that there would be a mixture of bungalows, semi-detached and detached houses. All of these would either have a garage and drive or a drive so all parking would be off street.

3.5 The car and cycle parking allocation and layout would be fully confirmed at detailed design stage.

Servicing Arrangements

3.6 It is proposed that servicing would be undertaken from the internal site highway network. Swept path analysis will be undertaken on the internal site layout to ensure that all expected service vehicles will be able to access and move freely around the site. Appropriate and required swept path analysis would be provided as part of the reserve matters at detailed planning stage.

4.0 Accessibility

Introduction

4.1 A key element of national and local policy is to ensure new developments are located in areas where alternative modes of travel to the car are available.

4.2 It is important to ensure that developments are not isolated but are located close to complementary land uses. In this instance, that includes retail, leisure and employment opportunities for residents. This supports the aims of integrating planning and transport, providing more sustainable transport choices, and reducing overall travel and car use.

Pedestrian Accessibility

4.3 Research has indicated that acceptable walking distances depend on a number of factors, including the quality of the development, the type of amenity offered, the surrounding area, and other local facilities. The Chartered Institution for Highways and Transportation (CIHT) document entitled *'Providing for Journeys on Foot'* suggests walking distances which are relevant to this planning application. These are reproduced in Table 4.1.

Table 4.1 Suggested Acceptable Walking Distances

	Town Centres (m)	Commuting/School/ Sight Seeing (m)	Elsewhere/Local Services (m)
Desirable	200	500	400
Acceptable	400	1,000	800
Preferred Maximum	800	2,000	1,200

Source: '*Providing for Journeys on Foot*', CIHT

4.4 To assist in summarising the accessibility of the site by foot, an indicative pedestrian catchment plan has been produced. Plan 3 shows distances of 500m, 1,000m and 2,000m which are termed *'Desirable'*, *'Acceptable'* and the *'Preferred Maximum'* by the CIHT for travelling to employment or school.

4.5 The 500m catchment includes the nearby bus stops with the services shown later in this chapter and also Barrow Primary school. The village of Barrow is 500m from the site. The access to Clitheroe Golf Club is also within this catchment.

4.6 The 1,000m catchment includes the remainder of Barrow village and surrounding houses, while the 2000m catchment includes the local McDonalds takeaway drive-through restaurant, a petrol filling station with

associated mini supermarket and the other employment opportunities off the A59 as well as the employment opportunities in Whalley Industrial Park.

4.7 The site is located close to a developed residential area which ensures that there is a well-connected network of wide footways in proximity of the development connecting to the wider area.

4.8 As a result of the site's proximity to key services, local facilities and local residential areas it is considered that walking is a realistic and attractive mode of travel for residents to access local services.

Accessibility by Cycle

4.9 To assist in assessing accessibility by cycle, Plan 4 presents a 5km cycle catchment for the site. This distance equates to a journey time of around 25 minutes, while cycling at a leisurely speed of 12 kilometres per hour.

4.10 The 5km catchment encompasses all of the facilities mentioned above in the walking section. In addition, the 5km catchment also includes a large area including the whole of Clitheroe to the north, Sabden to the east, Whalley (with its rail station) to the south and the small hamlets around Great Mitton.

4.11 Regional Cycle Route 91 lays to the east of Barrow where it goes through Wiswell and Pendleton and Regional Cycle Route 90 lays to the west where it goes through Great Mitton.

4.12 In conclusion, cycling is considered to be a realistic and attractive mode of travel for both residents and visitors to the site.

Public Transport

Bus

4.13 The Chartered Institution of Highways and Transportation document, *Planning for Public Transport in Developments* recommends that developments should ideally be located within 400m of a bus stop.

4.14 The nearest bus stops to the site are located on Whalley Road, The northbound bus stop is directly outside the site and the southbound bus stop is 250m from the centre of the site.

4.15 Table 4.2 shows a summary of these services.

Table 4.2 – Bus Services from the local bus stops on Whalley Road

Service	Route	Frequency (Minutes)	
		Mon – Sat	Sun
22	Clitheroe – Whalley - Blackburn	3 per hour	1 per hour
26/27	Clitheroe – Whalley – Padiham - Burnley	2 per hour	1 per hour
280	Clitheroe – Whalley - Preston	1 per hour	1 per 2 hours
231	Clitheroe – Whalley - Accrington	6 per day on Saturday	-

4.16 Table 4.2 shows that there are good links to the surrounding villages and towns, which make bus travel an attractive option. It is therefore concluded that the site is well served by bus services.

Rail

4.17 The closest rail stations to the site are Whalley which is 3km from the site and Clitheroe which is 3.5km from the site. As Clitheroe is the end of the line, it is doubtful that any residents would wish to use the train service from there and would use Whalley instead as the same service goes through both stations. Whalley can be reached by cycle or using the local bus services from the site.

4.18 The service from Clitheroe and Whalley connects the towns to Blackburn, Bolton and Manchester. This service runs roughly every hour throughout the week.

4.19 Rail passengers can change at Blackburn for services to local towns Accrington and Burnley as well as longer distance services to Leeds, Bradford, Preston and Blackpool. There are also connection opportunities at Salford Crescent or Bolton for Manchester Piccadilly and Manchester Airport and at Manchester Victoria for the Manchester Metrolink system and for further services to Leeds and West Yorkshire.

Local Facilities and Services

4.20 It is important when siting residential development that it is located with access to good and services. The key services for residential developments are education, health, employment and retail.

4.21 Table 4.3 shows the local primary and secondary schools and the potential routes available for people to get there from the site.

4.0 Accessibility

Table 4.3 – Routes to Local Schools

School	Distance from site	Travel Route
Barrow Primary School	360m	Walking, Cycling, Bus (All Services)
Ribbledale High	2.8km	Cycling, Bus (All Services)
Whalley C of E Primary School	3.1km	Cycling, Bus (All Services)
Clitheroe RGS	4.4km	Cycling, Bus (180/280)
Saint Augustines RC High School	4.8km	Cycling, Bus (280,22)

4.22 Table 4.3 shows that the schools are accessible from the site by cycling which may be attractive to older children or by the frequent bus services that operate from outside the site. Barrow Primary School is in easy walking distance of the site.

4.23 Table 4.4 shows the closest local GP surgeries to the site. The linear nature of Barrow is shown to be an advantage as all bus routes run along Whalley Road in a north-south direction with a frequent service allowing easy access to medical centres.

Table 4.4 – Routes to Local GP Surgeries

School	Distance from site	Travel Route
Sabden and Whalley Medical Group	2.9km	Cycling, Bus (All Services)
Pendleside Medical Practice	3.8km	Cycling, Bus (All Services)

4.24 Table 4.5 shows the local employment centres. The local Barrow Brooks business village has no direct bus services but can be accessed by cycling or walking from the site. Blackburn is the closest major centre for employment but it may be the case that people that live at the site may work in Manchester which is also accessible via the train at Whalley or Clitheroe. As described in the rail section, there are many different areas that can be accessed by rail by direct service or changing at Blackburn.

Table 4.5 – Routes to Local Employment Sites

School	Distance from site	Travel Route
Barrow Brooks Business Village	1.9km	Walk, Cycle
Clitheroe	3.5km	Cycling, Bus (All Services)
Blackburn	13km	Bus (22) or a connection with rail at either Whalley or Clitheroe

4.25 Table 4.6 shows the local retail centres that would serve the site.

Table 4.6 – Routes to Local Retail Centres

School	Distance from site	Travel Route
Whalley – Local Shops and Services	2.9km	Cycling, Bus (All Services)
Clitheroe – including Sainsburys, Booths and Tesco	3.5km	Cycling, Bus (All Services)

4.26 Clitheroe is the main attractor in the area and it is expected that residents at the proposed development will travel north to Clitheroe as the main supermarkets are located there along with a number of chain high street outlets.

Conclusion

4.27 It can be concluded that the proposed development is in a sustainable location with good public transport links and that walking and cycling are attractive options.

5.0 Highway Impact

Introduction

5.1 This section will describe the expected highway impacts occurring as result of the proposed new development.

Proposed Development Traffic Generation

5.2 The indicative proposals for the development are for 62 houses which is the standard quantum of development for a five acre site. It is proposed to show the trip generation at 65 dwellings for robustness. The exact quantum of development will be subject to agreement at detailed planning.

5.3 The TRICS 2013(a) 6.11.1 database has been interrogated to identify the likely traffic generation of the residential land use. The TRICS database contains traffic survey data for a range of land uses and is the industry recognised tool for calculating traffic generations for new developments.

5.4 For a robust assessment of the proposed development, 85th percentile rates have been adopted. The TRICS data sheets are shown in Appendix A.

5.5 The TRICS database has also been used to identify the likely traffic generation of the development. The trip rate is per unit with the impact of the site in terms of trip generation being based on 65 units as a robust figure. The results are shown in Table 5.1 below.

Table 5.1 – Residential Traffic Peak Period Traffic Generation

Land Use	AM Peak Period (08.00-09.00)			PM Peak Period (17.00-18.00)		
	Arrivals	Departures	Total	Arrivals	Departures	Total
Houses Privately Owned Trip Rates (Per Dwelling)	0.225	0.450	**0.675**	0.478	0.261	**0.739**
Houses Privately Owned Vehicle Trips	15	29	**44**	31	17	**48**

5.6 During the AM peak period in the region of 44 two-way vehicle movements will be generated by the development (15 arrivals and 29 departures) while during the PM peak 48 two-way vehicle movements will be generated (31 arrivals and 17 departures).

5.7 This volume of traffic, if spread evenly throughout the peak periods would result in approximately one vehicle accessing or egressing from the development every minute and a half.

Current Land Use

5.8 The present land use should be assessed as a material consideration in any traffic generation and to fully assess the impact of the proposed development.

5.9 The present land use is a garden centre. Following discussions with Trevor Lewis at LCC it was agreed that the most accurate way to get a true trip generation for the site would be to undertake a junction turning count at the site entrance. The count was undertaken on Tuesday 7th May 2013.

5.10 Traffic Count data is shown in Appendix B.

5.11 The network peaks for the development have been taken from the Barrowlands TA as agreed with Trevor Lewis at LCC. This will allow the junction assessments that are carried out to be consistent with other developments.

5.12 Table 5.2 shows the arrivals and departures that were recorded by the traffic count.

Table 5.2 – Garden Centre Traffic Peak Period Traffic Generation

Land Use	AM Peak Period (08.00-09.00)			PM Peak Period (16.45-17.45)		
	Arrivals	Departures	Total	Arrivals	Departures	Total
Garden Centre Vehicle Trips	5	6	**11**	14	22	**36**

5.13 The difference in trips between the present use and the proposed development is shown in Table 5.3.

Table 5.3 – Difference in Traffic Generation

Land Use	AM Peak Period (08.00-09.00)			PM Peak Period (16.45-17.45)		
	Arrivals	Departures	Total	Arrivals	Departures	Total
Garden Centre Vehicle Trips	5	6	**11**	14	22	**36**
Houses Privately Owned Vehicle Trips	15	29	**44**	31	17	**48**
Difference	+10	+23	**+33**	+17	-5	**+12**

5.14 The results in Table 5.3 show that there is an increase of 33 vehicle trips in the AM Peak at the site. The garden centre opens at 09:00 so the only trips associated with the site are likely to be staff arriving or deliveries. The increase equates to one extra vehicle in just over two minutes which cannot be considered a significant increase.

5.15 In the PM Peak, there is an increase of 12 vehicles with the development in place. This equates to an increase of a vehicle every five minutes which would be unnoticeable in everyday traffic fluctuations.

Trip Distribution

5.16 Following pre-application discussions with Trevor Lewis at LCC and the appeal for the Barrowlands development, it has been decided for consistency to follow the agreed statement of common ground for distribution from the site. This distribution is:

- A671 (N) towards Clitheroe – 24%;
- A59 (N) towards Skipton – 5%;
- A671 (S) towards Burnley/Accrington – 38%;
- Whalley – 11%; and
- A59 (W) towards Preston – 22%.

5.17 From the HGC, this distribution was routed along the most direct routes to these destinations. It is clear that the most direct routes to the A671 (N) and A59 (N) are by turning left from the site. This is also the same scenario for traffic travelling to Preston via the A59 as to travel south to access this road would require a tortuous route through Barrow and Whalley before finally accessing the A59 to the north of Langho. It is a much more attractive option to access the A59 just to the north of the site.

5.18 Curtins acknowledge that the traffic travelling to Whalley is likely to turn right from the site and travel south through Barrow village. The traffic travelling on the A671 travelling towards Burnley and Accrington accounts for 38% of the distributed trips. For robustness this has been split 50/50 with half of the distributed traffic travelling northwards and down the A59 and half travelling through Barrow and Whalley. This gives a 70/30 split from the site with a northwards bias.

5.19 Appendix C provides details of:

- Peak distribution (Based on agreed Statement of Common Ground distribution from the Barrowlands Appeal);

- Proposed residential trips and distribution;
- Existing garden centre trips and distribution; and
- Resultant net trips and distribution.

5.20 The figures shown in Appendix C show that when the net trips as distributed around the network, the link impact is insignificant and way below the 5% threshold apart from in the AM Peak outside the site which is to be expected given the relatively small flow of five vehicles a minute in a northern direction past the site.

5.21 Throughout negotiations with LCC, the key impact that is to be considered is the effect of the development on Whalley and Barrow villages. This is dealt with in more detail below but assessment of the link impact on Whalley shows that there is less than 2% in any peak and the highest number of vehicles accessing Whalley is 7 in the AM Peak which equates to roughly one every ten minutes which would be unnoticeable in the variances of daily traffic.

5.22 The impact on Barrow village in vehicle terms would be at its highest 7 vehicles southbound in the AM Peak. This would equate to roughly one vehicle every 10 minutes. If we assess the flows as a two way junction impact then the development would have an effect of 1.7% increase in traffic in the AM Peak and 0.5% in the PM Peak if the two way flows were analysed.

5.23 The development impact assessments therefore show that the traffic from the development would have an insignificant impact upon the local highway network.

Highway Capacity Assessment

5.24 Discussions with LCC have highlighted that the main concern politically is the impact of any proposed development on the centres of Whalley and Barrow. The impact on these settlements has been discussed above and is shown to be negligible. This impact has been based on the robust assessment of the base 2018 traffic that was shown in the Barrowlands TA for the site to the south of Barrow.

5.25 Curtins have been asked by Trevor Lewis at LCC to consider a number of developments that have either been through the planning process or are going through the process. The developments that Curtins have been asked to consider are:

- 3/2012/0630: 504 dwellings, Barrowlands, Whalley Road, Barrow;
- 3/2012/0623: 23 dwellings, Old Row, Whalley Road, Barrow;
- 3/2013/0137: 260 dwellings Lawsonsteads, Clitheroe Road, Whalley;
- 3/2013/0169: 29 dwellings, Pendle Garage, Clitheroe Road, Barrow;

- 3/2010/820: 80 dwellings, Riddings Lane, Whalley; and
- 3/2012/0637: 137 dwellings, Mitton Road, Whalley.

5.26 As part of the Barrowlands development, discussions between their transport planning consultant and LCC suggested that two of the above sites (3/2010/0820 and 3/2012/0637) were considered as part of the base 2018 flows for that scheme. The Barrowlands TA shows that with the aforementioned committed development plus the Barrowlands development traffic added, the junctions of A671/Whalley Road and A671/A59 operate well within capacity.

5.27 The highest RFC recorded on any one arm at the A671/A59 junction was 67.8% which slows that there is significant reserve capacity available. The HGC development will add an extra 16 vehicles to the A59/A671 junction in the AM Peak and an extra 6 in the PM Peak. This will not make a significant difference to the RFC's or queue lengths at this junction.

5.28 The highest recorded RFC at the A671/Whalley Road junction was 50.5% on any one arm. The HGC development would add 23 vehicles on the AM Peak and 8 vehicles in the PM Peak to this junction. It is not expected that these extra vehicles will make a significant difference to the operation of the junction or the queue lengths as it only equates to a vehicle every three minutes in the AM Peak and every seven and a half minutes in the PM Peak.

5.29 The above points take into account the following developments:

- 3/2012/0630: 504 dwellings, Barrowlands, Whalley Road, Barrow;
- 3/2010/820: 80 dwellings, Riddings Lane, Whalley; and
- 3/2012/0637: 137 dwellings, Mitton Road, Whalley.

5.30 Curtins have been asked to assess three further sites. Two small developments in Barrow (3/2012/0623 and 3/2013/0169) and a large site in Whalley (3/2013/0137) which shows plans for 260 houses including 55 that have been approved by a previous application.

5.31 Analysis of the TA for the site in Whalley shows that there is a potential issue with the junction of Accrington Road and King Street which is a mini roundabout. The proposed development at Lawsonsteads do not propose to offer any mitigation measures to alleviate this issue rather they have re-assigned traffic by the introduction of a central boulevard through their site. This junction as a worse case will have 10 additional vehicles in the AM Peak and 3 in the PM Peak with the HGC development. This is unlikely to make a difference to the operation of the junction.

5.32 The Lawsonsteads development TA also suggests that the A59/A671 junction has spare capacity with a worse case RFC of 69% in the AM Peak. The HGC development has 15 2-way trips accessing this junction in the AM Peak, which is one per 3 minutes and six in the PM Peak, which is one per 10 minutes. The HGC development will not therefore have a significant impact on this junction.

5.33 The proposed development at Old Row, Barrow (3/2012/0623) has a valid consent for 23 dwellings. As part of their scope, no junction assessments or capacity analysis was requested. The TS shows that the consultants expect 9 trips in either peak. This is not predicted to be noticeable in daily traffic variations.

5.34 The final development that LCC specified for consideration was the 29 dwellings proposed at Pendle Garage, Barrow (3/2013/0169) which has not has a TS or TA undertaken and has not yet been determined. Using the same trip rates as the HGC development, we would expect this development to generate 20 2-way trips in the AM Peak and 21 in the PM Peak. This would equate to one vehicle every 3 minutes entering or leaving the site and would not be noticeable in the variances of daily traffic.

Conclusion

5.35 Extensive analysis of the development sites trip generation and analysis of previous applications has shown that all local junctions operate with spare capacity. This figure when joined with the small net trip generation of the HGC development shows that the proposed development will have an insignificant effect on the local highway network.

6.0 Summary and Conclusions

Summary

6.1 Curtins has been appointed on behalf of Hanson Garden Centre to provide traffic and transportation advice in relation to a proposed residential development off Whalley Road in Barrow.

6.2 The indicative site proposals comprise the construction of up to 62 residential dwellings.

6.3 The site is considered to be highly accessible by public transport, having excellent linkages to local key destinations by bus and rail with good connectivity to key destinations for employment and leisure.

6.4 Walking and cycling represent realistic modes of travel with key employment, education and retail facilities located close by.

6.5 Total peak hour vehicle trips based on 85th percentile rates for the development are expected to be in the region of 44 two-way vehicle movements during the traditional AM peak period and 48 two-way vehicle movements in the PM peak.

6.6 The present use must be taken into account when assessing a site and removing the garden centre tips from the expected trip generation of the residential development shows an increase of 26 two way trips in the AM Peak and 17 in the PM Peak. This is not considered to be significant.

6.7 Such low levels of traffic generation are therefore considered to have a negligible impact on the local highway network.

6.8 Analysis of previous applications in the area shows that there is sufficient reserve capacity at nearby junctions and that the HGC development will have little highway impact.

Conclusion

6.9 This Transport Assessment has given due consideration to the development proposals and concludes that there is no reason why planning permission should be refused on the grounds of traffic or transportation issues.

Drg No:	Rev:
TPLE1012 / 001	-

Project: HANSON GARDEN CENTRE, CLITHEROE

Drg Title: REGIONAL SITE LOCATION PLAN

Drawn: MF

Checked: TP

Scale: NTS

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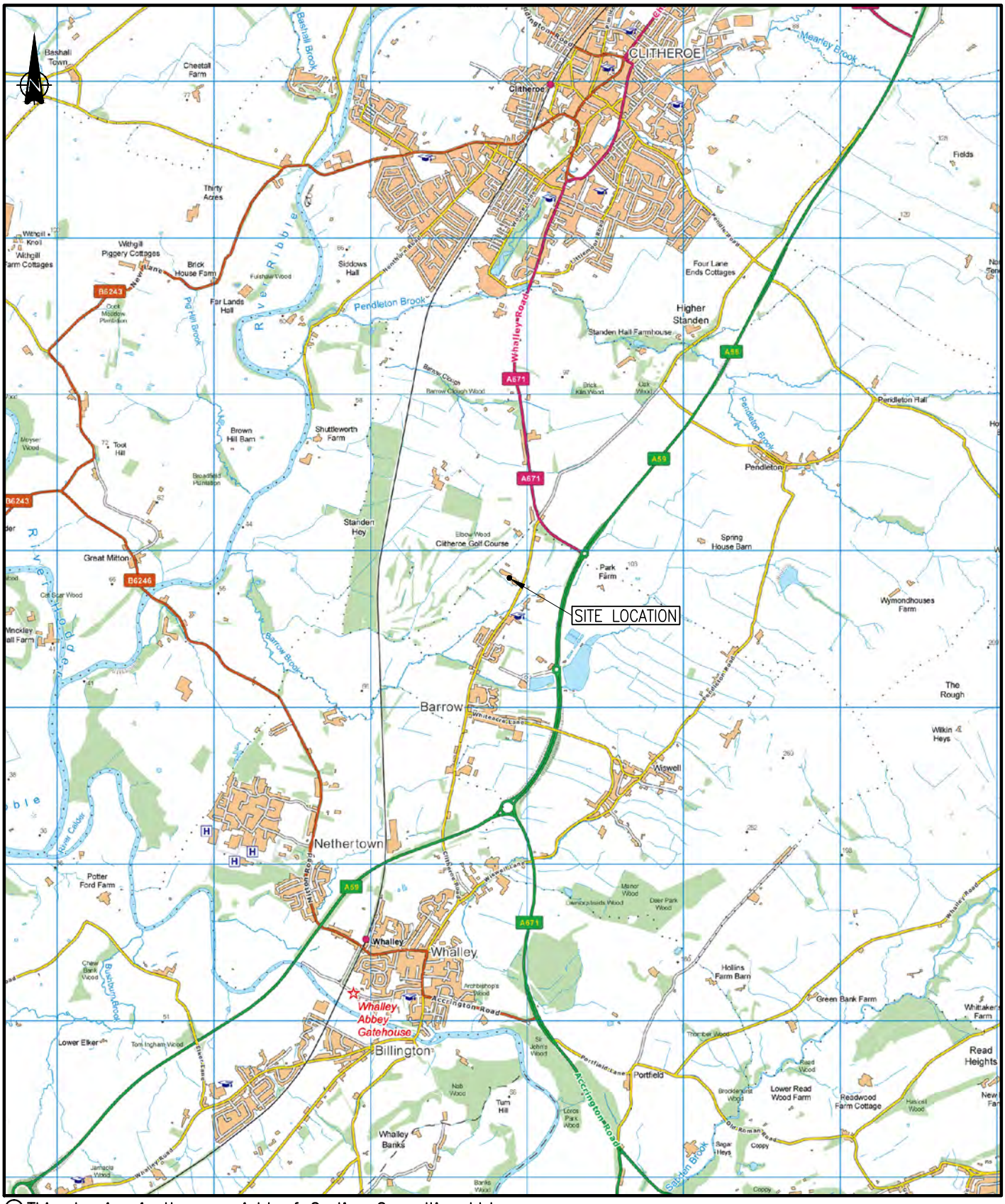

Drg No:	Rev:
TPLE1012 / 002	-

Project:	HANSON GARDEN CENTRE, CLITHEROE
Drg Title:	LOCAL SITE LOCATION PLAN
Drawn:	MF
Checked:	TP
Scale:	NTS

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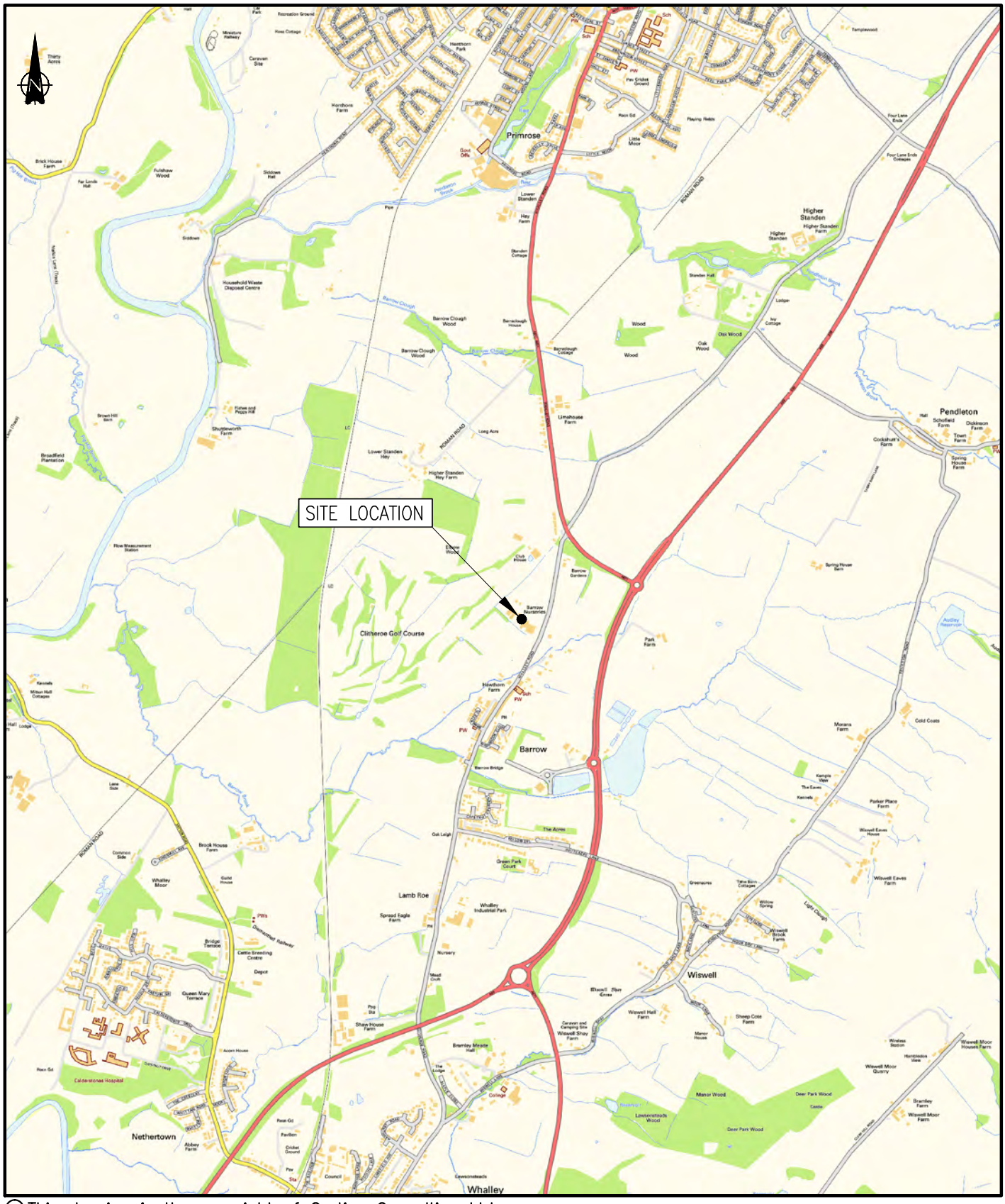

Drg No:	Rev:
TPLE1012 / 003	-

Project: HANSON GARDEN CENTRE, CLITHEROE

Drg Title: PEDESTRIAN CATCHMENT PLAN

Drawn: MF

Checked: TP

Scale: NTS

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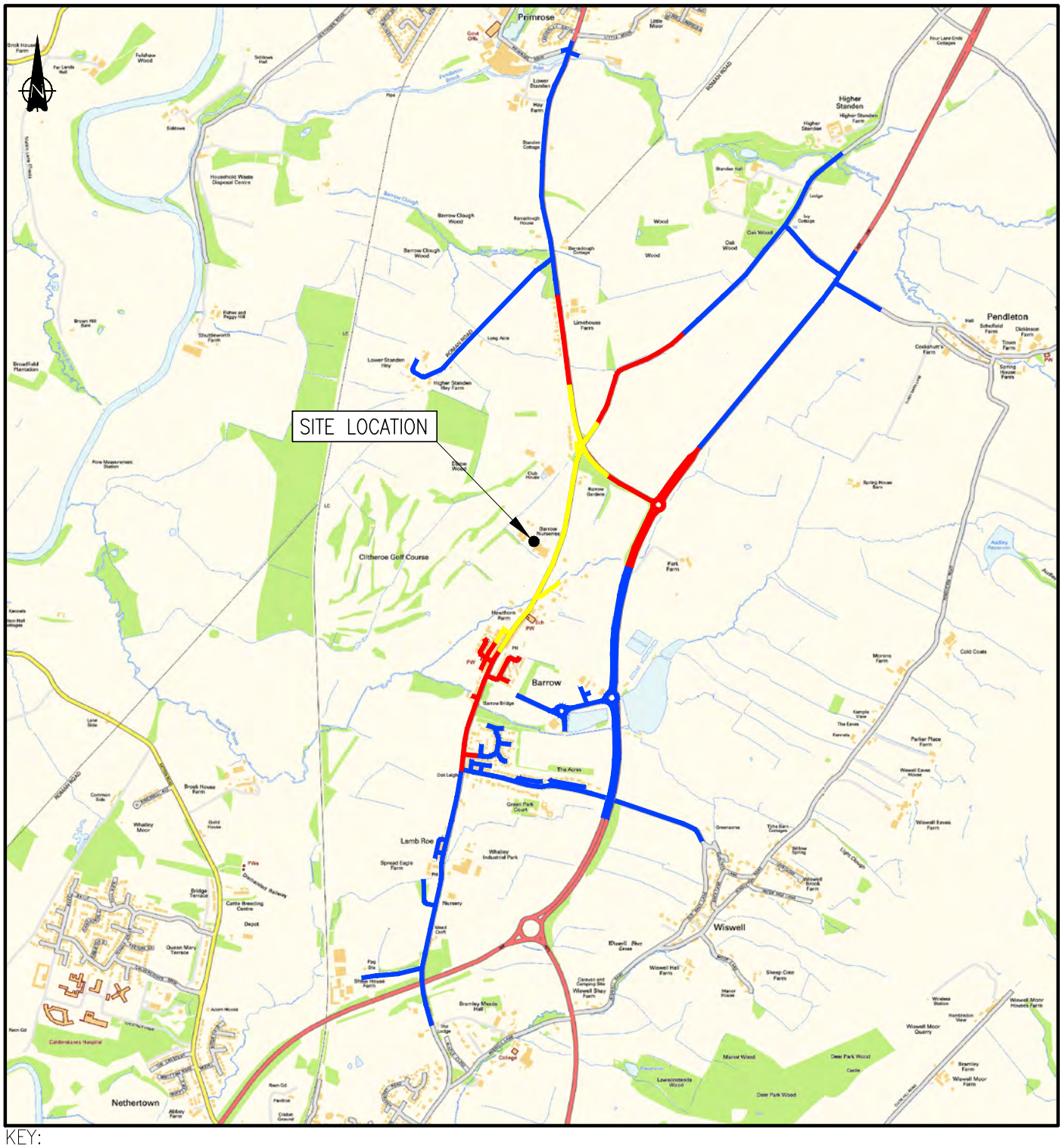

KEY:

0m–500m CATCHMENT

500m–1000m CATCHMENT

1000m–2000m CATCHMENT

Drg No:

TPLE1012 / 004

Rev:

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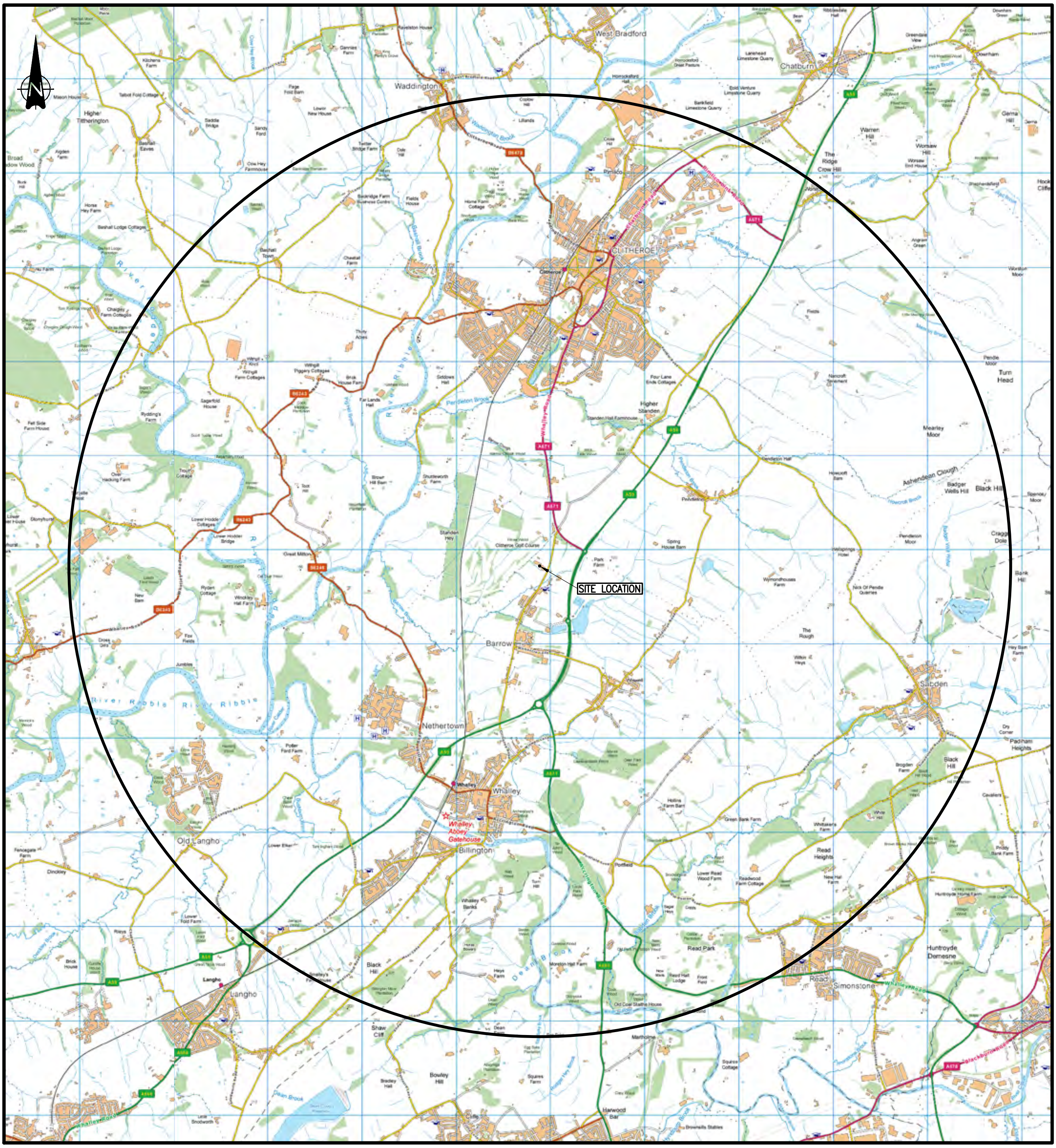
Project: HANSON GARDEN CENTRE, CLITHEROE

Drg Title: FIVE KILOMETRE CYCLE CATCHMENT

Drawn: MF

Checked: TP

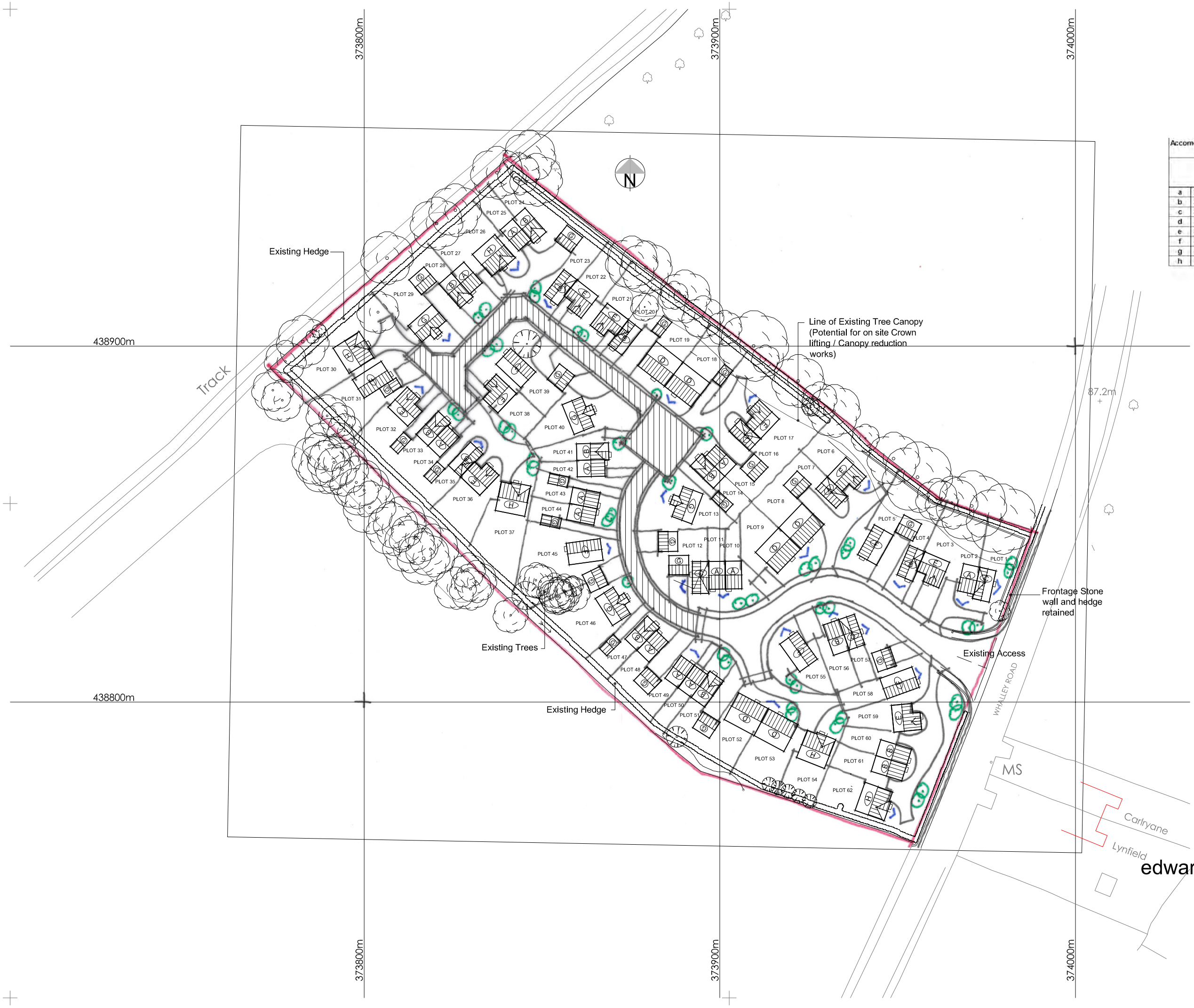
Scale: NTS



KEY:

● SITE

— 5km CYCLE CATCHMENT



Notes:
Sketch schemes may be based on plan information of unknown origin and is subject to verification and survey.
Contractors must verify all dimensions on site before commencing any work or shop drawings. This drawing is not to be scaled. Use figured dimensions only. Ensure digital versions are plotted at 'Actual Size'.
Building areas are liable to adjustment over the course of the design process due to ongoing construction detailing developments.

Subject to statutory approvals and survey.

50 40 30 20 10mm

Accomodation Schedule

	House Type	Area (sq.ft)	Quantity	Total Areas (sq.ft)
a	2 bed semi detached/town	660	15	9,900
b	3 bed semi detached	768	14	10,752
c	3 bed semi detached corner turn	768	3	2,304
d	3 bed bungalow	775	6	4,650
e	3 bed with int garage	788	9	7,092
f	4 bed detached	1,072	6	6,432
g	4 bed detached wide frontage	1,050	4	4,200
h	4 bed detached with int garage	1,180	5	5,900
	Total	62 No.		51,230 sq.ft
	Nett developable housing Site Area	4.9 Acre		10,455 sq.ft/Acre

revisions
status -

edward architectural services ltd
prospect house 32 sovereign street leeds ls1 4bj t 0113 398 4000
www.eas-llmited.co.uk

project Housing, Whalley Rd Barrow.
client Hanson Garden Centre
title Indicative Site Layout
.

drawn ge checked ge date March 2013 scale 1/1000@A3
job no 0378 drawing no SK_01 rev .

Z:\Projects\0378 (Hanson Garden Centre Clitheroe)\CAD\SK_01.dwg, A3L

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

03	SOUTH WEST		
	CW	CORNWALL	1 days
	DC	DORSET	1 days
	GS	GLOUCESTERSHIRE	1 days
05	EAST MIDLANDS		
	DS	DERBYSHIRE	1 days
	LN	LINCOLNSHIRE	1 days
06	WEST MIDLANDS		
	WO	WORCESTERSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	NY	NORTH YORKSHIRE	3 days
08	NORTH WEST		
	GM	GREATER MANCHESTER	1 days
09	NORTH		
	CB	CUMBRIA	1 days
10	WALES		
	CF	CARDIFF	1 days
	CP	CAERPHILLY	1 days
11	SCOTLAND		
	AD	ABERDEEN CITY	1 days
	EA	EAST AYRSHIRE	1 days
	FI	FIFE	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

Filtering Stage 2 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:	20 to 73 (units:)
Range Selected by User:	20 to 75 (units:)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/04 to 18/09/12

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	4 days
Tuesday	6 days
Wednesday	3 days
Thursday	3 days
Friday	2 days

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

Selected survey types:

Manual count	18 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:

Edge of Town Centre	1
Suburban Area (PPS6 Out of Centre)	10
Edge of Town	6
Neighbourhood Centre (PPS6 Local Centre)	1

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	13
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.

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

Ranking Type: TOTALS Time Range: 08:00-09:00
WARNING: Using 85th and 15th percentile highlighted trip rates in data sets of under 20 surveys is not recommended by TRICS and may be misleading.
15th Percentile = No. 15
85th Percentile = No. 4

Median Values
Arrivals: 0.092
Departures: 0.382
Totals: 0.474

Rank	Site-Ref	Description	Area	DWELLS	Day	Date	Trip Rate (Sorted by Totals)			Travel Plan
							Arrivals	Departures	Totals	
1	PK-03-A-01	DETAC. & BUNGALOWS, PERT	PERTH & KINROSS	36	Wed	11/05/11	0.861	0.667	1.528	
2	GM-03-A-10	DETACHED/SEMI, MANCHESTE	GREATER MANCHESTER	29	Wed	12/10/11	0.138	0.759	0.897	
3	FI-03-A-02	SEMI DETACHED, GLENROTHE	FIFE	58	Mon	16/05/05	0.276	0.569	0.845	
4	CB-03-A-03	SEMI DETACHED, WORKINGTO	CUMBRIA	40	Thu	20/11/08	0.225	0.450	0.675	
5	CF-03-A-03	DETACHED, CARDIFF	CARDIFF	29	Mon	08/10/07	0.069	0.552	0.621	
6	CP-03-A-02	SEMI DETACHED, PENGAM	CAERPHILLY	41	Mon	05/09/05	0.195	0.415	0.610	
7	EA-03-A-01	DETATCHED, KILMARNOCK	EAST AYRSHIRE	39	Thu	05/06/08	0.231	0.359	0.590	
8	NY-03-A-05	HOUSES AND FLATS, RIPON	NORTH YORKSHIRE	71	Mon	22/09/08	0.113	0.465	0.578	
9	NY-03-A-07	DETACHED/SEMI, BOROBRIDG	NORTH YORKSHIRE	23	Tue	18/10/11	0.087	0.391	0.478	
10	DC-03-A-01	DETACHED, POOLE	DORSET	51	Wed	16/07/08	0.098	0.373	0.471	
11	WO-03-A-02	SEMI DETACHED, REDDITCH	WORCESTERSHIRE	48	Tue	02/05/06	0.104	0.333	0.437	
12	CW-03-A-02	SEMI D./DETATCHED, TRURO	CORNWALL	73	Tue	18/09/07	0.096	0.329	0.425	
13	LN-03-A-03	SEMI DETACHED, LINCOLN	LINCOLNSHIRE	22	Tue	18/09/12	0.045	0.364	0.409	
14	GS-03-A-01	SEMI D./TERRACED, GLOUCE	GLOUCESTERSHIRE	73	Tue	25/05/04	0.123	0.260	0.383	
15	NY-03-A-01	MIXED HOUSES,NORTHALLERT	NORTH YORKSHIRE	52	Tue	25/09/07	0.173	0.173	0.346	
16	DS-03-A-01	SEMI D./TERRACED, DRONFI	DERBYSHIRE	20	Thu	22/06/06	0.200	0.100	0.300	
17	HI-03-A-14	SEMI-DETACHED, INVERNESS	HIGHLAND	73	Fri	13/05/11	0.096	0.164	0.260	
18	AD-03-A-01	SEMI-DETACHED, ABERDEEN	ABERDEEN CITY	59	Fri	18/05/12	0.017	0.085	0.102	

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.

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

03	SOUTH WEST		
	CW	CORNWALL	1 days
	DC	DORSET	1 days
	GS	GLOUCESTERSHIRE	1 days
05	EAST MIDLANDS		
	DS	DERBYSHIRE	1 days
	LN	LINCOLNSHIRE	1 days
06	WEST MIDLANDS		
	WO	WORCESTERSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	NY	NORTH YORKSHIRE	3 days
08	NORTH WEST		
	GM	GREATER MANCHESTER	1 days
09	NORTH		
	CB	CUMBRIA	1 days
10	WALES		
	CF	CARDIFF	1 days
	CP	CAERPHILLY	1 days
11	SCOTLAND		
	AD	ABERDEEN CITY	1 days
	EA	EAST AYRSHIRE	1 days
	FI	FIFE	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

Filtering Stage 2 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:	20 to 73 (units:)
Range Selected by User:	20 to 75 (units:)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/04 to 18/09/12

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	4 days
Tuesday	6 days
Wednesday	3 days
Thursday	3 days
Friday	2 days

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

Selected survey types:

Manual count	18 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:

Edge of Town Centre	1
Suburban Area (PPS6 Out of Centre)	10
Edge of Town	6
Neighbourhood Centre (PPS6 Local Centre)	1

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	13
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.

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

Ranking Type: TOTALS Time Range: 17:00-18:00
WARNING: Using 85th and 15th percentile highlighted trip rates in data sets of under 20 surveys is not recommended by TRICS and may be misleading.
15th Percentile = No. 15
85th Percentile = No. 4

Median Values
Arrivals: 0.378
Departures: 0.279
Totals: 0.657

Rank	Site-Ref	Description	Area	DWELLS	Day	Date	Trip Rate (Sorted by Totals)			Travel Plan
							Arrivals	Departures	Totals	
1	PK-03-A-01	DETAC. & BUNGALOWS, PERT	PERTH & KINROSS	36	Wed	11/05/11	0.639	0.611	1.250	
2	EA-03-A-01	DETATCHED, KILMARNOCK	EAST AYRSHIRE	39	Thu	05/06/08	0.667	0.179	0.846	
3	DC-03-A-01	DETACHED, POOLE	DORSET	51	Wed	16/07/08	0.510	0.333	0.843	
4	NY-03-A-07	DETACHED/SEMI, BOROBRIDG	NORTH YORKSHIRE	23	Tue	18/10/11	0.478	0.261	0.739	
5	CB-03-A-03	SEMI DETACHED, WORKINGTO	CUMBRIA	40	Thu	20/11/08	0.475	0.250	0.725	
6	FI-03-A-02	SEMI DETACHED, GLENROTHE	FIFE	58	Mon	16/05/05	0.483	0.224	0.707	
7	WO-03-A-02	SEMI DETACHED, REDDITCH	WORCESTERSHIRE	48	Tue	02/05/06	0.458	0.229	0.687	
8	HI-03-A-14	SEMI-DETACHED, INVERNESS	HIGHLAND	73	Fri	13/05/11	0.356	0.329	0.685	
9	CP-03-A-02	SEMI DETACHED, PENGAM	CAERPHILLY	41	Mon	05/09/05	0.341	0.317	0.658	
10	CF-03-A-03	DETACHED, CARDIFF	CARDIFF	29	Mon	08/10/07	0.414	0.241	0.655	
11	CW-03-A-02	SEMI D./DETATCHED, TRURO	CORNWALL	73	Tue	18/09/07	0.425	0.219	0.644	
12	NY-03-A-05	HOUSES AND FLATS, RIPON	NORTH YORKSHIRE	71	Mon	22/09/08	0.437	0.169	0.606	
13	GM-03-A-10	DETACHED/SEMI, MANCHESTE	GREATER MANCHESTER	29	Wed	12/10/11	0.448	0.103	0.551	
14	GS-03-A-01	SEMI D./TERRACED, GLOUCE	GLOUCESTERSHIRE	73	Tue	25/05/04	0.411	0.137	0.548	
15	NY-03-A-01	MIXED HOUSES,NORTHALLERT	NORTH YORKSHIRE	52	Tue	25/09/07	0.154	0.231	0.385	
16	LN-03-A-03	SEMI DETACHED, LINCOLN	LINCOLNSHIRE	22	Tue	18/09/12	0.273	0.045	0.318	
17	DS-03-A-01	SEMI D./TERRACED, DRONFI	DERBYSHIRE	20	Thu	22/06/06	0.100	0.150	0.250	
18	AD-03-A-01	SEMI-DETACHED, ABERDEEN	ABERDEEN CITY	59	Fri	18/05/12	0.085	0.085	0.170	

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.

Barrow - Manual Traffic Survey, Tuesday 7th May 2013

Produced by Road Data Services Ltd

Junction: Whalley Road / Hansons Garden Centre

Approach: Whalley Road (North)

	S/B to Whalley Road (South)								Right to Hansons Garden Centre							
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	**TOTAL**	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	**TOTAL**
0800 - 0815	1	0	32	3	0	0	2	**38**	0	0	0	0	0	0	0	**0**
0815 - 0830	0	0	44	8	0	0	4	**56**	0	0	1	0	0	0	0	**1**
0830 - 0845	2	1	46	4	0	0	3	**56**	0	0	1	0	0	0	0	**1**
0845 - 0900	0	0	36	4	2	4	0	**46**	0	0	2	0	0	0	0	**2**
Hourly Total	**3**	**1**	**158**	**19**	**2**	**4**	**9**	**196**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**4**
0900 - 0915	0	0	36	5	0	0	6	**47**	0	0	1	0	0	0	0	**1**
0915 - 0930	1	0	42	5	1	0	0	**49**	0	0	2	0	0	0	0	**2**
0930 - 0945	1	1	34	7	2	0	1	**46**	0	0	3	0	0	0	0	**3**
0945 - 1000	1	0	30	2	1	0	4	**38**	0	0	3	0	0	0	0	**3**
Hourly Total	**3**	**1**	**142**	**19**	**4**	**0**	**11**	**180**	**0**	**0**	**9**	**0**	**0**	**0**	**0**	**9**
Session Total	**6**	**2**	**300**	**38**	**6**	**4**	**20**	**376**	**0**	**0**	**13**	**0**	**0**	**0**	**0**	**13**
1600 - 1615	0	1	50	11	1	0	6	**69**	0	0	3	2	0	0	0	**5**
1615 - 1630	0	1	64	5	1	0	1	**72**	0	0	5	1	0	0	0	**6**
1630 - 1645	0	2	49	4	0	0	2	**57**	0	0	3	0	0	0	0	**3**
1645 - 1700	0	0	30	12	0	0	1	**43**	0	0	5	1	0	0	0	**6**
Hourly Total	**0**	**4**	**193**	**32**	**2**	**0**	**10**	**241**	**0**	**0**	**16**	**4**	**0**	**0**	**0**	**20**
1700 - 1715	2	1	61	0	0	0	2	**66**	0	0	1	0	0	0	0	**1**
1715 - 1730	0	0	78	3	0	0	3	**84**	0	0	2	0	0	0	0	**2**
1730 - 1745	3	1	64	1	1	0	2	**72**	0	0	0	0	0	0	0	**0**
1745 - 1800	4	0	37	2	0	0	2	**45**	0	0	0	0	0	0	0	**0**
Hourly Total	**9**	**2**	**240**	**6**	**1**	**0**	**9**	**267**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**3**
1800 - 1815	1	1	44	1	0	0	2	**49**	0	0	0	0	0	0	0	**0**
1815 - 1830	4	0	31	2	0	0	1	**38**	0	0	0	0	0	0	0	**0**
1830 - 1845	2	0	35	2	0	0	3	**42**	0	0	0	0	0	0	0	**0**
1845 - 1900	2	0	39	1	0	0	1	**43**	0	0	0	0	0	0	0	**0**
Hourly Total	**9**	**1**	**149**	**6**	**0**	**0**	**7**	**172**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Session Total	**18**	**7**	**582**	**44**	**3**	**0**	**26**	**680**	**0**	**0**	**19**	**4**	**0**	**0**	**0**	**23**

Barrow - Manual Traffic Survey, Tuesday 7th May 2013

Produced by Road Data Services Ltd

Junction: Whalley Road / Hansons Garden Centre

Approach: Whalley Road (South)

	Left to Hansons Garden Centre								N/B to Whalley Road (North)							
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	**TOTAL**	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	**TOTAL**
0800 - 0815	0	0	0	1	0	0	0	**1**	0	1	48	6	1	0	3	**59**
0815 - 0830	0	0	0	0	0	0	0	**0**	1	1	54	9	0	0	5	**70**
0830 - 0845	0	0	0	0	0	0	0	**0**	0	1	58	7	1	0	2	**69**
0845 - 0900	0	0	0	0	0	0	0	**0**	0	0	64	7	0	0	2	**73**
Hourly Total	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**1**	**3**	**224**	**29**	**2**	**0**	**12**	**271**
0900 - 0915	0	0	2	0	0	0	0	**2**	1	0	63	6	4	0	1	**75**
0915 - 0930	0	0	1	1	0	0	0	**2**	1	1	38	4	0	0	3	**47**
0930 - 0945	0	0	1	0	0	0	0	**1**	0	0	42	3	1	0	2	**48**
0945 - 1000	0	0	2	0	0	0	0	**2**	4	0	44	4	1	0	3	**56**
Hourly Total	**0**	**0**	**6**	**1**	**0**	**0**	**0**	**7**	**6**	**1**	**187**	**17**	**6**	**0**	**9**	**226**
Session Total	**0**	**0**	**6**	**2**	**0**	**0**	**0**	**8**	**7**	**4**	**411**	**46**	**8**	**0**	**21**	**497**
1600 - 1615	0	0	2	0	0	0	0	**2**	2	0	59	5	0	0	3	**69**
1615 - 1630	0	0	4	0	0	0	0	**4**	0	0	33	4	1	0	2	**40**
1630 - 1645	0	0	2	1	0	0	0	**3**	2	0	31	7	0	0	2	**42**
1645 - 1700	0	0	2	0	0	0	0	**2**	0	1	42	2	1	0	3	**49**
Hourly Total	**0**	**0**	**10**	**1**	**0**	**0**	**0**	**11**	**4**	**1**	**165**	**18**	**2**	**0**	**10**	**200**
1700 - 1715	0	0	2	0	0	0	0	**2**	0	0	54	6	0	0	1	**61**
1715 - 1730	0	0	1	0	0	0	0	**1**	3	1	55	6	0	0	2	**67**
1730 - 1745	0	0	0	0	0	0	0	**0**	2	1	45	3	0	0	1	**52**
1745 - 1800	0	0	0	0	0	0	0	**0**	1	0	45	3	0	0	3	**52**
Hourly Total	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**3**	**6**	**2**	**199**	**18**	**0**	**0**	**7**	**232**
1800 - 1815	0	0	0	0	0	0	0	**0**	2	0	38	4	0	0	2	**46**
1815 - 1830	0	0	0	0	0	0	0	**0**	5	0	48	3	0	0	0	**56**
1830 - 1845	0	0	0	0	0	0	0	**0**	2	0	42	0	1	0	3	**48**
1845 - 1900	0	0	0	0	0	0	0	**0**	5	0	37	0	0	0	1	**43**
Hourly Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**14**	**0**	**165**	**7**	**1**	**0**	**6**	**193**
Session Total	**0**	**0**	**13**	**1**	**0**	**0**	**0**	**14**	**24**	**3**	**529**	**43**	**3**	**0**	**23**	**625**

Barrow - Manual Traffic Survey, Tuesday 7th May 2013

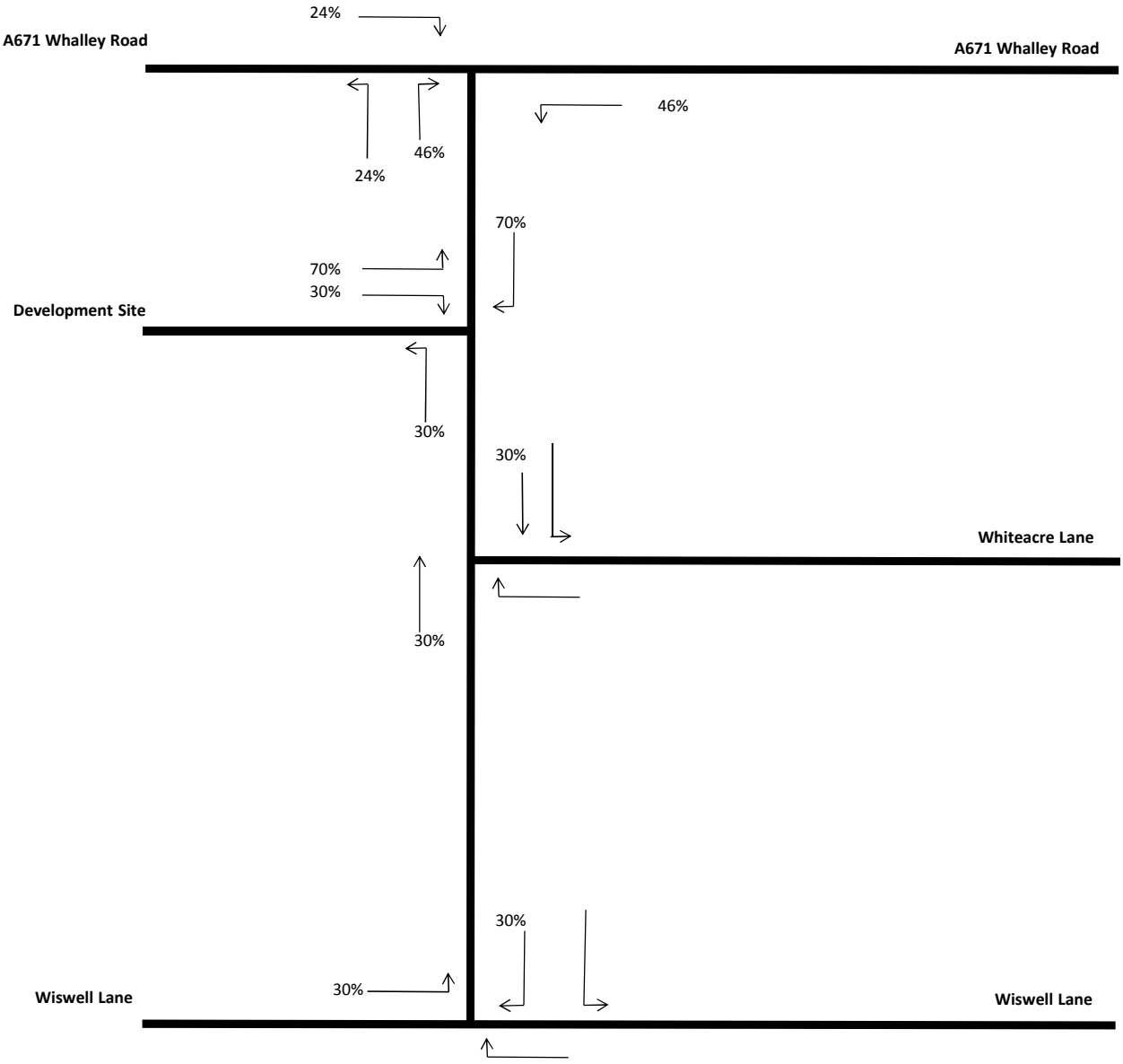
Produced by Road Data Services Ltd

Junction: Whalley Road / Hansons Garden Centre

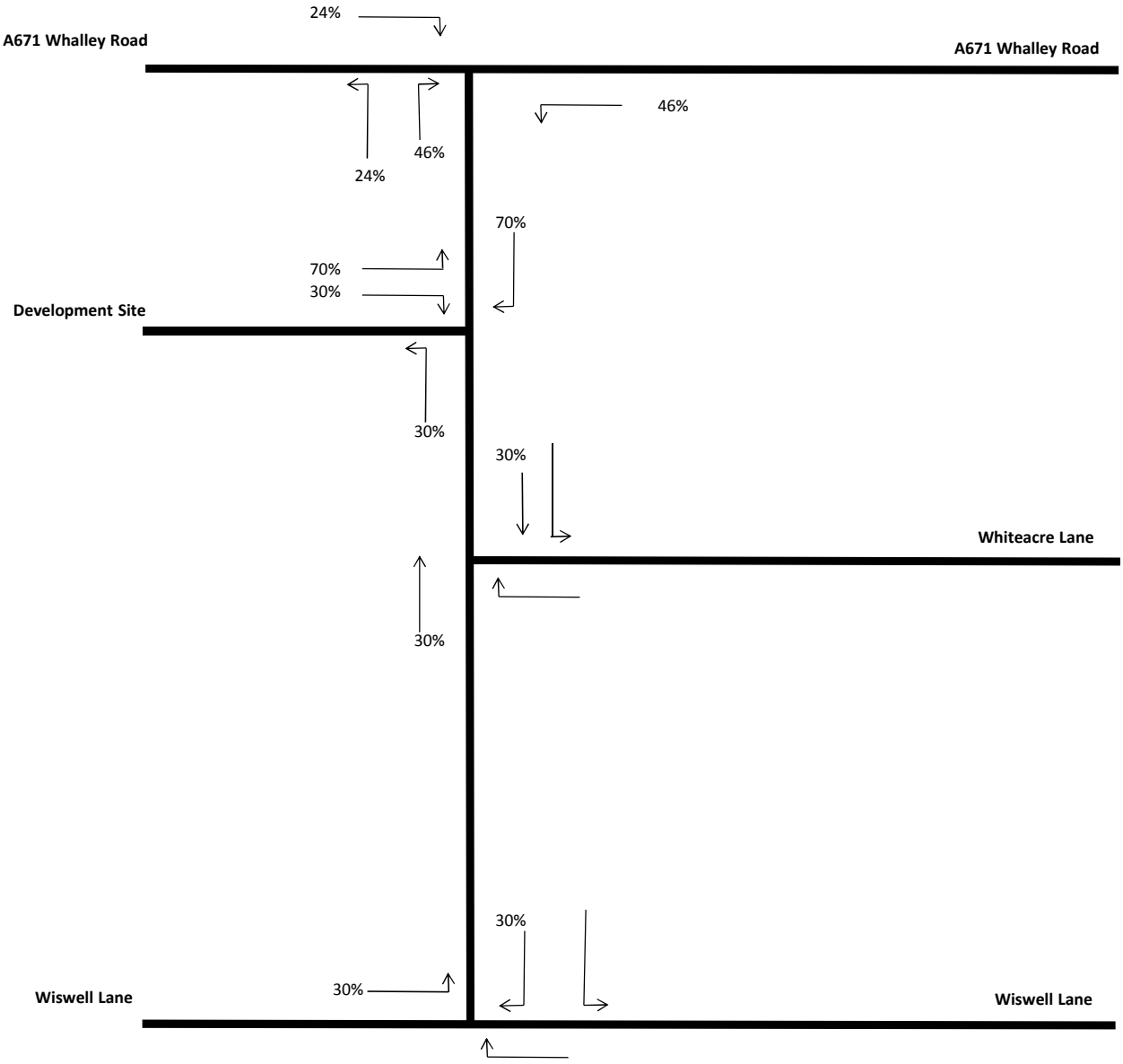
Approach: Hansons Garden Centre

	Left to Whalley Road (North)								Right to Whalley Road (South)							
TIME	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	**TOTAL**	P/CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	**TOTAL**
0800 - 0815	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
0815 - 0830	0	0	1	1	0	0	0	**2**	0	0	0	1	0	0	0	**1**
0830 - 0845	0	0	0	0	0	0	0	**0**	0	0	1	0	0	0	0	**1**
0845 - 0900	0	0	0	0	0	0	0	**0**	0	0	2	0	0	0	0	**2**
Hourly Total	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**2**	**0**	**0**	**3**	**1**	**0**	**0**	**0**	**4**
0900 - 0915	0	0	0	0	0	0	0	**0**	0	0	1	0	0	0	0	**1**
0915 - 0930	0	0	1	1	0	0	0	**2**	0	0	2	1	0	0	0	**3**
0930 - 0945	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
0945 - 1000	1	0	3	0	0	0	0	**4**	0	0	1	0	0	0	0	**1**
Hourly Total	**1**	**0**	**4**	**1**	**0**	**0**	**0**	**6**	**0**	**0**	**4**	**1**	**0**	**0**	**0**	**5**
Session Total	**1**	**0**	**5**	**2**	**0**	**0**	**0**	**8**	**0**	**0**	**7**	**2**	**0**	**0**	**0**	**9**
1600 - 1615	0	0	6	1	0	0	0	**7**	0	0	4	2	0	0	0	**6**
1615 - 1630	0	0	4	0	0	0	0	**4**	0	0	8	1	0	0	0	**9**
1630 - 1645	0	0	5	1	0	0	0	**6**	0	0	2	0	0	0	0	**2**
1645 - 1700	0	0	5	1	0	0	0	**6**	0	0	2	0	0	0	0	**2**
Hourly Total	**0**	**0**	**20**	**3**	**0**	**0**	**0**	**23**	**0**	**0**	**16**	**3**	**0**	**0**	**0**	**19**
1700 - 1715	0	0	3	0	0	0	0	**3**	0	0	3	0	0	0	0	**3**
1715 - 1730	0	0	6	0	0	0	0	**6**	0	0	1	0	0	0	0	**1**
1730 - 1745	0	0	1	0	0	0	0	**1**	0	0	0	0	0	0	0	**0**
1745 - 1800	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**10**	**0**	**0**	**0**	**0**	**10**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**4**
1800 - 1815	0	0	1	0	0	0	0	**1**	0	0	1	0	0	0	0	**1**
1815 - 1830	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
1830 - 1845	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
1845 - 1900	0	0	0	0	0	0	0	**0**	0	0	0	0	0	0	0	**0**
Hourly Total	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**
Session Total	**0**	**0**	**31**	**3**	**0**	**0**	**0**	**34**	**0**	**0**	**21**	**3**	**0**	**0**	**0**	**24**

AM PEAK TRIP DISTRIBUTION
Taken from Barrowlands TA with a bias to Traffic Travelling North

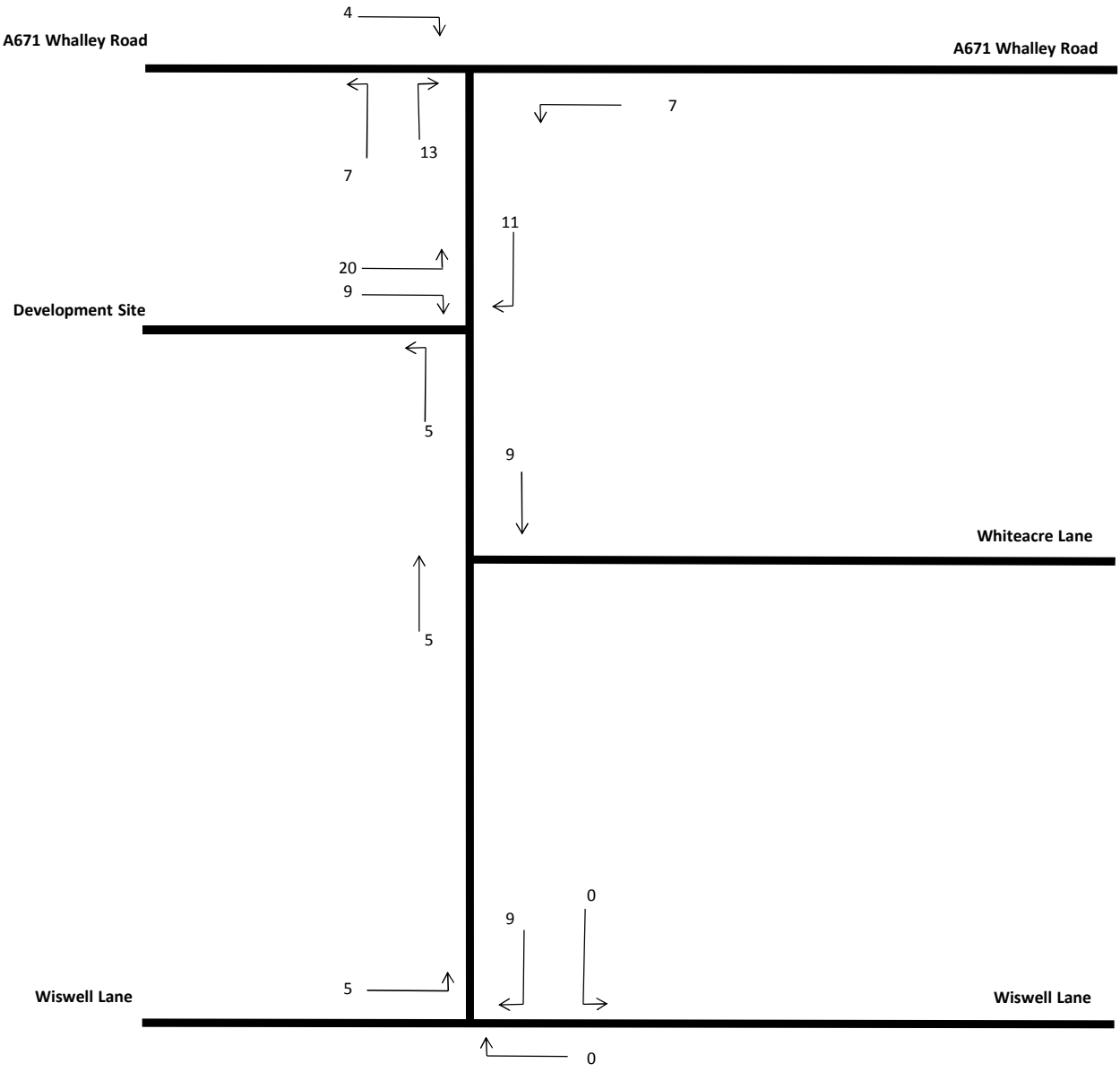


PM PEAK TRIP DISTRIBUTION
Taken from Barrowlands TA with a bias to Traffic Travelling North



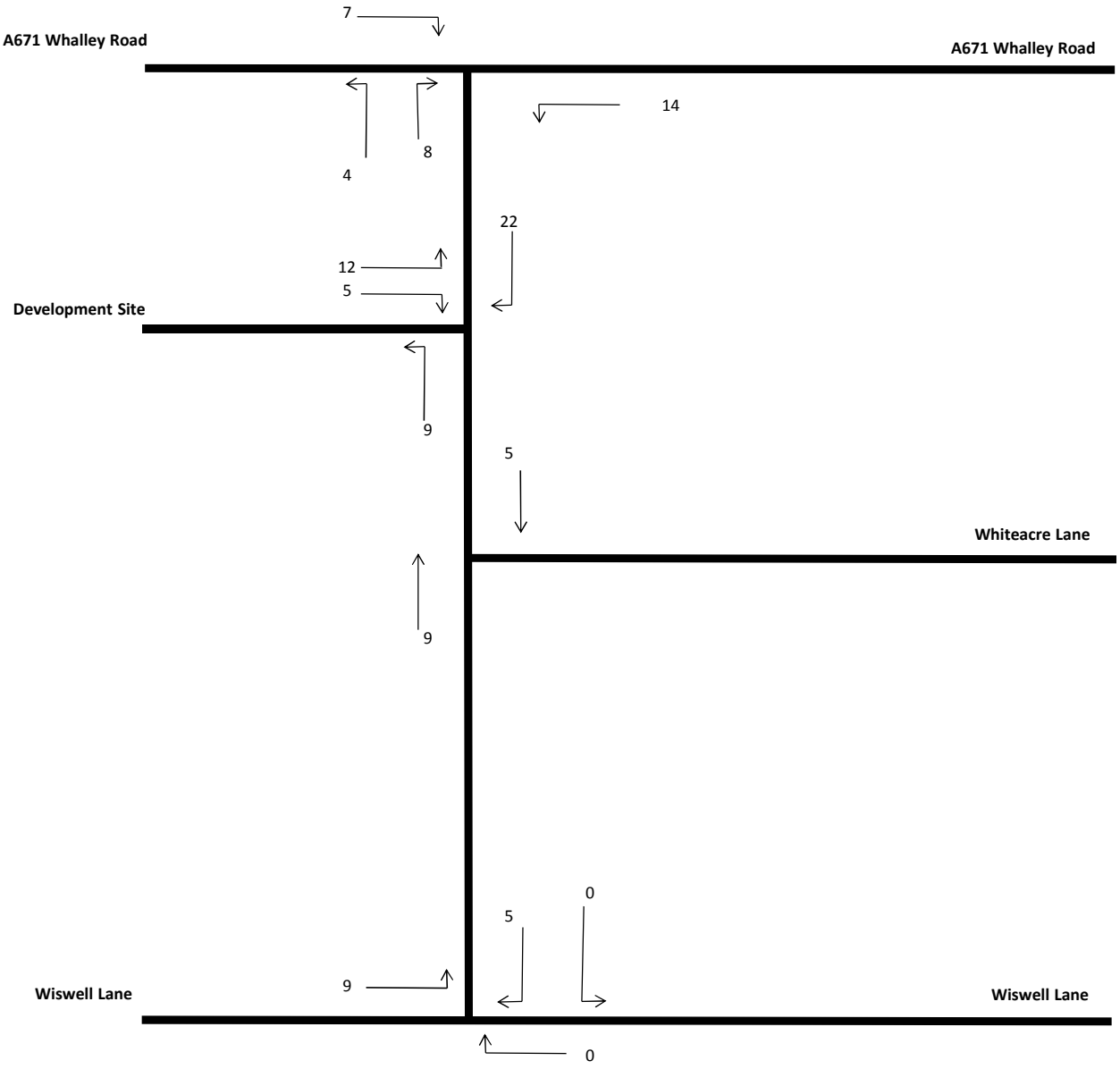
AM PEAK TRIP DISTRIBUTION - Proposed Development Vehicle Trips

Arr	Dep
15	29



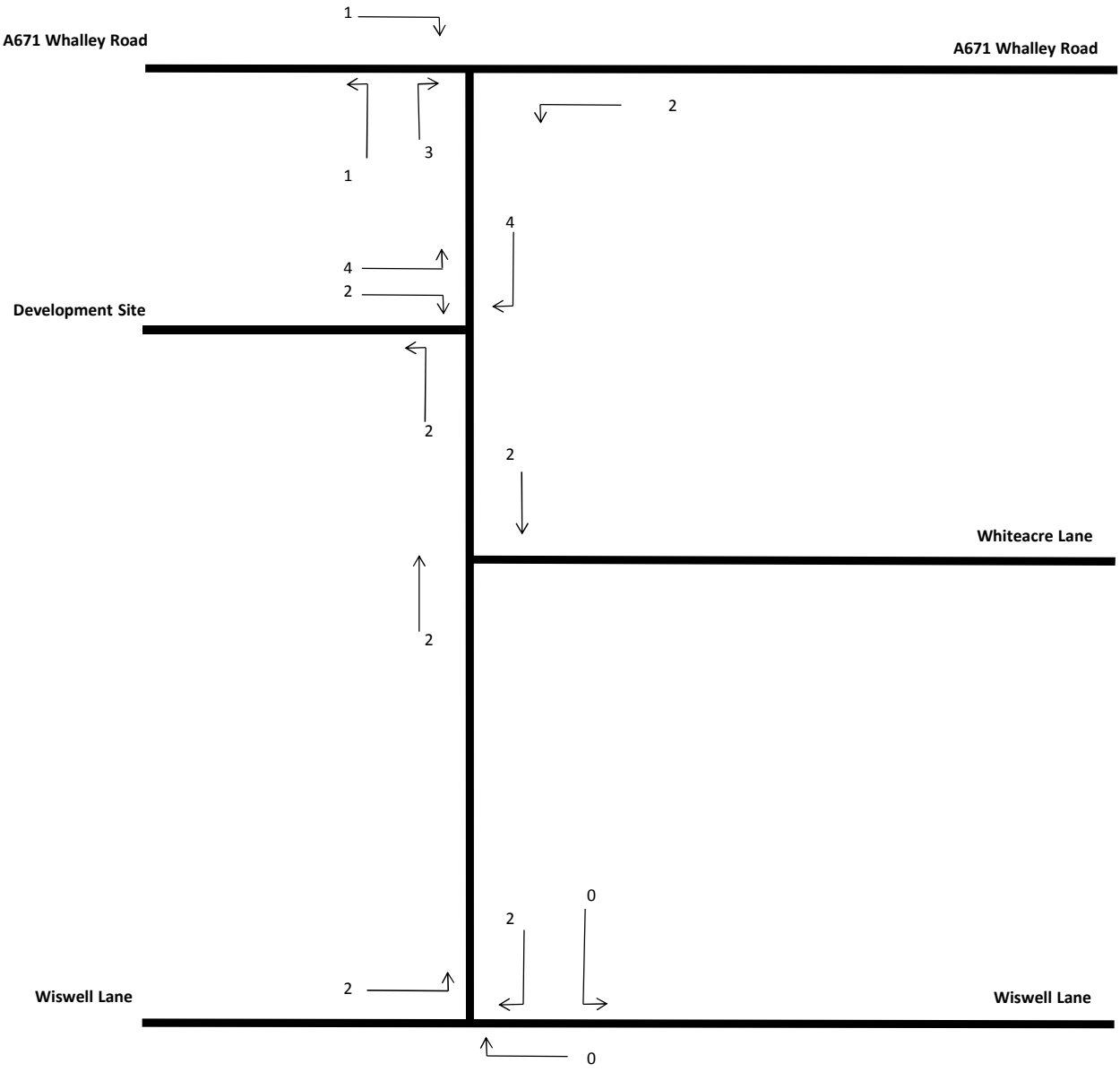
PM PEAK TRIP DISTRIBUTION - Proposed Development Vehicle Trips

Arr	Dep
31	17



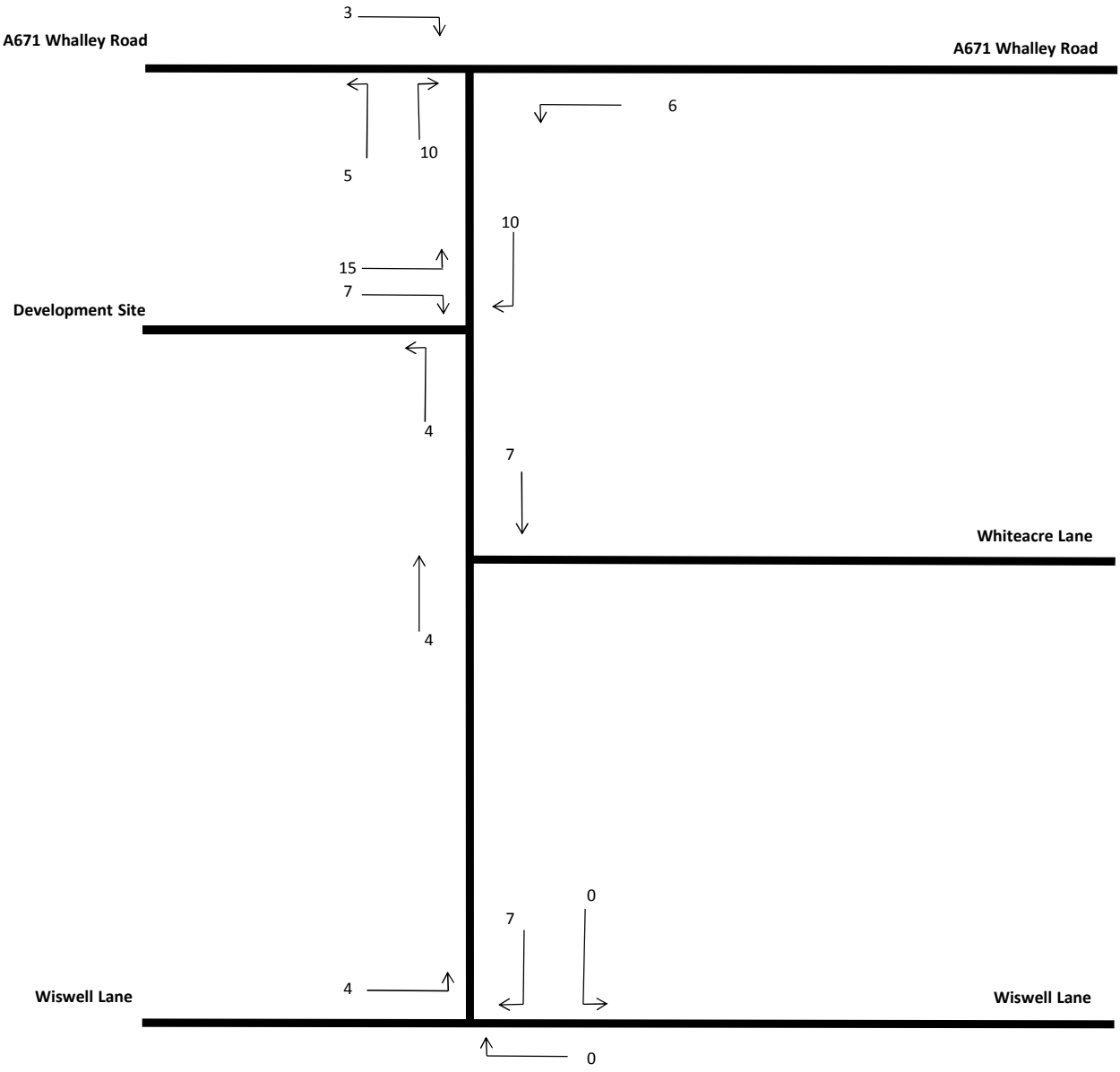
AM PEAK TRIP DISTRIBUTION - Existing Vehicle Trips

Arr	Dep
5	6



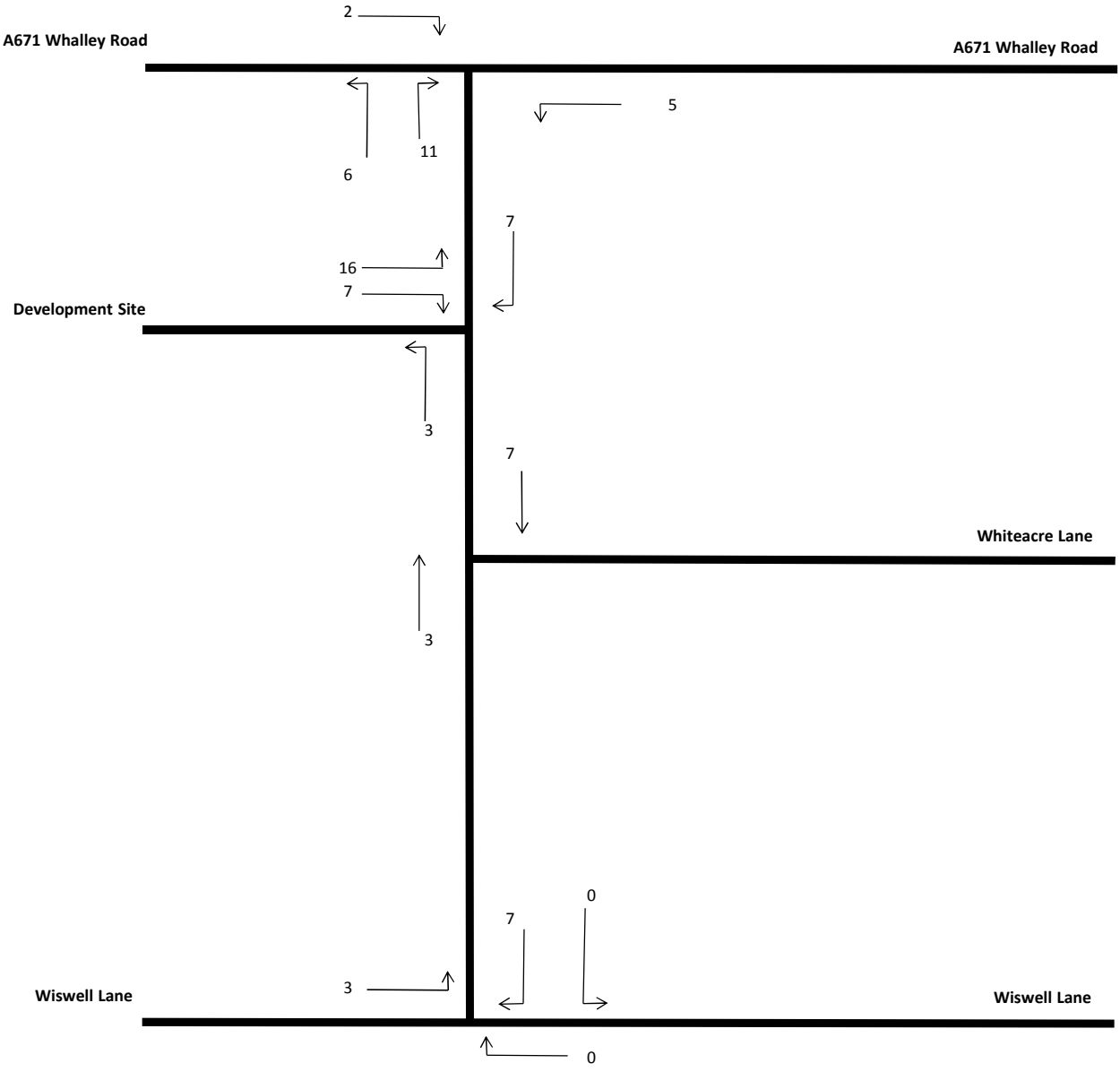
PM PEAK TRIP DISTRIBUTION - Existing Vehicle Trips

Arr	Dep
14	22



AM PEAK TRIP DISTRIBUTION - Proposed NETT Development Vehicle Trips

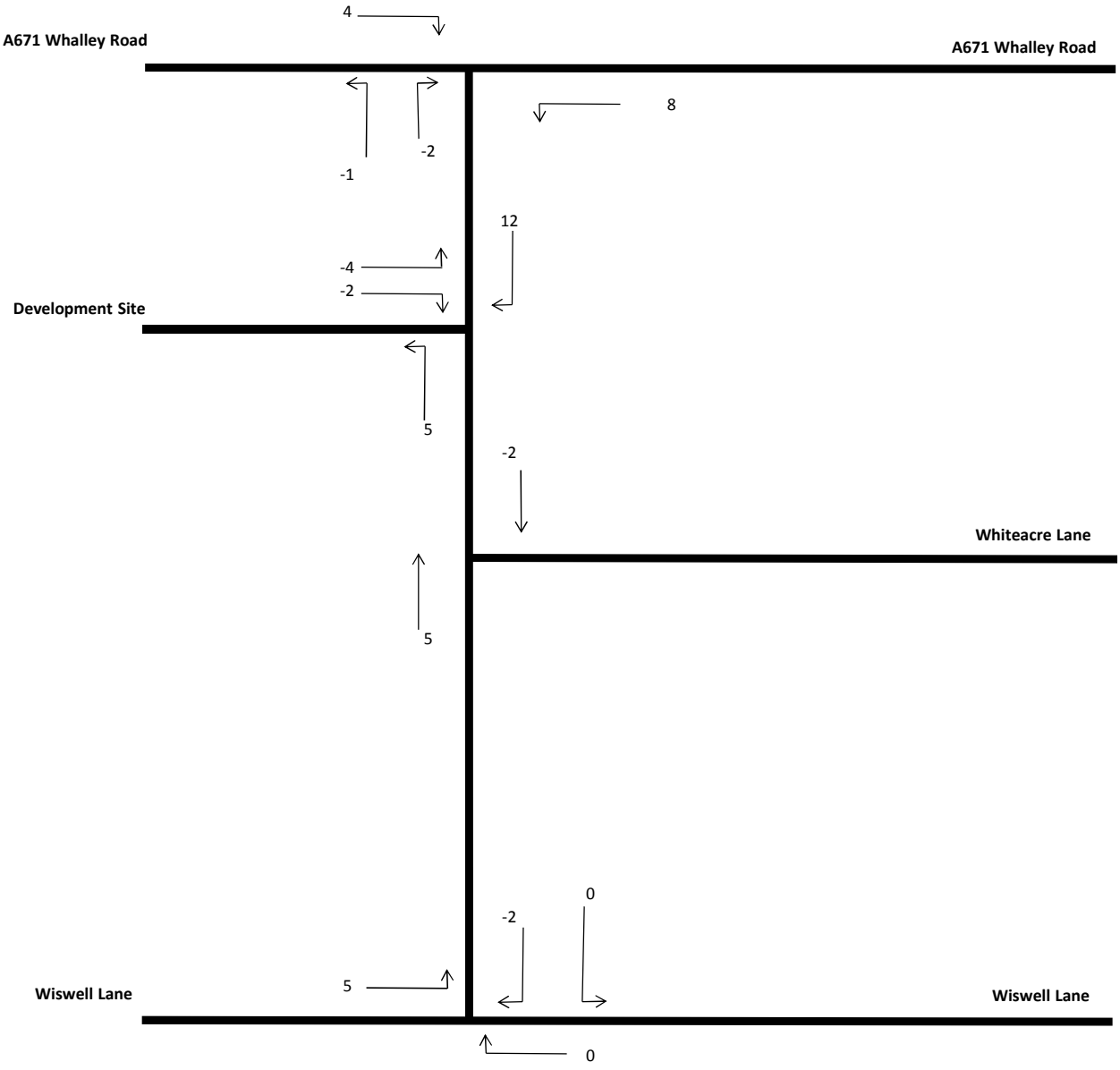
Arr	Dep
10	23



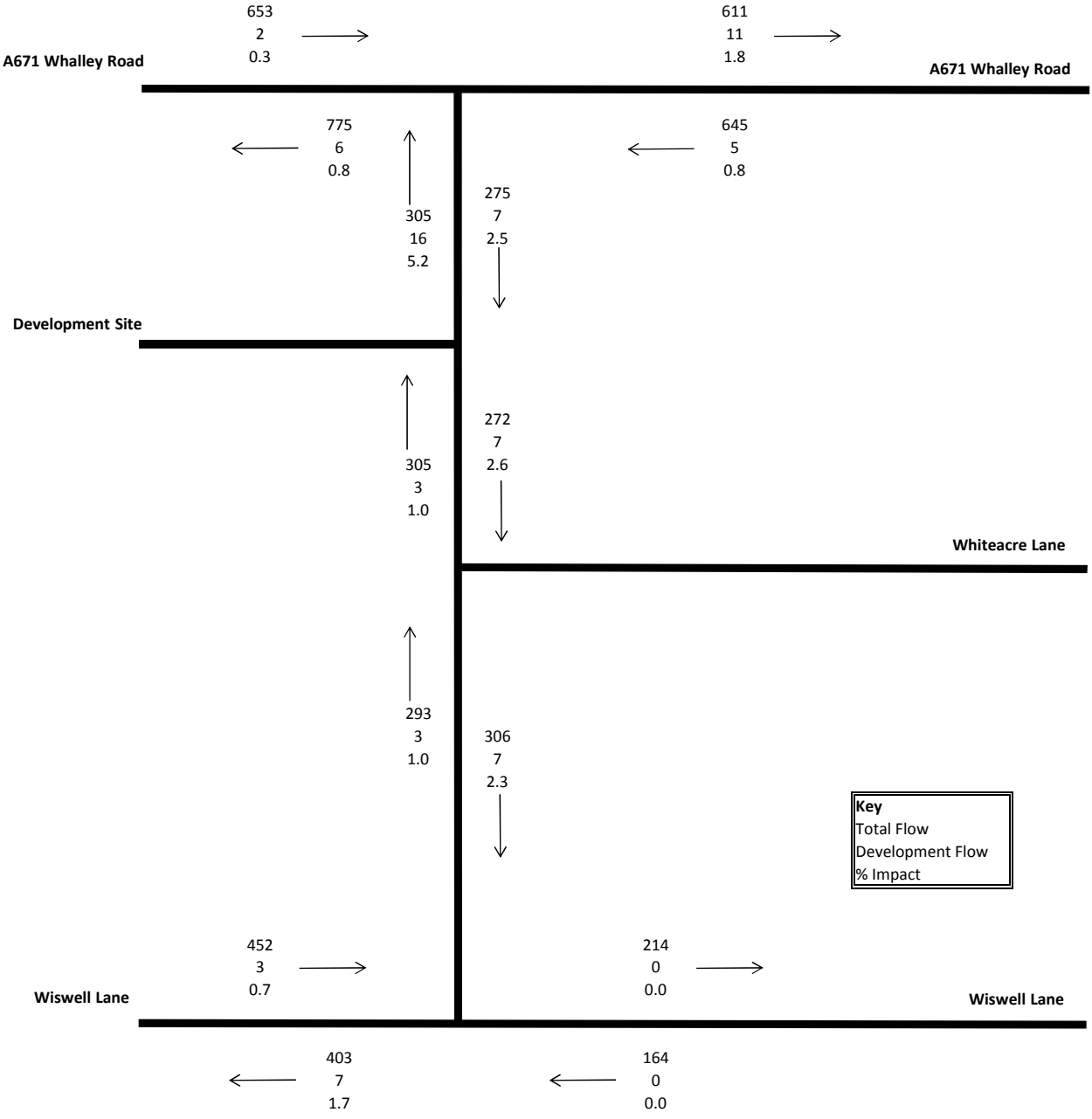
PM PEAK TRIP DISTRIBUTION - Proposed Development Vehicle Trips
Surveyed Garden Centre Trips Removed

Arr	Dep
17	-5

Note this is actually -5 as 22 departed and TRICS shows 17



AM PEAK Link Impact
Total flow taken from 2018 Barrowlands with development



PM PEAK Link Impact
Total flow taken from 2018 Barrowlands with development