Barratt Homes

PROPOSED RESIDENTIAL DEVELOPMENT, BOWLAND MEADOWS, EAST OF CHIPPING LANE, LONGRIDGE

Transport Assessment

VN30271

April 2014

3rd Floor Oxford Place, 61 Oxford Street, Manchester M1 6EQ
Tel: 0161 228 1008 www.vectos.co.uk
Company no. 07794057
Registered address: Vectos (North) Limited, 20 Broomfield Road, Stockport, SK4 4ND.

REPORT CONTROL

Document:	Transport Assessment
Project:	Proposed Residential Development, Bowland Meadows, East of Chipping Lane, Longridge
Client:	Barratt Homes
Job Number:	VN30277
File Origin:	V:\2013\VN30277 Longridge\Docs\Reports\Longridge TA-02 Full Application.docx

Document Checking:

Primary Author	Darren Lovell	**Initialled:**	DL
Contributor	Hannah Stevenson	**Initialled:**	HS
Review By	Darren Lovell	**Initialled:**	DL

Issue	Date	Status	Checked for Issue
1	09/04/14	1st Issue	DL
2	11/04/14	2nd Issue	DL
3			
4			

CONTENTS

FIGURES

Figures 1 to 22

PLANS

APPENDICES

1 INTRODUCTION

1.1 Introduction

1.1.1 Vectos have been instructed by Barratt Homes to advise on the traffic and transportation aspects of proposals for a residential development on land to the north of Longridge and the east of Chipping Lane known as Bowland Meadows.

1.1.2 The location of the application site in relation to the wider area is shown in **Plan 1** while **Plan 2** shows the location of the site in a more local context.

1.1.3 The report provides information on the traffic and transport planning aspects of the development proposals and will form supplementary information to assist in the determination of a full planning application.

1.2 Scope of Report

1.2.1 Following this introduction the report will consider the development site and its location in Section 2. Section 3 of the report provides details of the development proposals and Section 4 considers the accessibility of the site by non-car modes.

1.2.2 Section 5 presents the traffic impact assessment, Section 6 provides details of the site layout and the conclusions are then drawn together in Section 7.

2 DEVELOPMENT SITE AND IT'S LOCATION

2.1 Development Site and Its Location

2.1.1 The development site is located directly to the north of Longridge and extends approximately 7.3 hectares (18 acres). The site is currently used as agricultural land and the site is characterised by fields formed mainly by hedgerows with trees scattered long the hedgerows.

2.1.2 Vehicular access is currently afforded off Chippings Lane in the form of an iron gate leading in to the site.

2.1.3 The existing site is currently bounded to the west by Chipping Lane, the existing cricket pitch to the north, Fields to the east and existing residential properties and Sainsbury's to the south.

2.1.4 Longridge is located 12.9 kilometres (8 miles) north-east of Preston, 14.5 kilometres (9 miles) south-west of Clitheroe and about 12.1 kilometres (7.5 miles) north-west of Blackburn.

2.1.5 The M55 to Blackpool, the M61 to Manchester and the M65 to Blackburn, Accrington and Burnley are all directly accessible from the M6 or adjoining main road networks. These major road connections make Longridge highly accessible to the wider region.

2.2 Access

2.2.1 As part of the development scheme it is proposed to provide the main vehicular site access junction from Chipping Lane. A 30mph speed restriction is currently in force along Chipping Lane and this then changes to national speed limit approximately 110 metres from Inglewhite Road. As part of the site access arrangement it is proposed to extend the 30 mph speed limit to the north of the existing cricket club. It is also proposed to provide a right turning ghost-island for access to the proposed site. The proposed site access arrangement can be seen on **Plan 3**.

2.2.2 New footways will be provided along the site frontage connecting the internal site footway network to the existing off-site footway network.

2.3 Accident Data

2.3.1 An accident investigation has been undertaken and covers the last five years within the vicinity of the site. Lancashire Constabulary has provided this information for the period between 22/11/2008 to 19/08/2013 and the full accident data has been included within **Appendix 1**.

2.3.2 In summary, there have been a total of 30 road traffic accidents that have occurred in the last five years within the search area with 26 having a slight severity, 4 having a serious severity and no fatalities. The following section summarises the accidents at the key junctions within Longridge.

Inglewhite Road/Chipping Lane

2.3.3 There has been a total of one accident at this junction and this had a slight severity, this accident involved two vehicles with an overtaking vehicle colliding with a 'U' turning vehicle.

Inglewhite Road/Halfpenny Lane

2.3.4 No accidents have occurred at this junction within the last five years.

Inglewhite Road/Berry Lane

2.3.5 At this mini-roundabout junction there has been only one accident that has occurred within the last five years and this had a slight severity. This accident involved two vehicles colliding on the roundabout due to bad weather and poor visibility.

Stonebridge Roundabout

2.3.6 At the existing mini-roundabout with Preston Road/Derby Road/Whittingham Road/Kestor Lane there have been a total of two accidents that have occurred over the last five years both of which had a slight severity.

2.3.7 The first accident involved a car and a motorcycle colliding on the roundabout and the second accident also involved a collision of the roundabout but this involved a car and a motorcycle.

Preston Road/Chapel Hill

2.3.8 At the existing mini-roundabout with Preston Road and Chapel Hill there has been a total of four accidents that have occurred within the five year period, all accidents had a slight severity.

2.3.9 Two of the accidents involved two cars colliding on the roundabout junction, one accident involved a vehicle losing control and colliding with a hedge due to a vehicle malfunction. The fourth accident involved a car colliding with a cyclist on the roundabout due to their vision being impaired by the sun.

Berry Lane/Calder Avenue

2.3.10 No accidents have occurred at this junction within the last five years.

Whittingham Road/Halfpenny Lane

2.3.11 At the priority controlled junction with Whittingham Road and Halfpenny Lane there has been a total of two accidents that have occurred at this junction within the last five years, both of these accidents had a severity of slight.

2.3.12 The first accident involved a refuse operative loading to the rear of the refuse vehicle when a vehicle to the rear struck the operative and stated that there foot slipped off the brake. The second accident occurred when a vehicle over ran the give way line and another vehicle travelling along Whittingham Road had the swerve to avoid vehicle and then collided with a lamp post.

Accident Summary

2.3.13 The remaining accidents area scattered around Longridge with no clusters of accidents at one location or evidence of a particular reoccurring accident problem at any one location.

2.3.14 As such, it is concluded that there are no existing highway or safety issues currently present within the vicinity of the site in Longridge.

3 DEVELOPMENT PROPOSALS

3.1.1 The development proposals for this full planning application will consist of a scheme providing 106 dwellings which will be accessed from Chipping Lane. The development will consist of a mixture of 2, 3 and 4 bed properties including 30% affordable property.

3.1.2 The proposed development masterplan can be seen on **Plan 4**.

3.1.3 This scheme will form part of a wider overall residential proposal consisting of up to 500 dwellings, this will be submitted as part of an outline planning application.

3.1.4 Vehicular access will be provided off Chipping Lane via a new priority controlled junction along with a right turn ghost-island facility. Pedestrian and cycle access will be provided for from Chipping Lane with a new footway provided along the site frontage. The footway adjacent to the junction with Inglewhite Road and Chipping Lane will be set back in order to improve forward visibility around the bend. A pedestrian connection from the site to the bus stops along Chipping Lane will also be provided.

3.1.5 It is also proposed to extend the 30mph speed limit along Chipping Lane to the north of the site, with the 30mph speed limit coming in to force to the north side of the existing cricket club along Chipping Lane. It is also proposed to provide two refuge islands within the proposed ghost island to prevent overtaking manoeuvres at this location and improve highway safety and junction visibility splays of 2.4 metres x 43 metres from the proposed site access.

3.1.6 In addition to footpath connection within the site there will also be a 3 metre wide pedestrian/cycleway running along the main site access road through the site. To the north end of the site there will be two pedestrian connection points linking the site to the new area of public open space. A new pedestrian footpath will also be provided which will link the site to the adjacent Sainsbury's foodstore.

3.1.7 The proposed site access arrangement in detail can be seen on **Plan 3**.

4 ACCESS BY A CHOICE OF MODE OF TRANSPORT

4.1 Introduction

4.1.1 New proposals should attempt to influence the mode of travel to the development in terms of gaining a shift in modal split towards non-car modes.

4.1.2 The accessibility of the proposed development by the following modes of transport has, therefore been considered:

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

4.2 Accessibility Questionnaire

4.2.1 As requested the Lancashire County Council residential development accessibility questionnaire has been completed and included as part of this application. The score for this full application site was awarded a high level of accessibility. The completed Accessibility questionnaire is provided in **Appendix 2** of this report.

4.3 Accessibility on Foot

4.3.1 As previously stated, pedestrian access to the proposed site will be afforded from Chipping Lane. Pedestrian facilities will be provided throughout the site along with a 3 metre combined pedestrian/cycleway along the main access road, as well as a new footpath connection linking the site to the adjacent Sainsbury's foodstore.

4.3.2 The closest bus route is located to the south of the proposed site access junction adjacent to the existing Alston Arms public house. As part of the development proposals these stops will be upgraded along with a pedestrian connection in to the site.

4.3.3 There are existing bus stops located along Chipping Lane and Inglewhite Road which are identified on **Plan 5**. In addition, the local amenities are identified on **Plan 6**. This plan demonstrates that the site is located in an accessible and sustainable location with a wide range of local amenities available within a short walk from the proposed site.

These facilities include local schools, health care facilities, two supermarkets and a wide range of local shops location with the centre of Longridge.

4.3.4 Guidelines produced by the Institute of Highways of Transportation (IHT) within their document entitled 'Guidelines for Providing for Journeys on Foot' state that the preferred maximum walking distance for developments in Town Centres is 800 metres.

4.3.5 A distance of 2,000 metres has also been derived from the Institution of Highways and Transportation (IHT) document entitled 'Guidelines for Providing for Journeys on Foot' as a 'preferred maximum' distance for commuting, school and sight-seeing journeys.

4.3.6 In this regard an analysis of the Baseline pedestrian catchment area has been completed. This has been undertaken to illustrate the site's 800 metre and 2 kilometre walking catchment, this is illustrated in **Plan 7**. Given that the development covers such a large area, the pedestrian catchments have been taken from the boundary of the site.

4.3.7 With reference to **Plan 7**, it can be seen that the 800m catchment covers the local primary school along with the facilities located within the town centre of Longridge as well as Sainsbury's supermarket.

4.3.8 The 2 kilometre pedestrian catchment encompasses the majority of Longridge and includes the local high school/college along with other facilities such as, dentists, doctors, employment areas, two supermarkets and the majority of the town local retail facilities.

4.3.9 The close proximity of the amenities in Longridge centre also provides an excellent opportunity for linked walking trips for a variety of purposes to be undertaken between the development site and town centre.

4.3.10 It has been demonstrated that the site's walking catchment covers residential, retail, educational and employment areas, as well as public transport amenities, and that there is excellent pedestrian infrastructure in the vicinity of the site to serve these links for pedestrians.

4.4 Accessibility by Cycle

4.4.1 Cycling has the potential to replace short car journeys, particularly those under 5 kilometres.

4.4.2 **Plan 8** displays a 5 kilometre cycle catchment from the site. This would equate to a journey of around 25 minutes using a leisurely cycle speed of 12 kilometres per hour.

4.4.3 As can be seen from **Plan 8** the 5 kilometre cycle catchment encompasses the whole of Longridge as well as areas surrounding such as Whittingham, Grimsargh and Knowle Green.

4.4.4 As such the site can be considered as being accessible by cycle.

4.5 Accessibility by Bus

4.5.1 When considering how accessible a site is to bus services it is generally accepted that 400 metres is a suitable walking distance to a bus stop. This distance has been taken from the IHT Guidelines on Planning for Public Transport for Development.

4.5.2 Existing bus routes are located along Chipping Lane/Inglewhite Road, within 400 metres of the site, there are also bus services provided along Berry Lane which are slightly beyond 400 metres but still offer a realistic opportunity for public transport access. The bus stop locations and bus routes within Longridge are identified on **Plan 5**.

4.5.3 Table 4.1 provides a summary of the bus services and frequencies that operate within 400 metres of the site.

Serv.	Route	Frequency/Hour					
		Mon-Fri				Sat	Sun
		AM Peak	Mid day	PM Peak	Eve.		
5	Chipping-Longridge-Ribchester-Whalley-Clitheroe	1	0.5	1	1 service	0.5	0
5A	Chipping-Longridge-Ribchester-Whalley-Clitheroe	1	0	0	0.5	0.5 eve.	0

35	Chipping-Longridge-Ribchester-Blackburn	1	0.5	0	0.5	0.5	0

Table 4.1 – Bus Routes and Frequencies in Operating along Chipping Lane

4.5.4 Table 4.2 provides a summary of the bus services that a slight beyond the 400 metre distance within Longridge town centre but these services still offer a realistic opportunity for public transport access.

Serv.	Route	Frequency/Hour					
		Mon-Fri				Sat	Sun
		AM Peak	Mid day	PM Peak	Eve.		
1	Preston-Ribbleton-Red Scar-Grimsargh-Longridge	7	6	6	2	6	2
4	Preston-Fulwood-Whittingham-Longridge	1	1	0	1	1	0

Table 4.2 – Bus Routes and Frequencies in Operating along Berry Lane

4.5.5 As can be seen from Table 4.1, during the busiest peak hours of the day there is a frequency of between 1 and 3 buses per hour in each direction which operate within 400 metres of the site.

4.5.6 Table 4.2 demonstrates that there are 2 additional frequent services operating within Longridge town centre that provide weekday peak hours frequencies of between 6 and 8 buses per hour.

4.5.7 It can be concluded that the site is currently served by bus and can be considered as accessible by bus.

4.6 Multi-Modal Trip Generation

4.6.1 In order to assess the modal split of trips generated by the proposed use the TRICS database was utilised using the "Houses Privately Owned" sub-heading. Trip rates per household were obtained for pedestrians, cyclists and public transport users for the busiest periods of the day. The full TRICS outputs are contained within **Appendix 3**.

4.6.2 The modal split figures for the weekday peak hour for the proposed residential use are shown within Table 4.3 below.

Mode	Trip Rates/Household			Trip Generation		
	Arr	Dep	2-Way	Arr	Dep	2-Way
Pedestrian	0.161	0.075	0.236	17	8	25
Cyclist	0.008	0.005	0.013	1	1	2
PT User	0.004	0.064	0.068	0	7	7

Table 4.3 – Weekday Peak Hour Multi – Modal Trip Generation for Proposed Residential Development (106 Units)

4.6.3 Based on the above, the proportional modal split is shown within Table 4.4.

Mode	Weekday Peak Hour
Pedestrian	74%
Cyclist	4%
Public Transport	21%
Total	100%

Table 4.4 – Proportional Modal Split for Residential Scheme (106 Units)

4.6.4 As can be seen from Tables 4.3 and 4.4 it is forecast that the majority of people would access the site by walking with a smaller percentage cycling and using public transport. As such, it can be concluded that the existing infrastructure can more than adequately cater for the proposed demand by non-car modes.

4.7 Conclusion

4.7.1 An analysis has been completed that studies the accessibility of the site by walking, cycling and public transport and the conclusions are as follows:

- The site is accessible by foot with a network of pedestrian facilities surrounding the site and providing connections to Longridge town centre and all of its associated facilities.
- There are a bus service within 400 metres of the site which are located along Chipping Lane/Inglewhite Road and further services within the town centre operating along Berry Lane.

4.7.2 In conclusion, the proposed development can be considered to be accessible for pedestrians, cyclists and public transport users.

5 TRAFFIC IMPACT ASSESSMENT

5.1 Introduction

5.1.1 Having established that the proposed development site is accessible by modes of transport other than the private car and would be in general accordance with land use and transport policies, the following section of the report considers the traffic impact of the development proposals on the local highway network.

5.2 Existing Traffic

5.2.1 In order to establish the existing highway network traffic flows for the agreed scope of junctions, traffic surveys have been undertaken and obtained at the following junctions for a typical weekday peak hours. The junctions are as follows:

- Junction 1 – Proposed site access off Chipping Lane.
- Junction 2 – Priority controlled junction with Inglewhite Road/Chipping Lane.
- Junction 3 – Roundabout junction with Inglewhite Road/Sainsbury's access.
- Junction 4 – Roundabout junction with Inglewhite Road/Berry Lane.
- Junction 5 – Roundabout junction with Berry Lane/Calder Avenue.
- Junction 6 – Roundabout junction with Derby Rd/Whittingham Rd/Kestor Lane.
- Junction 7 – Roundabout junction with Preston Road/Chapel Hill.
- Junction 8 – Priority controlled junction with Berry Lane/Market Place.
- Junction 9 – Priority controlled junction with Inglewhite Road/Halfpenny Lane.
- Junction 10 – Priority controlled junction with Whittingham Rd/Halfpenny Lane.

5.2.2 The raw survey data has been included within **Appendix 4**.

5.2.3 The weekday AM peak hour flows are identified on **Figure 1** and the weekday PM peak hour flows are identified on **Figure 2**. These flows are displayed in Passenger Car Units (PCUs) for the purpose of this assessment.

5.3 Growthed Flows

5.3.1 For the purpose of this assessment it is proposed to provide an assessment of the year of opening 2016 which will provide for 106 dwellings and a future year assessment of 2025 as agreed with LCC.

5.3.2 In order to fully inform the local authority and provide a robust assessment TEMPRO growth factors have been applied to the base traffic data in order to growth these to the opening year of 2016 and future year of 2025. The TEMPRO growth calculated for Longridge, Ribble Valley, Lancashire have been summarised in Table 5.1.

Year	Scenario	
	AM Peak	PM Peak
2010 to 2016	1.0342	1.0354
2013 to 2016	1.0208	1.0211
2014 to 2016	1.0172	1.0174
2010 to 2025	1.1669	1.1713
2013 to 2025	1.1515	1.1551
2014 to 2025	1.1475	1.1510

Table 5.1 – TEMPRO Growth Factors for Longridge

5.3.3 The resultant 2016 baseline flows are shown in **Figures 3** and **4** for the weekday AM and PM peaks hours.

5.3.4 Similarly, the resultant 2025 baseline flows are shown in **Figures 5** and **6** for the weekday AM and PM peaks hours.

5.4 Committed Developments

5.4.1 It is our understanding that as part of this assessment there are three committed development that need to be considered and these area as follows:

- Fox Strategic Land & Property – Whittingham Road, Longridge (200 Dwellings).
- David Wilson Homes – Whittingham Road, Whittingham (78 Dwellings).

- Residential and Employment Site, Whittingham Hospital.

5.4.2 The resultant committed development flows have been added together and are identified on **Figures 7** and **8** for the weekday AM and PM peak hours.

5.5 Baseline Flows

5.5.1 In order to calculate the baseline flows the committed development flows have been added to the growthed flows.

5.5.2 **Figures 9** and **10** identify the resultant 2016 Baseline Flows for the weekday AM and PM peak hours.

5.5.3 Similarly **Figures 11** and **12** identify the 2025 Baseline flows for the weekday AM and PM peak hours.

5.6 Distribution

5.6.1 To determine the distribution patterns for the proposed site, Journey-to-work Census data (2001) was utilised. This contains the origin (Home) and destination (usual place of work) information for work travel within the UK. Origin and Destination areas are uniquely defined by their COA Wards.

5.6.2 The COA Wards 30ULGC, 30ULGJ and 30ULGK were used to identify where local people currently travel to work and a map showing these three zones in a local perspective is provided within **Appendix 5**. Destinations for each of the three wards were loaded into the Geographic Information System (GIS) MapInfo and the shortest routes to these destinations from the application site were generated. A map providing a snapshot of these destinations and routes is provided within **Appendix 5**.

5.6.3 These routes highlighted that there are essentially six end nodes within the local highway network where traffic will exit the study area before branching out onto other routes in the wider area to reach the various destinations. By establishing these routes, it allowed destinations to be zoned and in turn, identifying the percentage of people travelling to each zone via the following end nodes of the local highway network (study area) as listed below:

- Inglewhite Road;
- B5269 Whittingham Road;
- B6244 Preston Road;
- King Street;
- Calder Avenue; and
- Chipping Lane.

5.7 Development Trip Generation

5.7.1 As previously stated it is proposed to provide 106 dwellings as part of a detailed planning application which will be accessed from Chipping Lane.

5.7.2 In order to calculate the potential traffic generation for the proposed residential scheme an interrogation of the TRICS database has been undertaken using the 'Houses Privately Owned' range for sites of a similar size and location.

5.7.3 The full TRICS outputs based on the number of dwellings can be seen within **Appendix 6** and the potential traffic generation has been summarised within Tables 5.3.

Time Period	Proposed Residential Scheme (106 units)					
	Trip Rates/Household			Traffic Flows		
	Arr	Dep	2-Way	Arr	Dep	2-Way
Weekday AM Peak	0.153	0.438	0.591	16	46	62
Weekday PM Peak	0.410	0.226	0.636	43	24	67

Table 5.3 – Traffic Generation for Proposed Residential Scheme (106 Dwellings – Full Application)

5.7.4 **Figures 15** and **16** identify the residential traffic generation associated with 106 units as part of the full application for the weekday AM and PM peak hours.

5.8 Assessment Flows

5.8.1 In order to establish the assessment flow scenarios the proposed traffic associated with the 106 units has been added to the 2016 baseline flows. The resultant 2016 assessment flows are identified on **Figures 17** and **18** for the weekday AM and PM peak hours.

5.8.2 In order to calculate the 2025 assessment flows, the trips associated with the proposed 106 dwellings have been added to the 2025 baseline flows. The resultant 2025 assessment flows are identified on **Figures 19** and **20** for the weekday AM and PM peak hours.

5.8.3 The percentage net impact for the provision of 106 residential units has been calculated by dividing the proposed development trips by the baseline scenario and has been identified on **Figures 21** and **22** for the weekday AM and PM peak hours.

5.8.4 Table 5.4 identifies the percentage net impact of the development proposals at the pertinent off-site junctions within the scope of assessment.

Junction	Percentage Net Impact	
	AM Peak	PM Peak
Priority controlled junction with Inglewhite Road/Chipping Lane.	+7.5%	+8.4%
Roundabout junction with Inglewhite Road/Sainsbury's access.	+4.6%	+3.9%
Roundabout junction with Inglewhite Road/Berry Lane.	+3.0%	+2.9%
Roundabout junction with Berry Lane/Calder Avenue.	+2.5%	+2.1%
Roundabout junction with Derby Rd/Whittingham Rd/Kestor Lane.	+0.9%	+1.2%
Roundabout junction with Preston Road/Chapel Hill.	+1.0%	+1.4%
Priority controlled junction with Berry Lane/Market Place.	+2.0%	+2.3%
Priority controlled junction with Inglewhite Road/Halfpenny Lane.	+4.1%	+4.7%
Priority controlled junction with Whittingham Rd/Halfpenny Lane	+1.9%	+2.2%

Table 5.4 – Junction Percentage Net Impact

5.8.5 Table 5.4 summarises the potential percentage net impact at the pertinent junctions as a result of the development proposals.

5.8.6 As requested by Lancashire County Council the following junctions within Longridge have been assessed in detail:

- Junction 1 – Proposed site access off Chipping Lane.
- Junction 2 – Priority controlled junction with Inglewhite Road/Chipping Lane.
- Junction 3 – Roundabout junction with Inglewhite Road/Sainsbury's access.
- Junction 4 – Roundabout junction with Inglewhite Road/Berry Lane.
- Junction 5 – Roundabout junction with Berry Lane/Calder Avenue.
- Junction 6 – Roundabout junction with Derby Rd/Whittingham Rd/Kestor Lane.
- Junction 7 – Roundabout junction with Preston Road/Chapel Hill.
- Junction 8 – Priority controlled junction with Berry Lane/Market Place.
- Junction 9 – Priority controlled junction with Inglewhite Road/Halfpenny Lane.

- Junction 10 – Priority controlled junction with Whittingham Rd/Halfpenny Lane.

5.9 Junction Assessments

5.9.1 The following sections will provide an analysis of each pertinent junction surrounding the site.

Proposed Site Access off Chipping Lane

5.9.2 In order to assess the operational characteristics of this proposed site access junction off Chipping Lane, the computer program PICADY has been utilised. The assessment has used the 2016 and 2025 assessment flows which assume the proposed 106 units are built out.

5.9.3 Table 5.5 provides a summary of the PICADY results for the 2016 and 2025 assessment flows, whilst the full outputs are contained within **Appendix 7**.

Arm	2016 Assessment Flows				2025 Assessment Flows			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Max RFC	Max Q	Max RFC	Max Q	Max RFC	Max Q	Max RFC	Max Q
Site Access	0.083	0.09	0.042	0.04	0.084	0.09	0.043	0.70
Chipping Ln – Right In	0.022	0.02	0.056	0.06	0.029	0.03	0.057	0.90

Table 5.5 - PICADY Results for Proposed Site Access Junction off Chipping Lane– 2016 and 2025 Assessment Flows

5.9.4 As can be seen from Table 5.5 the proposed site access junction can accommodate the initial 106 dwellings in 2016 and 2025 with the development built out.

Existing Junction with Inglewhite Road/Chipping Lane

5.9.5 In order to assess the operational characteristics of this existing priority access junction with Inglewhite Road and Chipping Lane, the computer program PICADY has been utilised. The assessment has used the 2016/2025 baseline and assessment flows, this will enable a comparison to be made between the 'without' and 'with' development scenarios.

5.9.6 Table 5.6 provides a summary of the PICADY results for the 2016 baseline and assessment flows, whilst the full outputs are contained within **Appendix 8**.

Arm	2016 Baseline Flows				2016 Assessment Flows			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Max RFC	Max Q	Max RFC	Max Q	Max RFC	Max Q	Max RFC	Max Q
Iglewhite Road – Left Out	0.053	0.06	0.31	0.03	0.61	0.06	0.054	0.06
Inglewhite Road – Right Out	0.314	0.45	0.339	0.51	0.322	0.47	0.350	0.53
Chipping Lane – Right In	0.109	0.12	0.025	0.03	0.096	0.11	0.039	0.04

Table 5.6 - PICADY Results for Existing Junction with Inglewhite Rd/Chipping Lane– 2016 Baseline and Assessment Flows

5.9.7 Table 5.7 provides a summary of the PICADY results for the 2025 baseline and assessment flows, whilst the full outputs are contained within **Appendix 8**.

Arm	2025 Baseline Flows				2025 Assessment Flows			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Max RFC	Max Q	Max RFC	Max Q	Max RFC	Max Q	Max RFC	Max Q
Iglewhite Road – Left Out	0.062	0.07	0.038	0.04	0.231	0.30	0.063	0.07
Inglewhite Road – Right Out	0.362	0.56	0.391	0.64	0.158	0.19	0.403	0.67
Chipping Lane – Right In	0.077	0.08	0.030	0.03	0.105	0.12	0.044	0.05

Table 5.7 - PICADY Results for Existing Junction with Inglewhite Rd/Chipping Lane– 2025 Baseline and Assessment Flows

5.9.8 As can be seen from Table 5.6 and 5.7 the existing priority controlled junction with Inglewhite Road and Chipping Lane operates within capacity without the proposed residential development in place and will continue to operate within capacity with the proposed residential development in place.

Existing Junction with Inglewhite Road/Sainsbury's Access

5.9.9 In order to assess the operational characteristics of this existing priority controlled mini-roundabout junction with Inglewhite Road and Sainsbury's access, the computer program ARCADY has been utilised. The assessment has used the 2016/2025 baseline and assessment flows, this will enable a comparison to be made between the 'without' and 'with' development scenarios.

5.9.10 Table 5.8 provides a summary of the ARCADY results for the 2016 baseline and assessment flows, whilst the full outputs are contained within **Appendix 9**.

Arm	2016 Baseline Flows				2016 Assessment Flows			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Max RFC	Max Q	Max RFC	Max Q	Max RFC	Max Q	Max RFC	Max Q
Inglewhite Rd (SB)	0.44	0.80	0.45	0.81	0.48	0.91	0.47	0.88
Sainsbury's Access	0.13	0.14	0.38	0.61	0.13	0.15	0.39	0.62
Inglewhite Rd (NB)	0.44	0.78	0.58	1.36	0.45	0.82	0.61	1.52

Table 5.8 - ARCADY Results for Existing Junction with Inglewhite Rd/Sainsbury's Access – 2016 Baseline and Assessment Flows

5.9.11 Table 5.9 provides a summary of the ARCADY results for the 2025 baseline and assessment flows, whilst the full outputs are contained within **Appendix 9**.

Arm	2025 Baseline Flows				2025 Assessment Flows			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Max RFC	Max Q	Max RFC	Max Q	Max RFC	Max Q	Max RFC	Max Q
Inglewhite Rd (SB)	0.50	1.00	0.51	1.04	0.54	1.14	0.53	1.12
Sainsbury's Access	0.15	0.18	0.44	0.79	0.15	0.18	0.45	0.80
Inglewhite Rd (NB)	0.19	0.96	0.65	1.83	0.50	1.00	0.68	2.10

Table 5.9 - ARCADY Results for Existing Junction with Inglewhite Rd/Sainsbury's Access – 2025 Baseline and Assessment Flows

5.9.12 As can be seen from Table 5.8 and 5.9 the existing priority controlled mini-roundabout junction with Inglewhite Road and Sainsbury's access operates within capacity in both assessment years without the proposed residential development in place. The tables demonstrate that this junction will continue to operate within capacity with the proposed residential scheme present.

Existing Junction with Inglewhite Road/Berry Lane

5.9.13 In order to assess the operational characteristics of this existing priority controlled mini-roundabout junction with Inglewhite Road and Berry Lane, the computer program ARCADY has been utilised. The assessment has used the 2016/2025 baseline and assessment flows, this will enable a comparison to be made between the 'without' and 'with' development scenarios.

5.9.14 Table 5.10 provides a summary of the ARCADY results for the 2016 baseline and assessment flows, whilst the full outputs are contained within **Appendix 10**.

Arm	2016 Baseline Flows				2016 Assessment Flows			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Max RFC	Max Q	Max RFC	Max Q	Max RFC	Max Q	Max RFC	Max Q
Inglewhite Rd (SB)	0.52	1.07	0.57	1.33	0.55	1.22	0.59	1.44
Berry Lane	0.84	4.73	0.91	8.42	0.86	5.46	0.95	11.65
Inglewhite Rd (NB)	0.52	1.07	0.67	1.96	0.53	1.10	0.69	2.16

Table 5.10 - ARCADY Results for Existing Junction with Inglewhite Rd/Berry Lane – 2016 Baseline and Assessment Flows

5.9.15 Table 5.11 provides a summary of the ARCADY results for the 2025 baseline and assessment flows, whilst the full outputs are contained within **Appendix 10**.

Arm	2025 Baseline Flows				2025 Assessment Flows			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Max RFC	Max Q	Max RFC	Max Q	Max RFC	Max Q	Max RFC	Max Q
Inglewhite Rd (SB)	0.59	1.41	0.66	1.89	0.62	1.62	0.68	2.07
Berry Lane	0.97	14.93	1.06	39.08	0.99	19.31	1.10	52.55
Inglewhite Rd (NB)	0.59	1.40	0.76	2.98	0.59	1.45	0.77	3.31

Table 5.11 - ARCADY Results for Existing Junction with Inglewhite Rd/Berry Lane – 2025 Baseline and Assessment Flows

5.9.16 As can be seen from Table 5.10 and 5.11 the existing priority controlled mini-roundabout junction with Inglewhite Road and Berry Lane generally operates within capacity without the development in place with the exception of Berry Lane. During the peak hour periods this arm suffers congestion and delay, however, it should be noted that this only occurs for a short period of time during the peak hours and generally operates within capacity for the majority of the day.

5.9.17 The results demonstrate that the proposals will not have a material impact to the operation of this existing junction with the proposed development resulting in less than 1 additional vehicle per minute during the weekday peak hour periods.

Existing Junction with Berry Lane/Calder Avenue

5.9.18 In order to assess the operational characteristics of this existing priority controlled mini-roundabout junction with Berry Lane and Calder Avenue, the computer program ARCADY has been utilised. The assessment has used the 2016/2025 baseline and assessment flows, this will enable a comparison to be made between the 'without' and 'with' development scenarios.

5.9.19 Table 5.12 provides a summary of the ARCADY results for the 2016 baseline and assessment flows, whilst the full outputs are contained within **Appendix 11**.

Arm	2016 Baseline Flows				2016 Assessment Flows			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Max RFC	Max Q	Max RFC	Max Q	Max RFC	Max Q	Max RFC	Max Q
Berry Lane (SB)	0.24	0.32	0.54	1.15	0.26	0.35	0.55	1.19
Calder Avenue	0.26	0.36	0.27	0.37	0.27	0.36	0.27	0.37
Berry Lane (NB)	0.42	0.72	0.43	0.75	0.43	0.74	0.44	0.80

Table 5.12 - ARCADY Results for Existing Junction with Berry Lane/Calder Avenue – 2016 Baseline and Assessment Flows

5.9.20 Table 5.13 provides a summary of the ARCADY results for the 2025 baseline and assessment flows, whilst the full outputs are contained within **Appendix 11**.

Arm	2025 Baseline Flows				2025 Assessment Flows			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Max RFC	Max Q	Max RFC	Max Q	Max RFC	Max Q	Max RFC	Max Q
Berry Lane (SB)	0.27	0.38	0.61	1.55	0.29	0.41	0.62	1.61
Calder Avenue	0.30	0.43	0.31	0.46	0.30	0.44	0.32	0.46
Berry Lane (NB)	0.48	0.92	0.49	0.96	0.49	0.94	0.51	1.02

Table 5.13 - ARCADY Results for Existing Junction with Berry Lane/Calder Avenue – 2025 Baseline and Assessment Flows

5.9.21 As can be seen from Table 5.12 and 5.13 the existing priority controlled mini-roundabout junction with Berry Lane and Calder Avenue operates within capacity without the proposed residential development on the local highway network.

5.9.22 The results demonstrate that the existing junction will continue to operate with capacity and with no significant vehicle queues with the proposed residential trip at this junction.

Existing Junction with Derby Rd/Whittingham Rd/Kestor Lane

5.9.23 In order to assess the operational characteristics of this existing priority controlled mini-roundabout junction with Derby Road, Whittingham Road and Kestor Lane, the computer program ARCADY has been utilised. The assessment has used the 2016/2015 baseline and assessment flows, this will enable a comparison to be made between the 'without' and 'with' development scenarios.

5.9.24 Table 5.14 provides a summary of the ARCADY results for the 2016 baseline and assessment flows, whilst the full outputs are contained within **Appendix 12**.

Arm	2016 Baseline Flows				2016 Assessment Flows			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Max RFC	Max Q	Max RFC	Max Q	Max RFC	Max Q	Max RFC	Max Q
Derby Road (N)	0.61	1.53	0.61	1.52	0.61	1.53	0.61	1.57
Kestor Lane	0.69	2.15	0.54	1.14	0.69	2.15	0.55	1.21
Preston Road	0.63	1.67	0.88	7.00	0.63	1.67	0.90	7.99
Whittingham Road	0.77	3.17	0.92	8.74	0.77	3.17	0.93	9.71

Table 5.14 - ARCADY Results for Existing Junction with Derby Rd/Whittingham Rd/Kestor Ln – 2016 Baseline and Assessment Flows

5.9.25 Table 5.15 provides a summary of the ARCADY results for the 2025 baseline and assessment flows, whilst the full outputs are contained within **Appendix 12**.

Arm	2025 Baseline Flows				2025 Assessment Flows			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Max RFC	Max Q	Max RFC	Max Q	Max RFC	Max Q	Max RFC	Max Q
Derby Road (N)	0.68	2.13	0.69	2.19	0.70	2.27	0.70	2.26
Kestor Lane	0.80	3.81	0.62	1.59	0.81	3.97	0.63	1.69
Preston Road	0.71	2.39	1.00	29.97	0.71	2.45	1.02	37.61
Whittingham Road	0.86	5.45	1.07	40.08	0.86	5.57	1.08	43.10

Table 5.15 - ARCADY Results for Existing Junction with Derby Rd/Whittingham Rd/Kestor Ln – 2025 Baseline and Assessment Flows

5.9.26 As can be seen from Table 5.14 the existing priority controlled mini-roundabout junction with Derby Rd, Whittingham Road and Kestor Lane generally operates within capacity within the 2016 'without' and 'with' development scenarios with a reduce level of service on the Preston Road and Whittingham Road arm during the weekday PM peak hour. It should be noted that the proposed development will only result in around 1 vehicle every three minutes at this location.

5.9.27 Table 5.15 which provides the 2025 'without' and 'with' development scenario assumes a level of background traffic growth. This has been applied at the request of LCC, however, it is considered that this level of growth will not actually materialise in Longridge town centre, any growth will be attributed to such development as additional houses, which have already been accounted for, as such it is considered that there is an element of double counting and these future year flows should be considered as providing an extremely robust analysis and an over estimate of flows on the network.

5.9.28 The 2025 future year flows demonstrate that there is still a reduce level of service at the Preston Road and Whittingham Road approach arms, however, the proposed development will have a negligible impact in terms of both vehicular queues and capacity.

5.9.29 It should be noted that as part of the planning consent for the David Wilson Homes scheme it is understood that there has been a package of highway works put forward, in addition, to the site specific travel plan, traffic calming measures, dropped kerbs, pedestrian refuges, cycle lanes and bus stop improvements proposed.

Existing Junction with Preston Road/Chapel Hill

5.9.30 In order to assess the operational characteristics of this existing priority controlled mini-roundabout junction with Preston Road and Chapel Hill, the computer program ARCADY has been utilised. The assessment has used the 2016/2025 baseline and assessment flows, this will enable a comparison to be made between the 'without' and 'with' development scenarios.

5.9.31 Table 5.16 provides a summary of the ARCADY results for the 2016 baseline and assessment flows, whilst the full outputs are contained within **Appendix 13**.

Arm	2016 Baseline Flows				2016 Assessment Flows			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Max RFC	Max Q	Max RFC	Max Q	Max RFC	Max Q	Max RFC	Max Q
Preston Road (SB)	0.89	7.14	0.64	1.78	0.90	8.27	0.65	1.84
Chapel Hill	0.65	1.83	0.34	0.52	0.66	1.90	0.35	0.53
Preston Road (NB)	0.76	3.11	1.07	74.28	0.77	3.20	1.08	83.96

Table 5.16 - ARCADY Results for Existing Junction with Preston Road and Chapel Hill – 2016 Baseline and Assessment Flows

5.9.32 Table 5.17 provides a summary of the ARCADY results for the 2025 baseline and assessment flows, whilst the full outputs are contained within **Appendix 13**.

Arm	2025 Baseline Flows				2025 Assessment Flows			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Max RFC	Max Q	Max RFC	Max Q	Max RFC	Max Q	Max RFC	Max Q
Preston Road (SB)	1.01	29.51	0.73	2.62	1.03	36.91	0.74	2.73
Chapel Hill	0.77	3.20	0.41	0.69	0.77	3.28	0.41	0.69
Preston Road (NB)	0.85	5.50	1.20	181.71	0.86	5.74	1.22	192.45

Table 5.17 - ARCADY Results for Existing Junction with Preston Road and Chapel Hill – 2025 Baseline and Assessment Flows

5.9.33 As can be seen from Table 5.16 and 5.17 the existing priority controlled mini-roundabout junction with Preston Road and Chapel Hill operates at capacity with levels of reduced service along Preston Road for vehicle leaving Longridge in the AM peak hour and for Preston Road entering Longridge in the weekday PM peak hour without the residential development in place.

5.9.34 The results demonstrate that the proposed trips associated with the residential scheme will have a negligible impact in terms of both capacity and vehicular queues. Again the residential scheme will only result in around 1 additional vehicle every 3 minutes during the peak hour periods.

5.9.35 Again, it should be noted that it is not considered that any background traffic growth will actually take place and with the exception of the peak hour periods this junction will operate within capacity for the majority of the day.

Existing Junction with Berry Lane/Market Place/King Street

5.9.36 In order to assess the operational characteristics of this existing priority controlled junction with Berry Lane, Market Place and King Street, the computer program PICADY has been utilised. The assessment has used the 2016/2025 baseline and assessment flows, this will enable a comparison to be made between the 'without' and 'with' development scenarios.

5.9.37 Table 5.18 provides a summary of the PICADY results for the 2016 baseline and assessment flows, whilst the full outputs are contained within **Appendix 14**.

Arm	2016 Baseline Flows				2016 Assessment Flows			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Max RFC	Max Q	Max RFC	Max Q	Max RFC	Max Q	Max RFC	Max Q
Berry Lane – Left and Right Out	0.449	0.81	0.483	0.93	0.400	0.66	0.497	0.98
King Street – Ahead and Right	0.360	0.63	0.288	0.43	0.369	0.66	0.312	0.49

Table 5.18 - PICADY Results for Existing Junction with Berry Lane/Market Place/King St – 2016 Baseline and Assessment Flows

5.9.38 Table 5.19 provides a summary of the PICADY results for the 2025 baseline and assessment flows, whilst the full outputs are contained within **Appendix 14**.

Arm	2025 Baseline Flows				2025 Assessment Flows			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Max RFC	Max Q	Max RFC	Max Q	Max RFC	Max Q	Max RFC	Max Q
Berry Lane – Left and Right Out	0.631	1.68	0.559	1.26	0.460	0.85	0.574	1.33
King Street – Ahead and Right	0.417	0.84	0.333	0.54	0.422	0.85	0.357	0.61

Table 5.19 - PICADY Results for Existing Junction with Berry Lane/Market Place/King St – 2025 Baseline and Assessment Flows

5.9.39 As can be seen from Table 5.18 and 5.19 the existing priority controlled junction with Berry Lane, Market Place and King Street operates within capacity without the development present and will continue to operate within capacity with no capacity or vehicular queuing issues with the proposed development trips present at this junction.

Existing Junction with Inglewhite Road/Halfpenny Lane

5.9.40 In order to assess the operational characteristics of this existing priority controlled junction with Inglewhite Road and Halfpenny Lane, the computer program PICADY has been utilised. The assessment has used the 2016/2025 baseline and assessment flows and, this will enable a comparison to be made between the 'without' and 'with' development scenarios.

5.9.41 Table 5.20 provides a summary of the PICADY results for the 2016 baseline and assessment flows, whilst the full outputs are contained within **Appendix 15**.

Arm	2016 Baseline Flows				2016 Assessment Flows			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Max RFC	Max Q	Max RFC	Max Q	Max RFC	Max Q	Max RFC	Max Q
Halfpenny Lane	0.114	0.13	0.142	0.17	0.122	0.14	0.166	0.20
Inglewhite Rd – Ahead and Right	0.024	0.02	0.170	0.02	0.024	0.02	0.017	0.02

Table 5.20 - PICADY Results for Existing Junction with Inglewhite Road/Halfpenny Lane – 2016 Baseline and Assessment Flows

5.9.42 Table 5.21 provides a summary of the PICADY results for the 2025 baseline and assessment flows, whilst the full outputs are contained within **Appendix 15**.

Arm	2025 Baseline Flows				2025 Assessment Flows			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Max RFC	Max Q	Max RFC	Max Q	Max RFC	Max Q	Max RFC	Max Q
Halfpenny Lane	0.129	0.15	0.163	0.19	0.138	0.16	0.187	0.23
Inglewhite Rd – Ahead and Right	0.028	0.03	0.019	0.02	0.028	0.03	0.019	0.02

Table 5.21 - PICADY Results for Existing Junction with Inglewhite Road/Halfpenny Lane – 2025 Baseline and Assessment Flows

5.9.43 As can be seen from Table 5.20 and 5.21 the existing priority controlled junction with Inglewhite Road and Halfpenny Lane operates with substantial reserve capacity without the proposed residential scheme trips on the highway network and will continue to operate within capacity with the residential trips present at this junction with no material impact to capacity or vehicular queues.

Existing Junction with Whittingham Road/Halfpenny Lane

5.9.44 In order to assess the operational characteristics of this existing priority controlled junction with Whittingham Road and Halfpenny Lane, the computer program PICADY has been utilised. The assessment has used the 2016/2025 baseline and assessment flows and the 2025 baseline and assessment flows, this will enable a comparison to be made between the 'without' and 'with' development scenarios.

5.9.45 Table 5.21 provides a summary of the PICADY results for the 2016 baseline and assessment flows, whilst the full outputs are contained within **Appendix 16**.

Arm	2016 Baseline Flows				2016 Assessment Flows			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Max RFC	Max Q	Max RFC	Max Q	Max RFC	Max Q	Max RFC	Max Q
Halfpenny Lane	0.194	0.24	0.157	0.19	0.221	0.28	0.168	0.20
Whittingham Road – Ahead and Right	0.057	0.06	0.042	0.04	0.057	0.06	0.042	0.04

Table 5.21 - PICADY Results for Existing Junction with Whittingham Road/Halfpenny Lane – 2016 Baseline and Assessment Flows

5.9.46 Table 5.22 provides a summary of the PICADY results for the 2025 baseline and assessment flows, whilst the full outputs are contained within **Appendix 16**.

Arm	2025 Baseline Flows				2025 Assessment Flows			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Max RFC	Max Q	Max RFC	Max Q	Max RFC	Max Q	Max RFC	Max Q
Halfpenny Lane	0.224	0.29	0.170	0.20	0.254	0.34	0.195	0.24
Whittingham Road – Ahead and Right	0.065	0.07	0.018	0.02	0.065	0.07	0.048	0.05

Table 5.22 - PICADY Results for Existing Junction with Whittingham Road/Halfpenny Lane – 2025 Baseline and Assessment Flows

5.9.47 As can be seen from Table 5.21 and 5.22 the existing priority controlled junction with Whittingham Road and Halfpenny Lane operates with substantial spare capacity both without and with the development proposals in place.

5.10 Traffic Impact Assessment Conclusions

5.10.1 The Traffic Impact Assessment has been undertaken to analyse a study network as agreed with Lancashire County Council.

5.10.2 The conclusions of the consideration of transport impact is that there will be an increase in pedestrian, cycle and vehicle flows at the proposed site, which can be accommodated on the local highway network without any requirement for highway improvement works.

5.10.3 There will also be an increase in demand for local bus services, which can be accommodated by the current service provision.

5.10.4 Again it should be noted that the proposed analysis has assumed background traffic growth as well as taking in to account the committed developments in the area as should it is considered that this analysis should be considered as being robust.

5.10.5 It has been demonstrated that the proposed site access arrangement off Chipping Lane can accommodate the dwellings as part of this full application.

5.10.6 The existing priority controlled junction with Inglewhite Road and Chipping Lane currently operates within capacity and as part of the full application scheme this junction will continue to operate within capacity with 106 dwellings proposed on site.

5.10.7 The existing mini-roundabout with Inglewhite Road and the Sainsbury's site access currently operates within capacity without the development scheme in place. This existing junction will continue to operate within capacity with the proposed development in place.

5.10.8 The existing mini-roundabout with Inglewhite Road and Berry Lane which is located to the south of the site generally operates within capacity for the without and with development scenarios with the exception of Beery Lane which offers a reduce level of service for both the without and with development scenarios.

5.10.9 The existing mini-roundabout junction with Berry Lane and Calder Avenue which is also located to the south of the site currently operates within capacity with no material vehicle queues present during the weekday morning and evening peak hours. It has been demonstrated that the development proposals can be accommodated for at this junction with no material impact to the operational characteristics.

5.10.10 The existing mini-roundabout junction with Whittingham Road, Derby Road and Kestor Lane currently offers a reduced level of service during the peak hour periods for both the without and with development scenarios, however it has been demonstrated that the proposed residential scheme will have a negligible impact with only around one additional vehicle every 3 minutes passing through this junction as a result of the proposed scheme.

5.10.11 To the south of the site along Preston Road there is a mini-roundabout junction with Chapel Hill. It has been demonstrated that this junction currently operates with a level of reduce service, however, again the development proposals will only generate around one additional vehicle every 3 minutes during the peak hour periods.

5.10.12 Located to the south-east of the site Berry Lane forms a three-arm priority junction with Market Place and King Street. It has been demonstrated that this existing junction operates within capacity and there will be a minimal impact as a result of the development proposals.

5.10.13 To the west of the site Inglewhite Road forms a three-arm priority controlled junction with Halfpenny Lane. It has been demonstrated that this existing junction currently operates within capacity without the proposed 106 dwellings on the highway network and the proposed residential scheme will have a minimal impact at this junction in terms of both capacity and vehicular queues.

5.10.14 Finally, to the south-west of the site Whittingham Road forms a three-arm priority controlled junction with Halfpenny Lane. It has been demonstrated that this existing junction currently operates within capacity and the proposed development scheme will have a minimal impact in terms of both capacity and vehicular queues.

5.10.15 It can be concluded that the proposed development will have a minimal impact to the operation of the highway network in and around Longridge.

6 SITE LAYOUT

6.1 Introduction

6.1.1 This section of the report will detail the proposed site access arrangement and the internal layout.

6.2 Site Access

6.2.1 Vehicular access will be provided off Chipping Lane via a new priority controlled junction along with a right turn ghost-island facility. Pedestrian and cycle access will be provided for from Chipping Lane with a new footway provided along the site frontage. The footway adjacent to the junction with Inglewhite Road and Chipping Lane will be set back in order to improve forward visibility around the bend. A pedestrian connection from the site to the bus stops along Chipping Lane will also be provided.

6.2.2 It is also proposed to extend the 30mph speed limit along Chipping Lane to the north of the site, with the 30mph speed limit coming in to force to the north side of the existing cricket club along Chipping Lane. It is also proposed to provide two refuge islands within the proposed ghost island to prevent overtaking manoeuvres at this location and improve highway safety and junction visibility splays of 2.4 metres x 43 metres from the proposed site access.

6.2.3 In addition to footpath connection within the site there will also be a 3 metre wide pedestrian/cycleway running along the main site access road through the site. To the north end of the site there will be two pedestrian connection points linking the site to the new area of public open space. A new footpath connection will also be provided which will link the site to the adjacent Sainsbury's foodstore.

6.2.4 The proposed site access arrangement in detail can be seen on **Plan 3**.

6.3 Internal Layout

6.3.1 The internal site layout will be designed to accommodate the turning movements of both delivery and refuse vehicles.

6.3.2 Appropriate turning head facilities will be provided for at the end of any cul-de-sac to allow refuse and delivery vehicles to manoeuvre.

6.4 Parking

6.4.1 As part of the development proposals the 2 to 3 bed properties will be provided with 2 car parking spaces and the 2 bed properties will be provided with 1 space. As such, the overall car parking provision equates to 196 spaces for the 106 proposed dwellings.

6.5 Potential Developer Contribution

6.5.1 In accordance with Lancashire County Council's document 'Planning Obligations in Lancashire Policy' adopted November 2006 and updated in September 2008 there will be a requirement to contribution towards promoting sustainable development. This is based on the accessibility score as presented in **Appendix 2**.

7 CONCLUSIONS AND RECOMMENDATIONS

7.1.1 This report has considered the proposals for a full application consisting of 106 residential dwelling on land to the north of Longridge and the east of Chipping Lane known as Bowland Meadows.

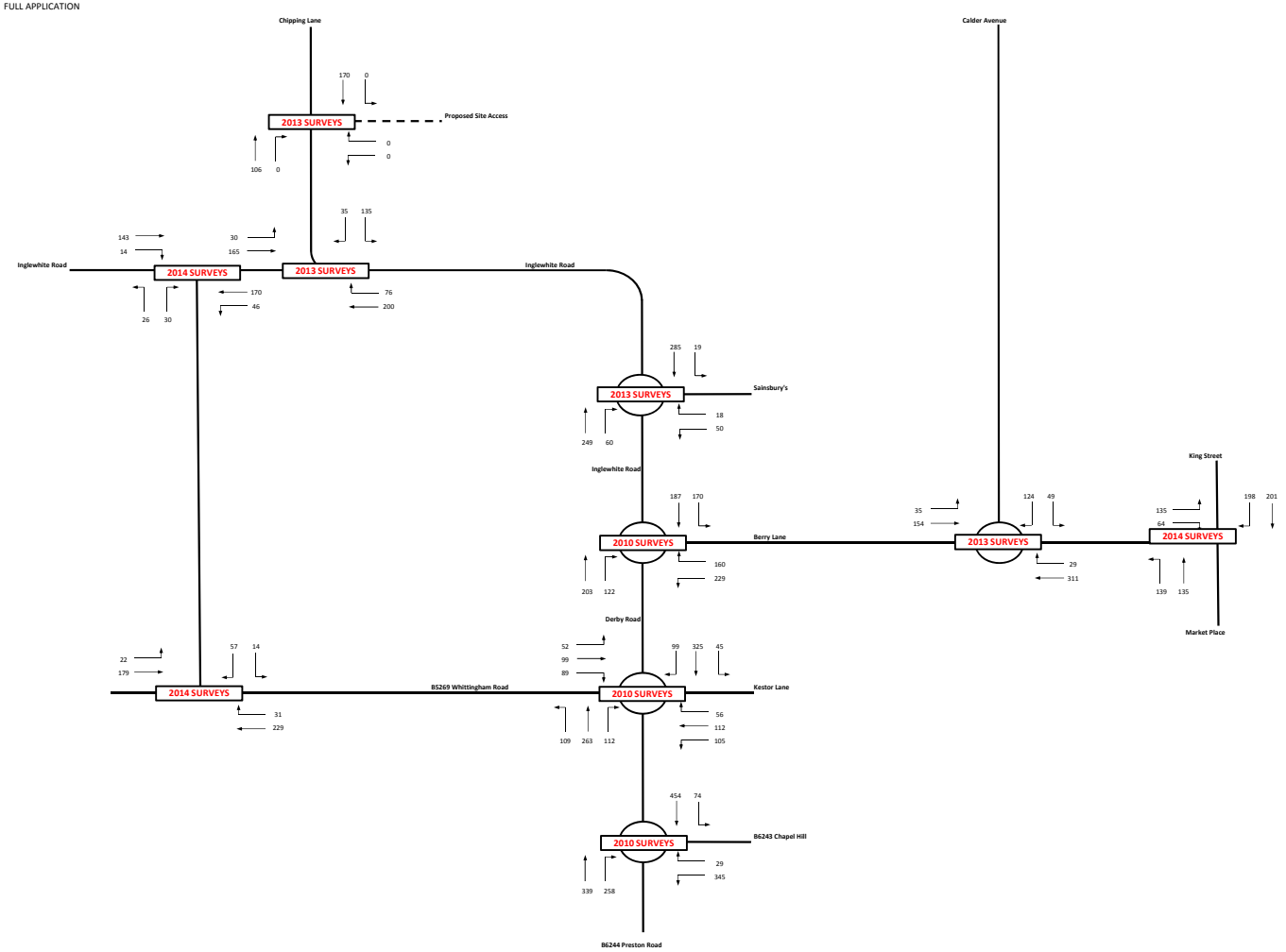
7.1.2 The conclusions can be summarised as follows:

- The site is accessible by sustainable modes of travel given its proximity to Longridge town centre;
- There is an established network of footways located within the vicinity of the site providing links to the surrounding retail, employment, educational and residential areas;
- There is a bus route located within 400 metres of the site with further services provided with Longridge town centre.
- It has been demonstrated that the proposed residential development scheme will not have a material impact to the operation of the existing highway network in and around Longdrige.

7.1.3 In conclusion, there are no highway or transportation reasons why the proposals should not receive planning consent.

FIGURES

FULL APPLICATION

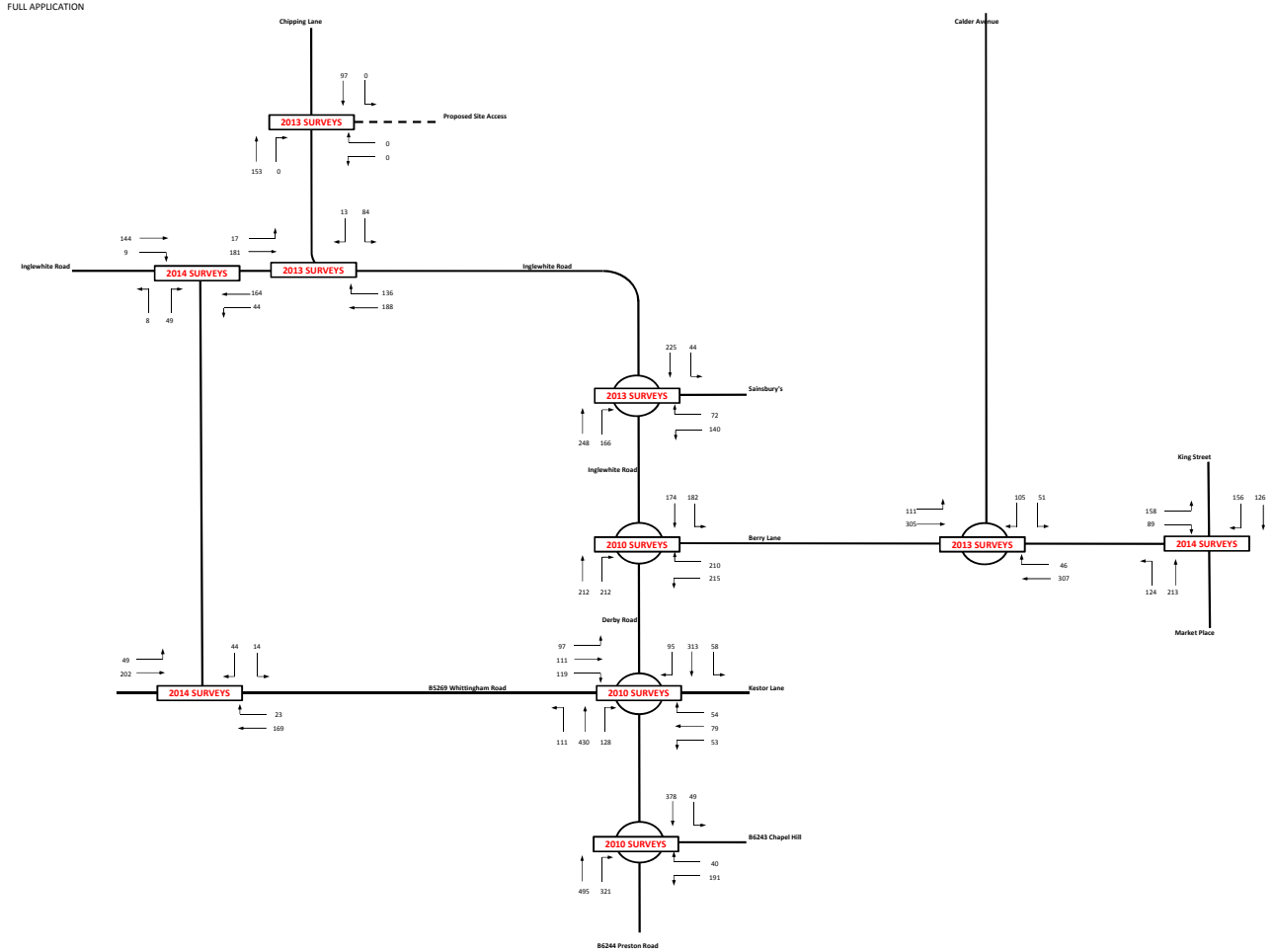


PCUs

Figure 1 **Surveyed Traffic Flows (Weekday AM Peak 0800 to 0900)**

vectos transport planning specialists
3rd Floor Oxford Place, 61 Oxford Street, Manchester M1 6EQ Tel: 0161 228 1008 www.vectos.co.uk

FULL APPLICATION

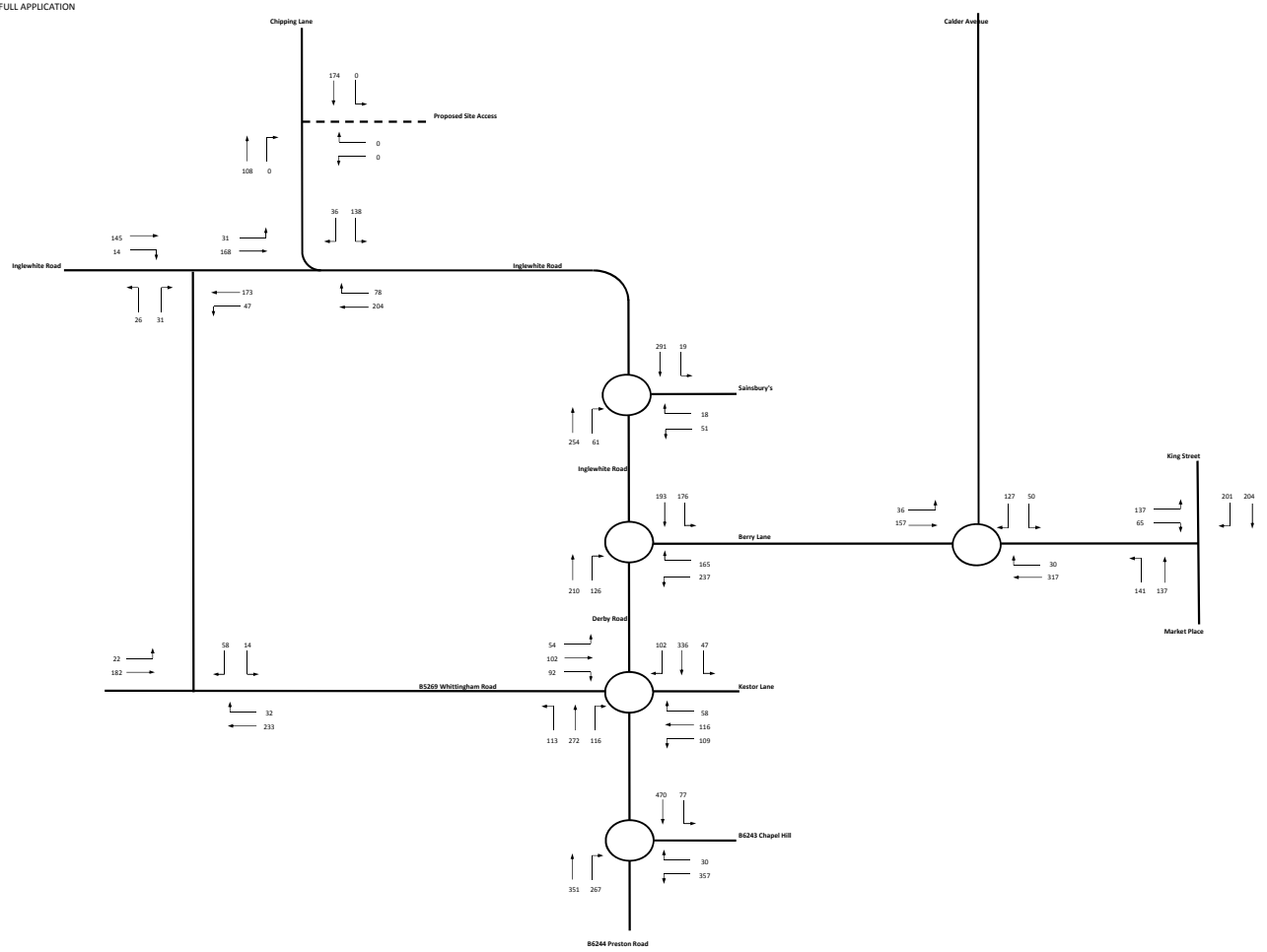


PCUs

Figure 2 **Surveyed Traffic Flows (Weekday PM Peak 1700 to 1800)**

vectos transport planning specialists
3rd Floor Oxford Place, 61 Oxford Street, Manchester M1 6EQ Tel: 0161 228 1008 www.vectos.co.uk

FULL APPLICATION



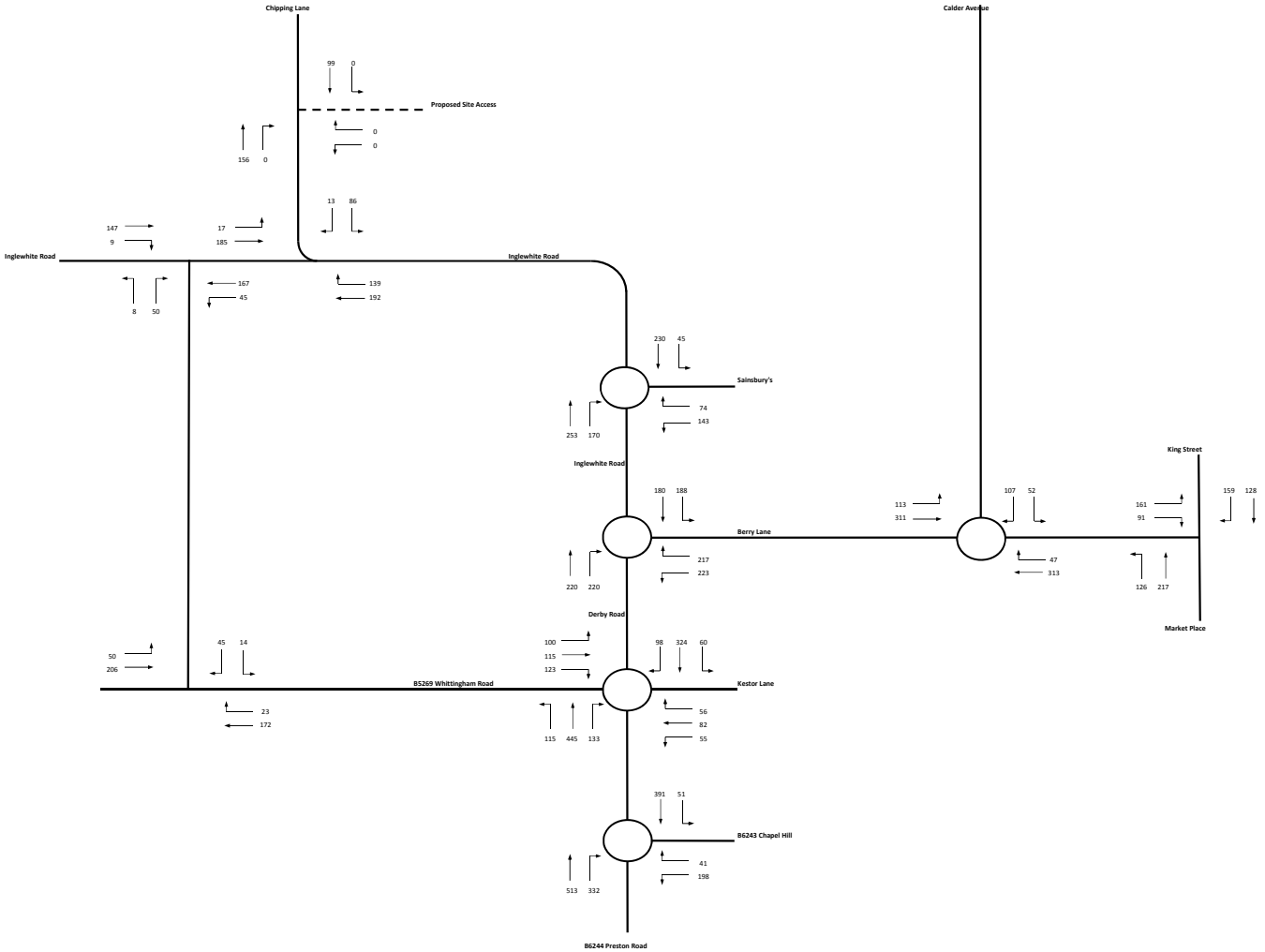
NTM TEMPRO Growth Factor 2010 to 2016 = 1.034
NTM TEMPRO Growth Factor 2013 to 2016 = 1.021
NTM TEMPRO Growth Factor 2014 to 2016 = 1.017

PCUs

Figure 3 **2016 Growthed Flows (Weekday AM Peak 0800 to 0900)**

3rd Floor Oxford Place, 61 Oxford Street, Manchester M1 6EQ Tel: 0161 228 1008 www.vectos.co.uk

FULL APPLICATION



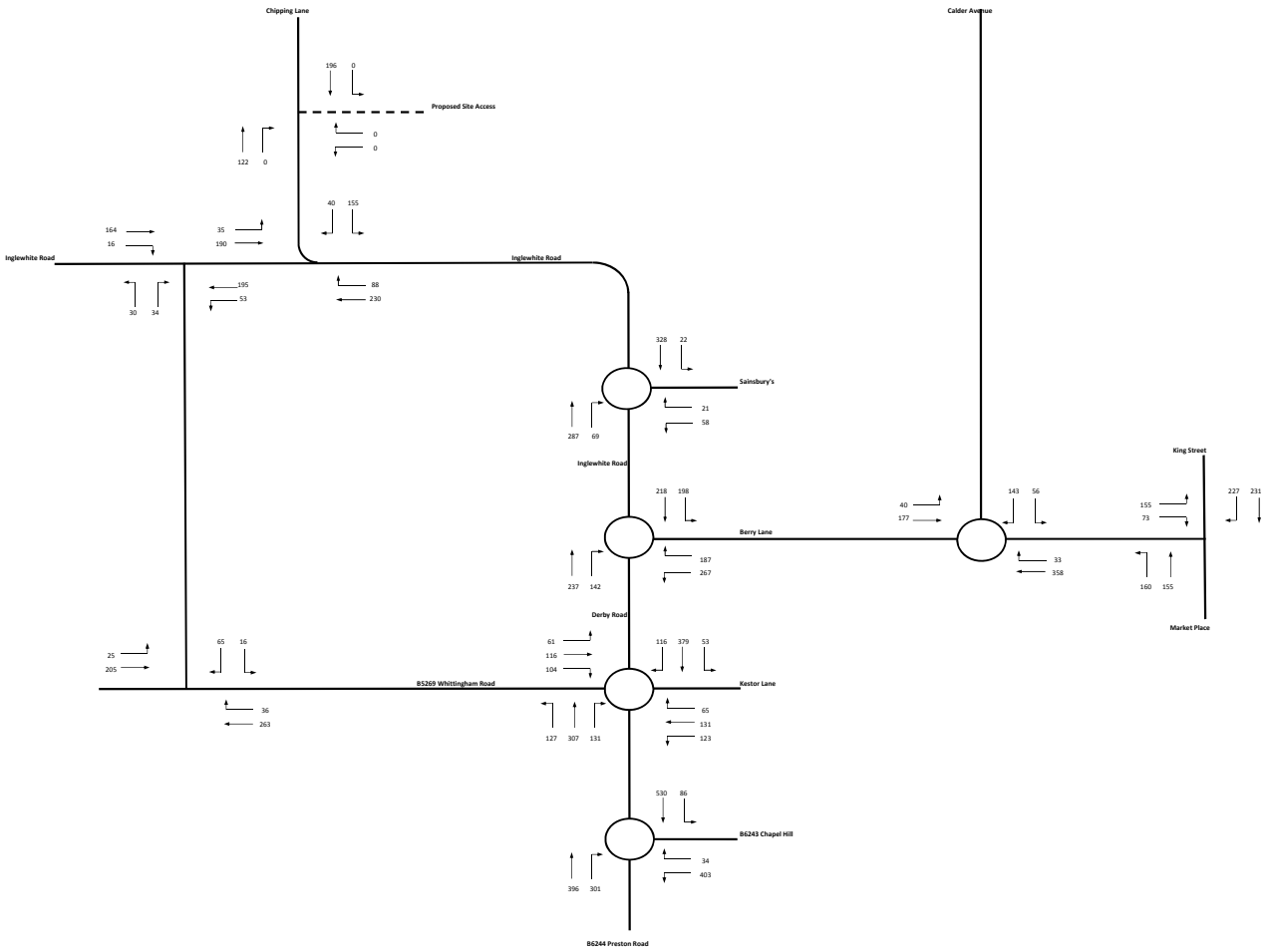
NTM TEMPRO Growth Factor 2010 to 2016 = 1.04
NTM TEMPRO Growth Factor 2013 to 2016 = 1.02
NTM TEMPRO Growth Factor 2014 to 2016 = 1.02

PCUs

Figure 4 **2016 Growthed Flows (Weekday PM Peak 1700 to 1800)**

vectos transport planning specialists
3rd Floor Oxford Place, 61 Oxford Street, Manchester M1 6EQ Tel: 0161 228 1008 www.vectos.co.uk

FULL APPLICATION



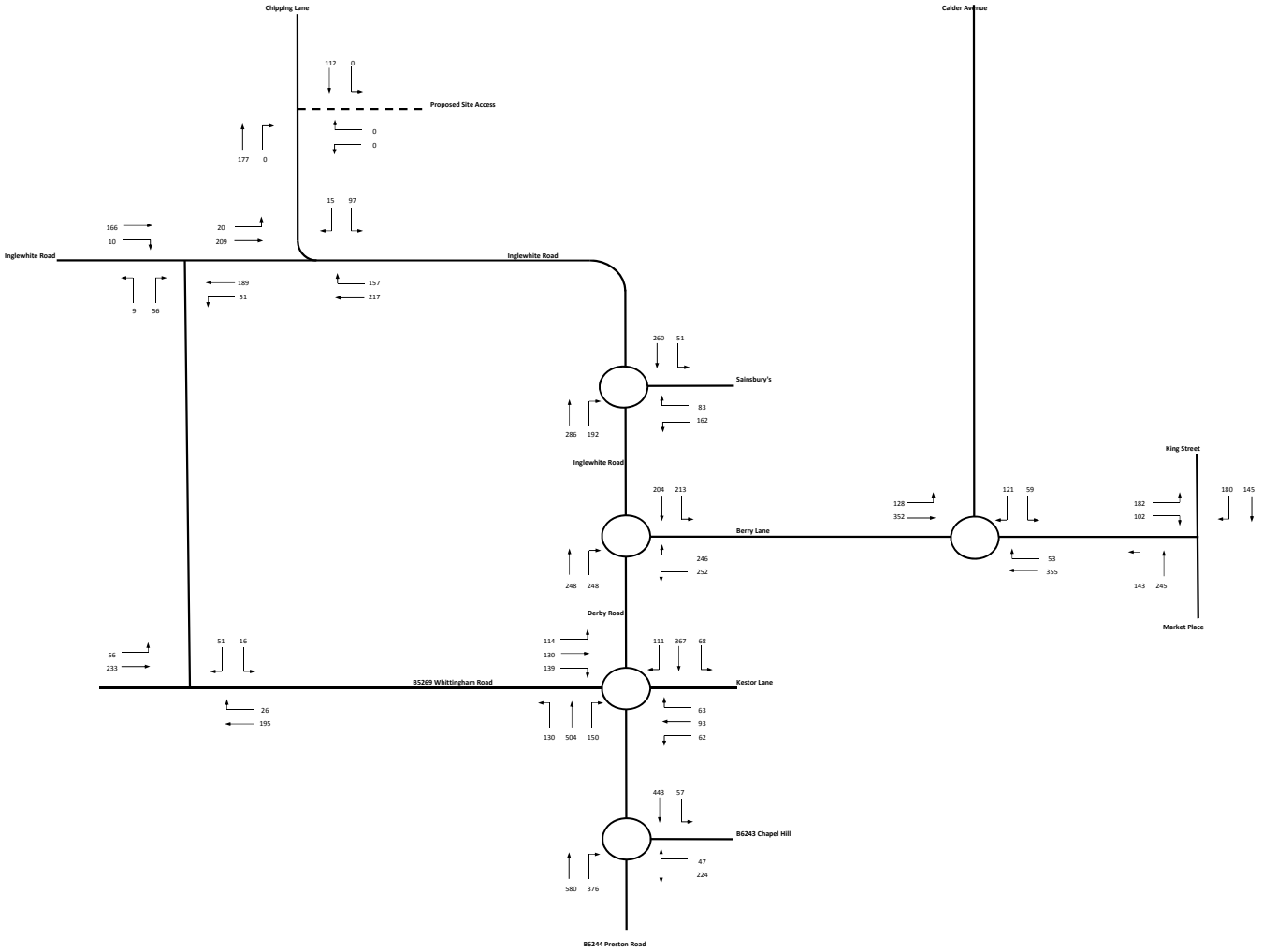
NTM TEMPRO Growth Factor 2010 to 2025 = 1.167
NTM TEMPRO Growth Factor 2013 to 2025 = 1.152
NTM TEMPRO Growth Factor 2014 to 2025 = 1.148

PCUs

Figure 5 **2025 Growthed Flows (Weekday AM Peak 0800 to 0900)**

3rd Floor Oxford Place, 61 Oxford Street, Manchester M1 6EQ Tel: 0161 228 1008 www.vectos.co.uk

FULL APPLICATION



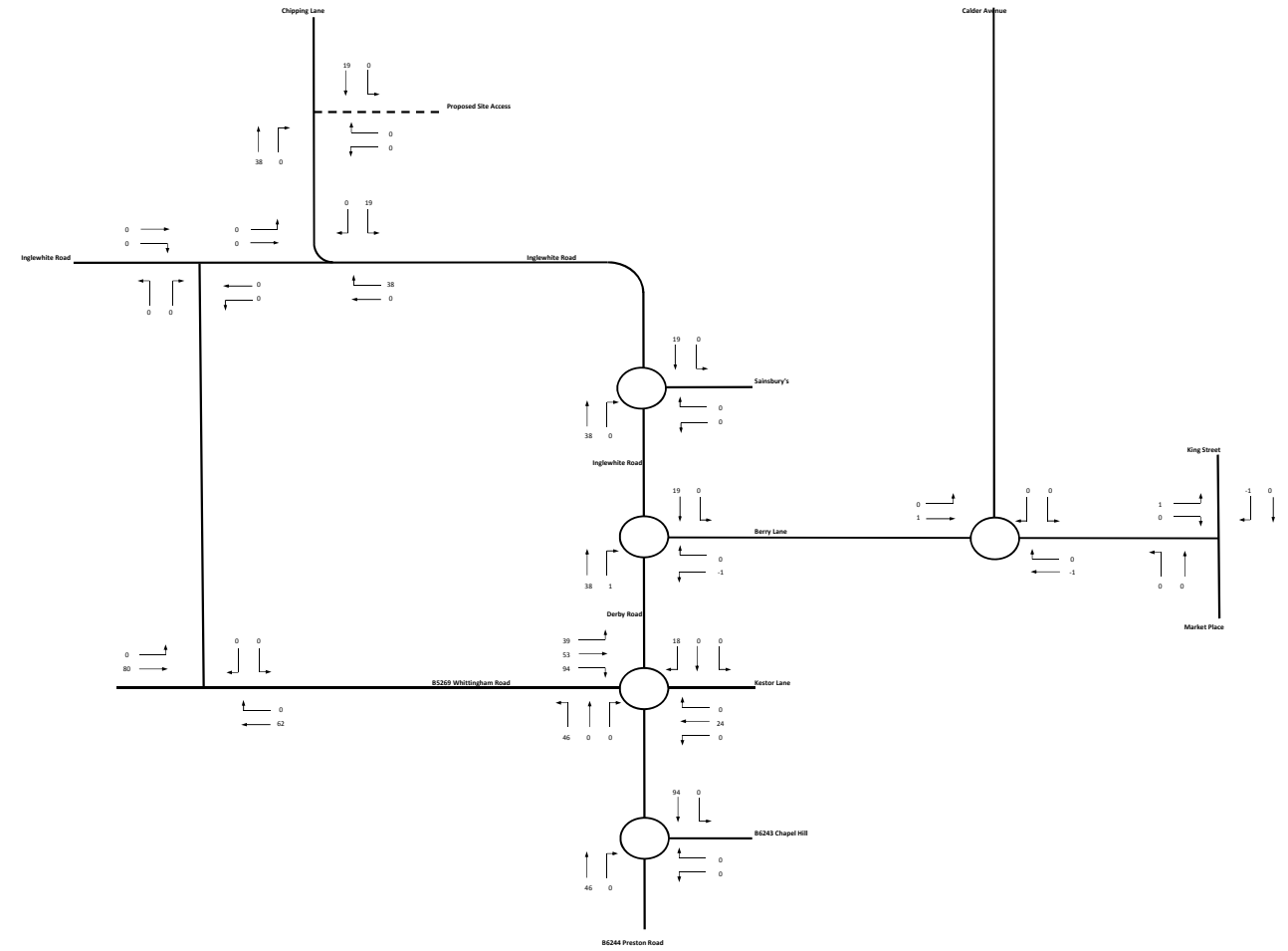
NTM TEMPRO Growth Factor 2010 to 2025 = 1.17
NTM TEMPRO Growth Factor 2013 to 2025 = 1.16
NTM TEMPRO Growth Factor 2014 to 2025 = 1.15

PCUs

Figure 6 **2025 Growthed Flows (Weekday PM Peak 1700 to 1800)**

3rd Floor Oxford Place, 61 Oxford Street, Manchester M1 6EQ Tel: 0161 228 1008 www.vectos.co.uk

FULL APPLICATION

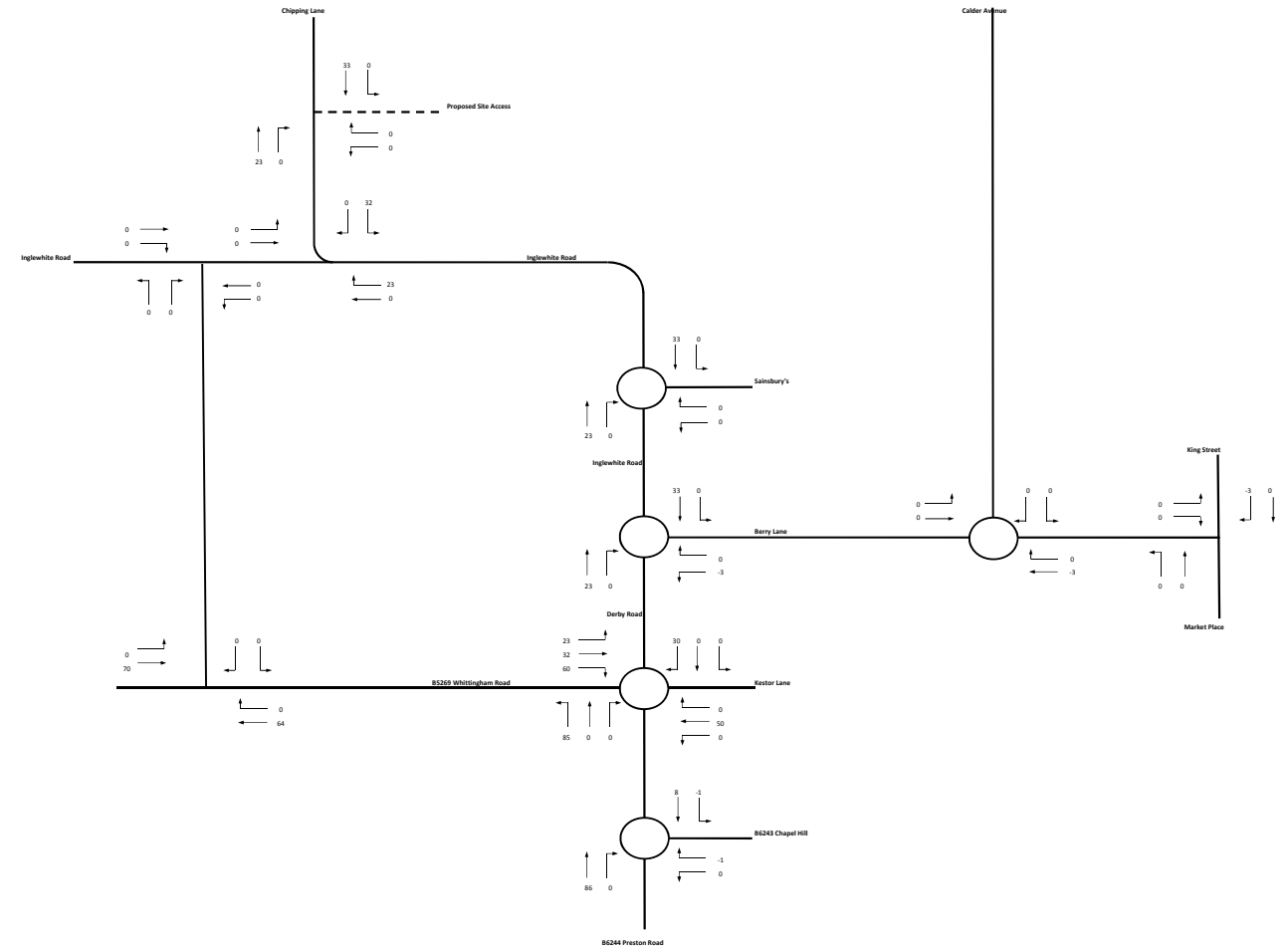


PCUs

Figure 7 **Committed Developments (Weekday AM Peak 0800 to 0900)**

3rd Floor Oxford Place, 61 Oxford Street, Manchester M1 6EQ Tel: 0161 228 1008 www.vectos.co.uk

FULL APPLICATION

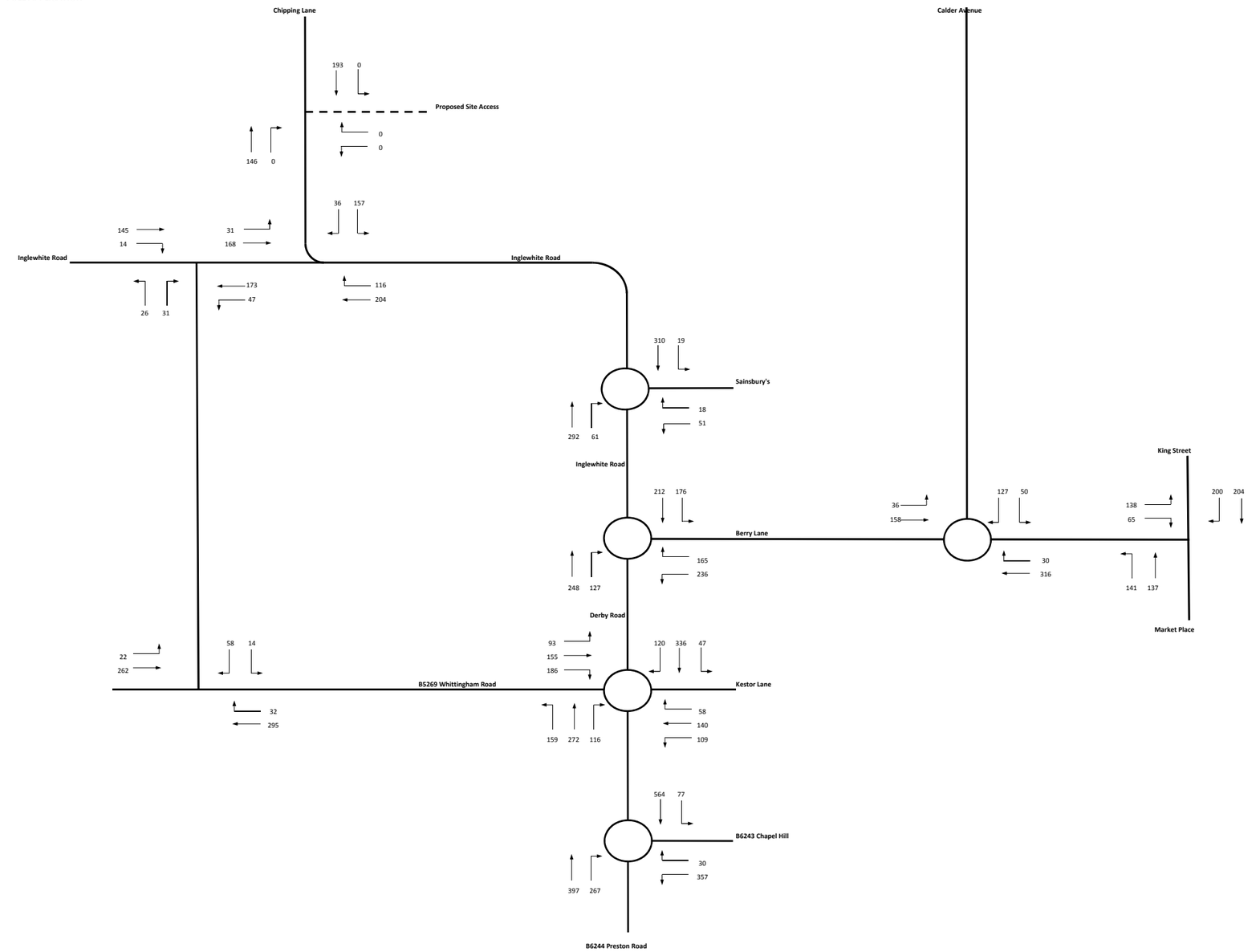


PCUs

Figure 8 **Committed Developments (Weekday PM Peak 1700 to 1800)**

vectos transport planning specialists
3rd Floor Oxford Place, 61 Oxford Street, Manchester M1 6EQ Tel: 0161 228 1008 www.vectos.co.uk

FULL APPLICATION



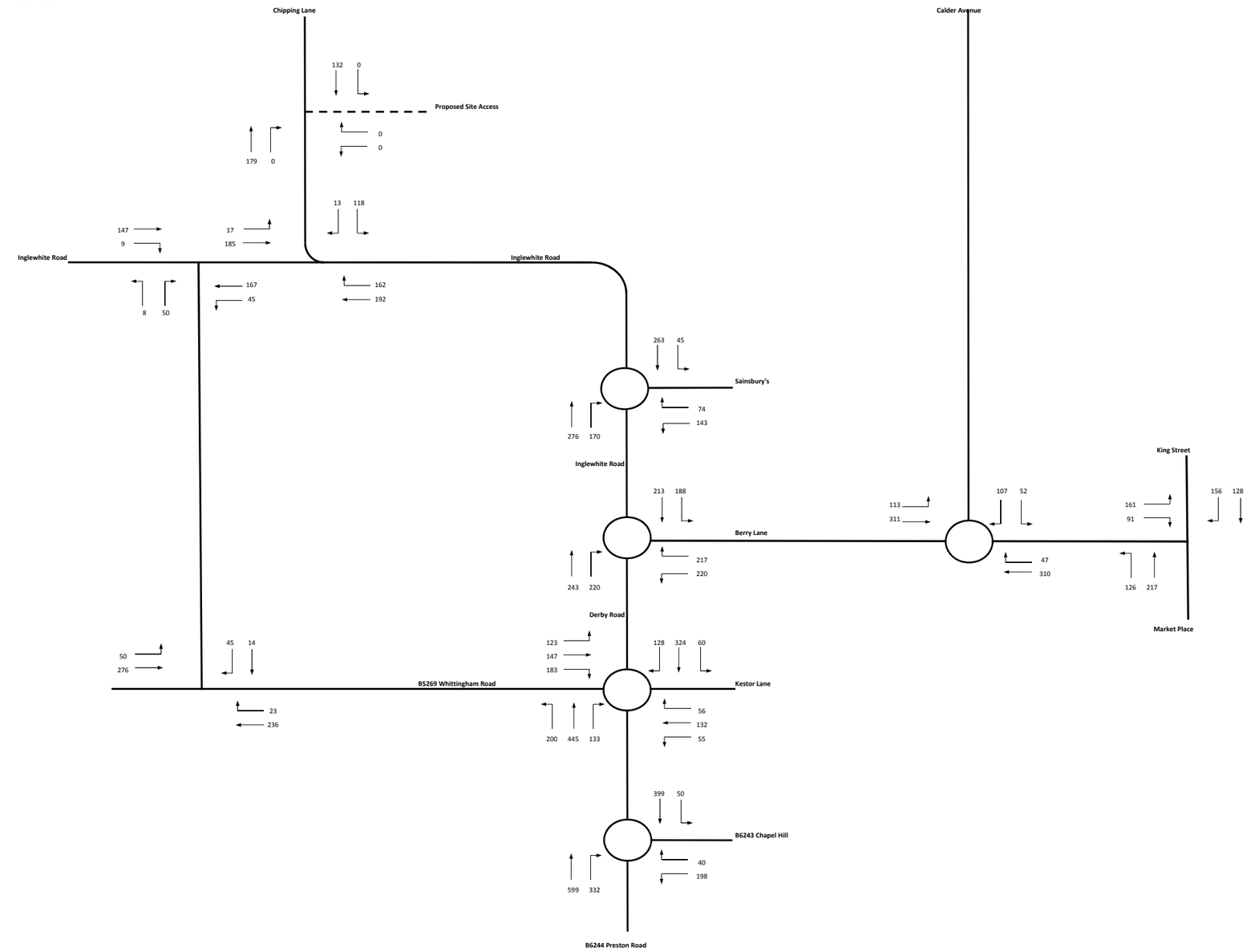
PCUs

Figure 9 **2016 Baseline Flows (Weekday AM Peak 0800 to 0900)**

vectos transport planning specialists

3rd Floor Oxford Place, 61 Oxford Street, Manchester M1 6EQ Tel: 0161 228 1008 www.vectos.co.uk

FULL APPLICATION

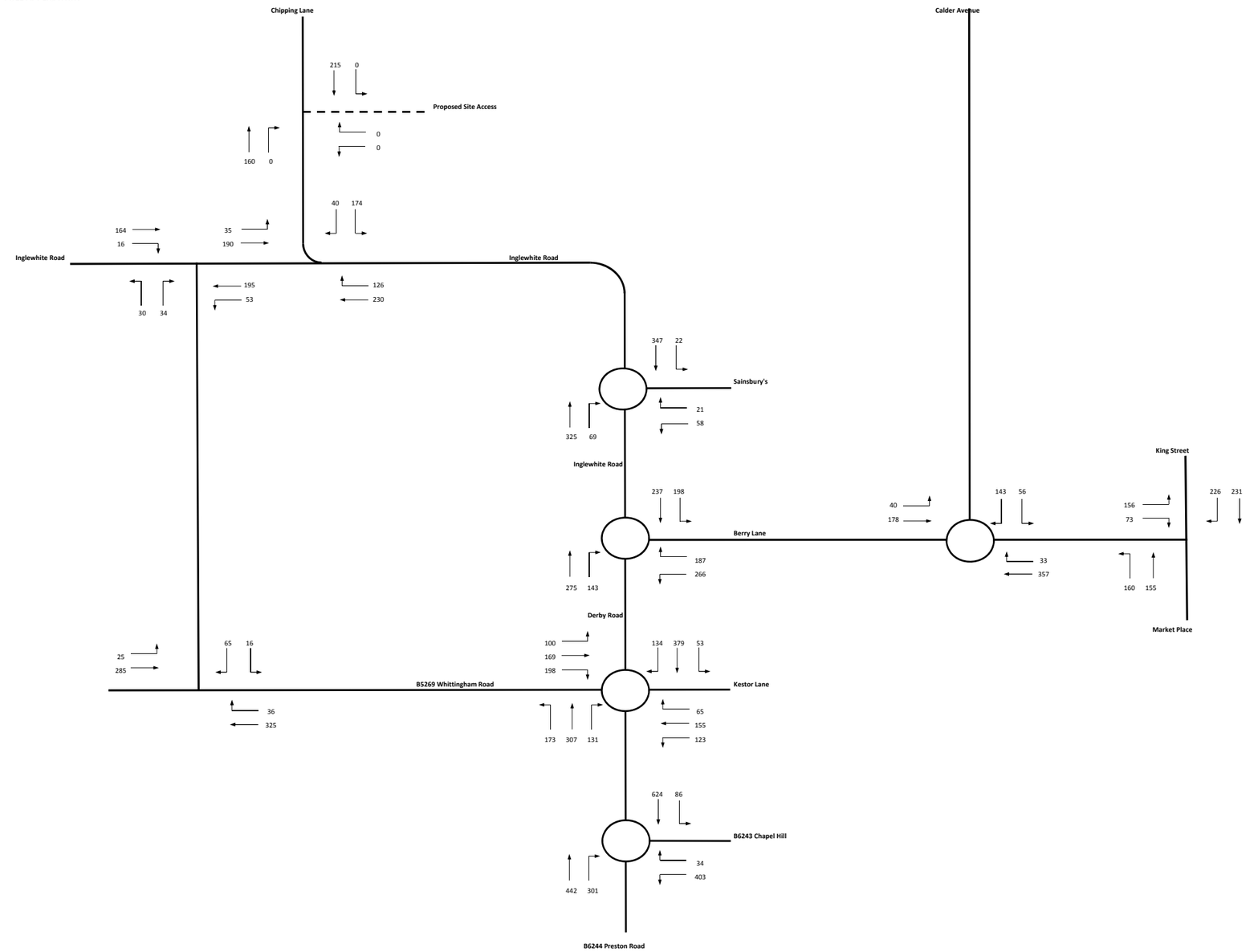


PCUs

Figure 10 **2016 Baseline Flows (Weekday PM Peak 1700 to 1800)**

vectos transport planning specialists
3rd Floor Oxford Place, 61 Oxford Street, Manchester M1 6EQ Tel: 0161 228 1008 www.vectos.co.uk

FULL APPLICATION

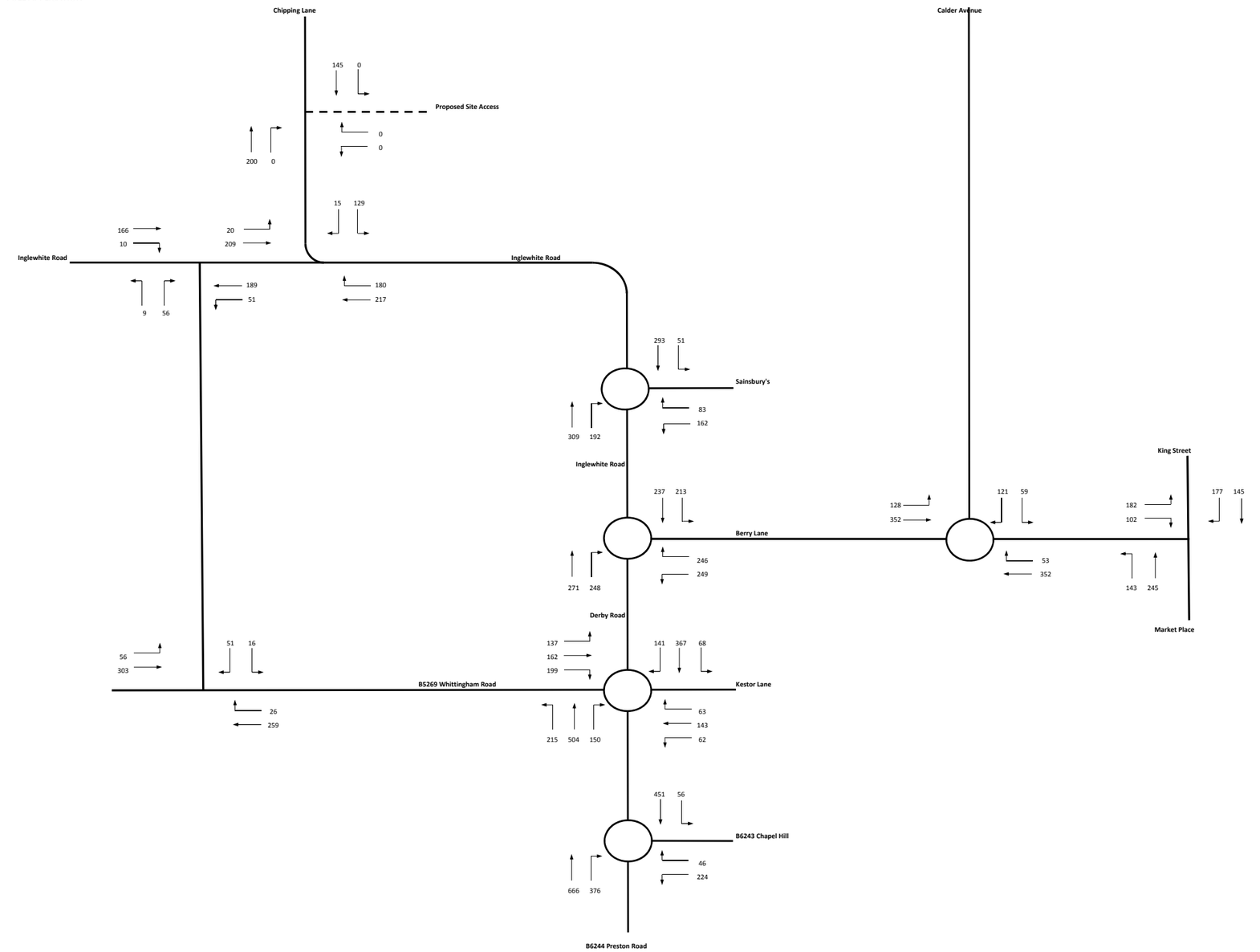


PCUs

Figure 11 **2025 Baseline Flows (Weekday AM Peak 0800 to 0900)**

3rd Floor Oxford Place, 61 Oxford Street, Manchester M1 6EQ Tel: 0161 228 1008 www.vectos.co.uk

FULL APPLICATION

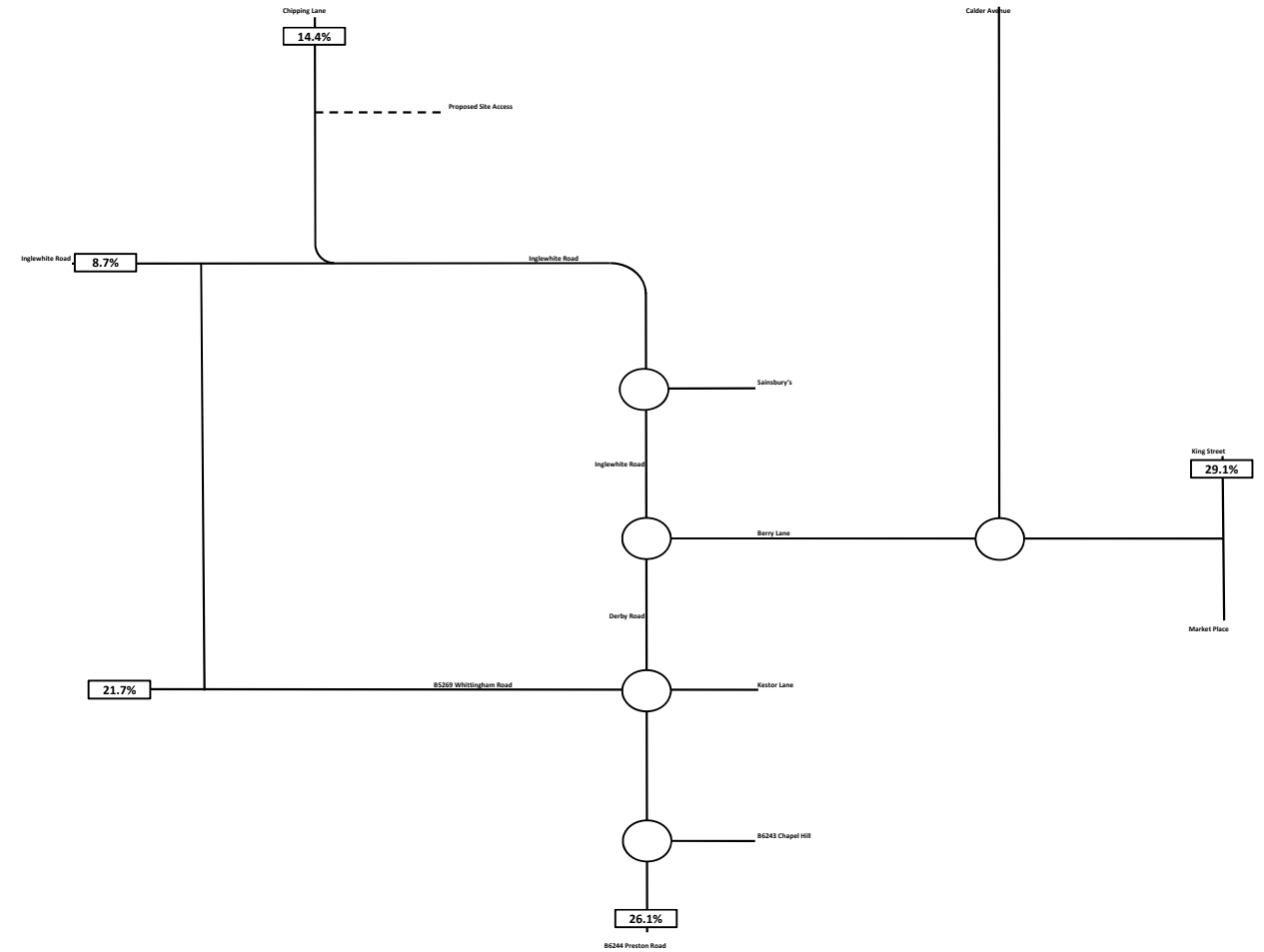


PCUs

Figure 12 **2025 Baseline Flows (Weekday PM Peak 1700 to 1800)**

3rd Floor Oxford Place, 61 Oxford Street, Manchester M1 6EQ Tel: 0161 228 1008 www.vectos.co.uk

FULL APPLICATION

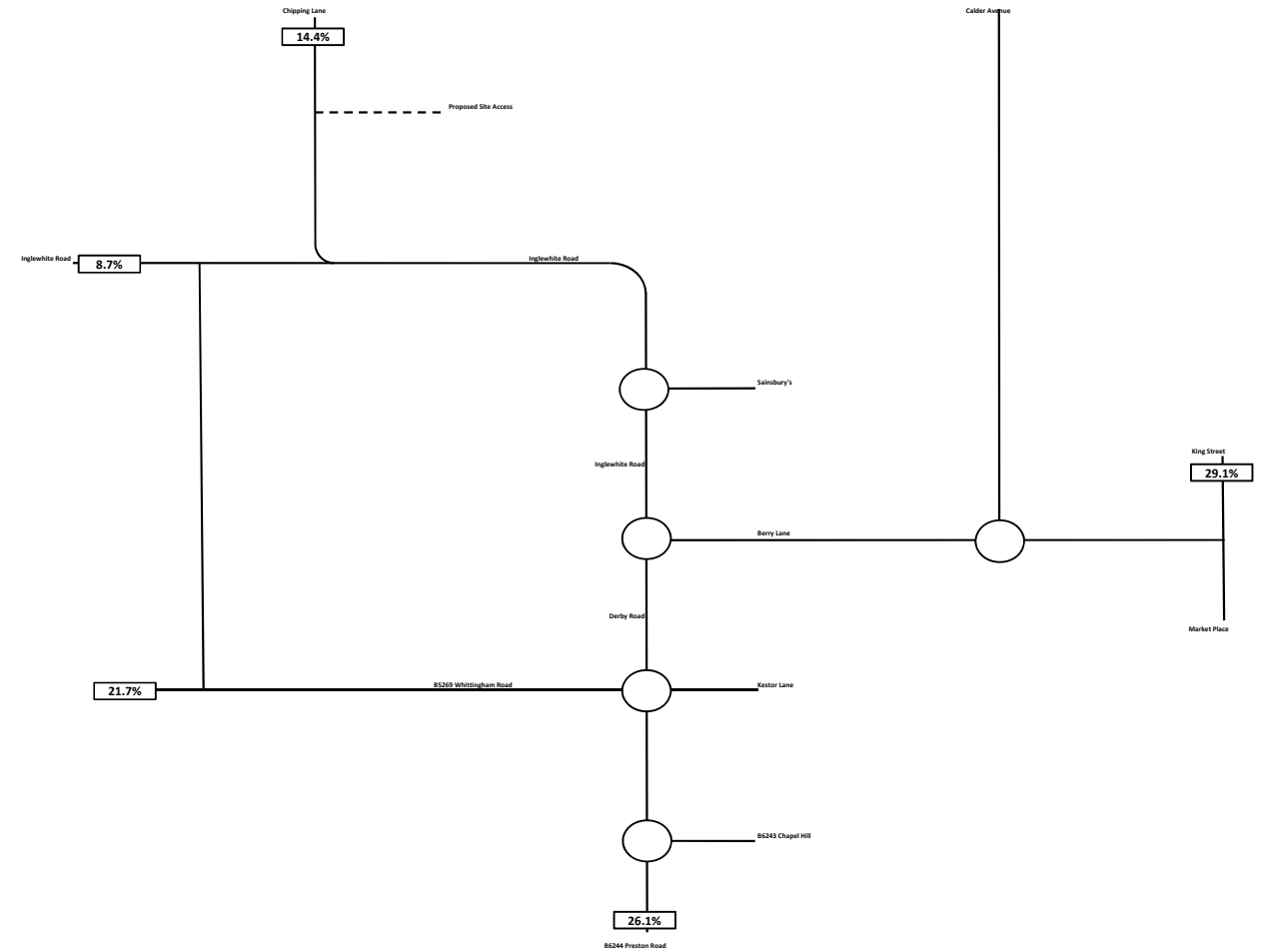


PCUs

Figure 13 **Distribution**
(Weekday AM Peak 0800 to 0900)

3rd Floor Oxford Place, 61 Oxford Street, Manchester M1 6EQ Tel: 0161 228 1008 www.vectos.co.uk

FULL APPLICATION

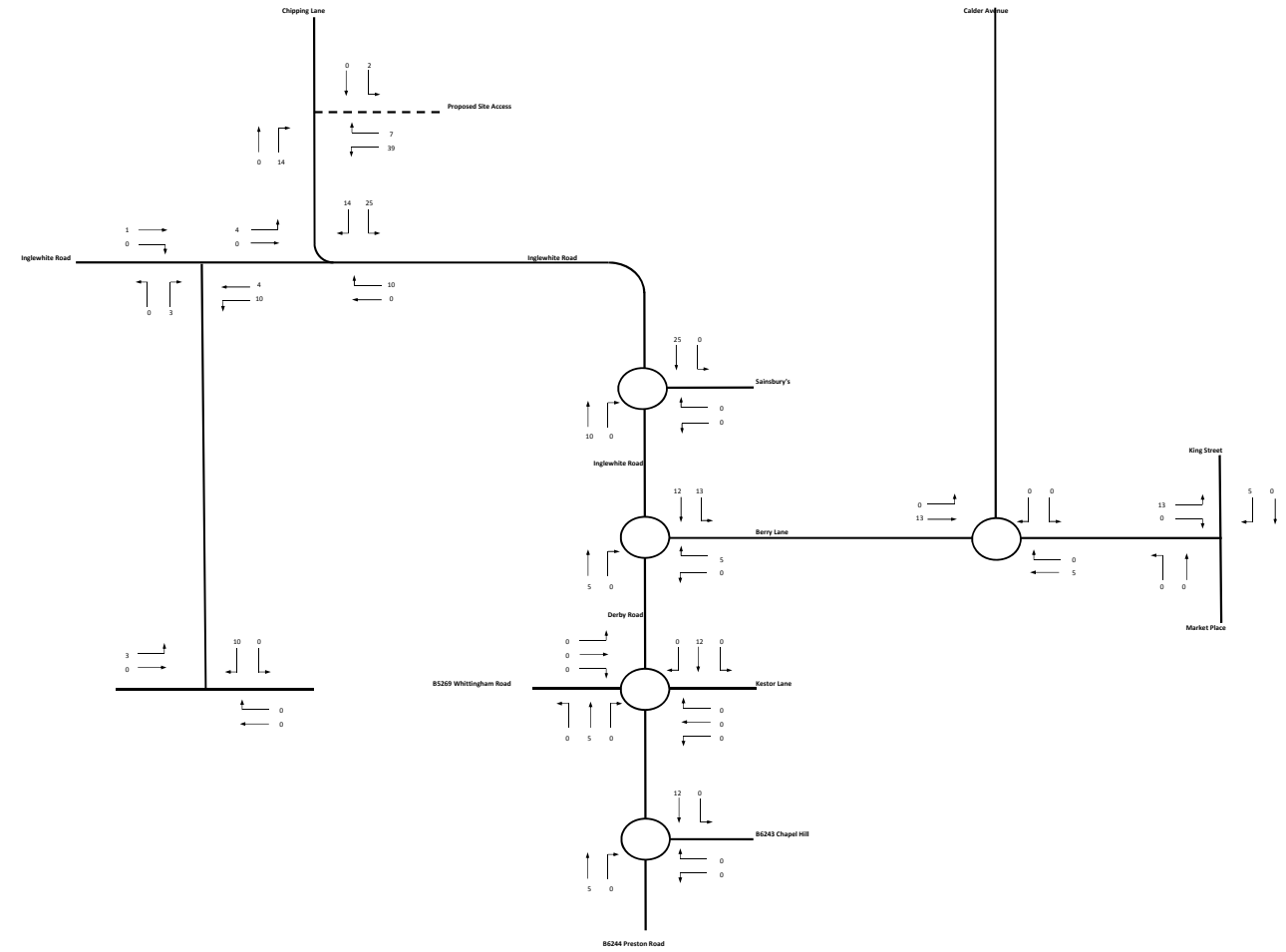


PCUs

Figure 14 **Distribution (Weekday PM Peak 1700 to 1800)**

vectos transport planning specialists
3rd Floor Oxford Place, 61 Oxford Street, Manchester M1 6EQ Tel: 0161 228 1008 www.vectos.co.uk

FULL APPLICATION

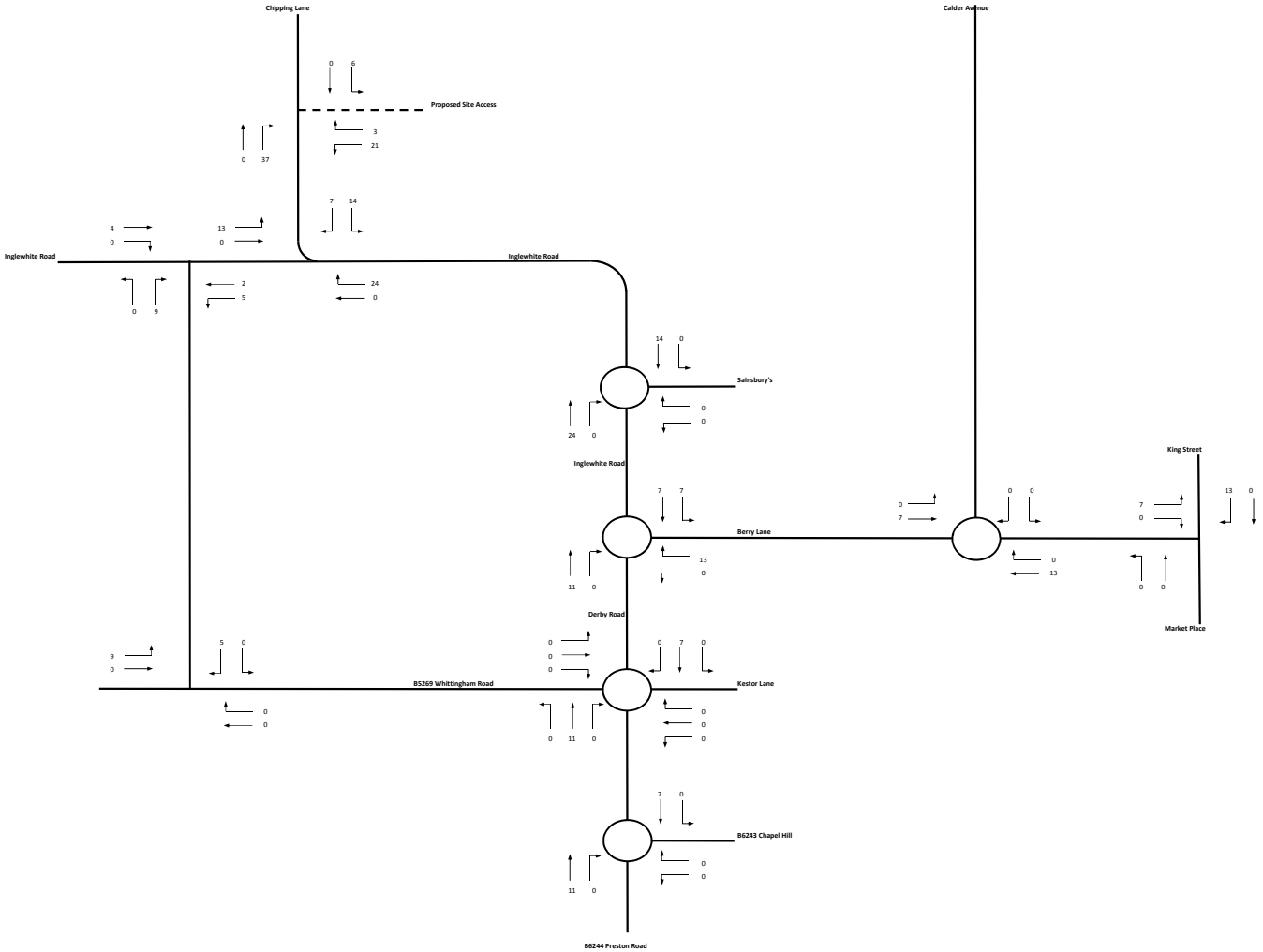


PCUs

Figure 15 **Proposed Residential Development (106 Houses)**
(Weekday AM Peak 0800 to 0900)

vectos transport planning specialists
3rd Floor Oxford Place, 61 Oxford Street, Manchester M1 6EQ Tel: 0161 228 1008 www.vectos.co.uk

FULL APPLICATION

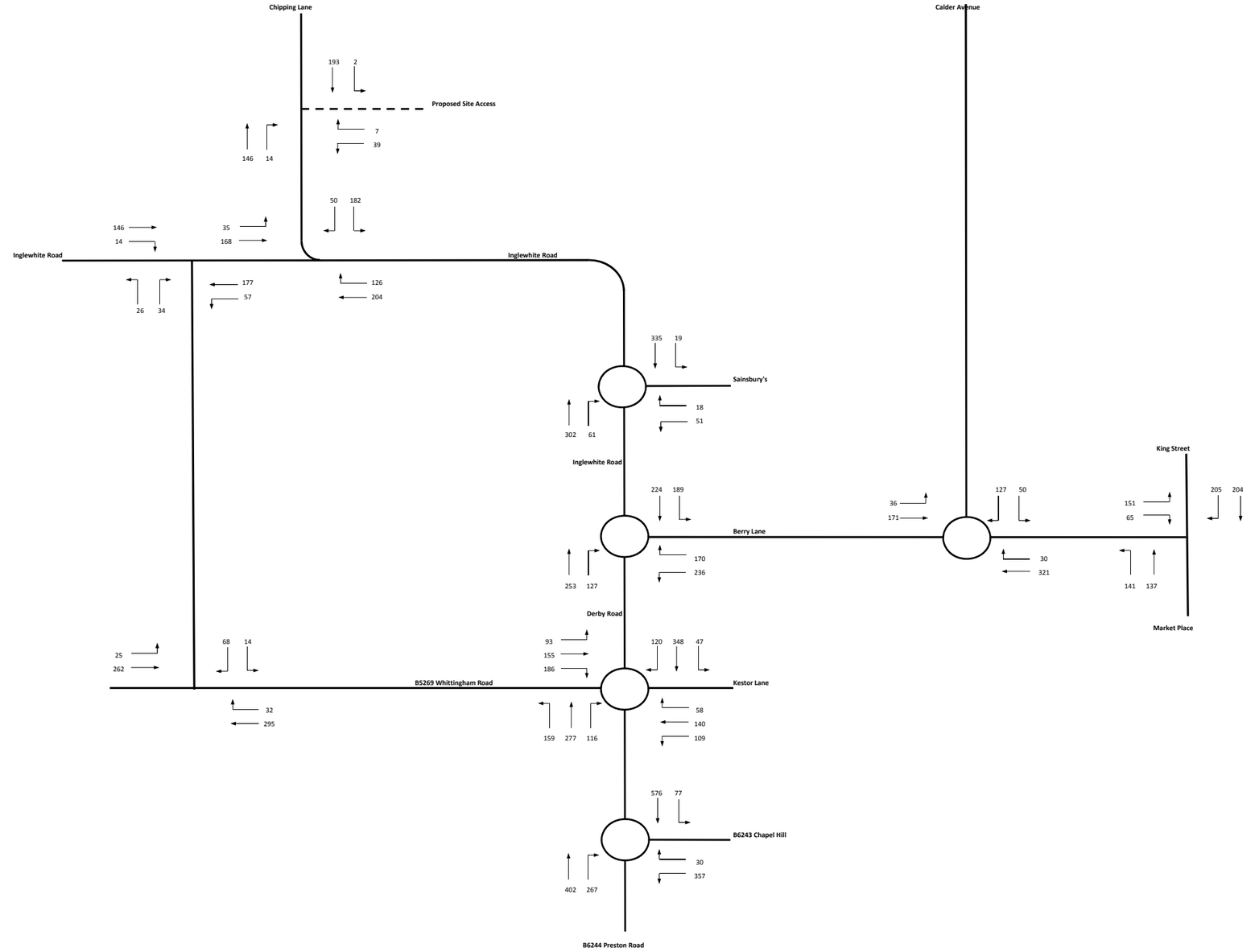


PCUs

Figure 16 **Proposed Residential Development (106 Houses) (Weekday PM Peak 1700 to 1800)**

3rd Floor Oxford Place, 61 Oxford Street, Manchester M1 6EQ Tel: 0161 228 1008 www.vectos.co.uk

FULL APPLICATION

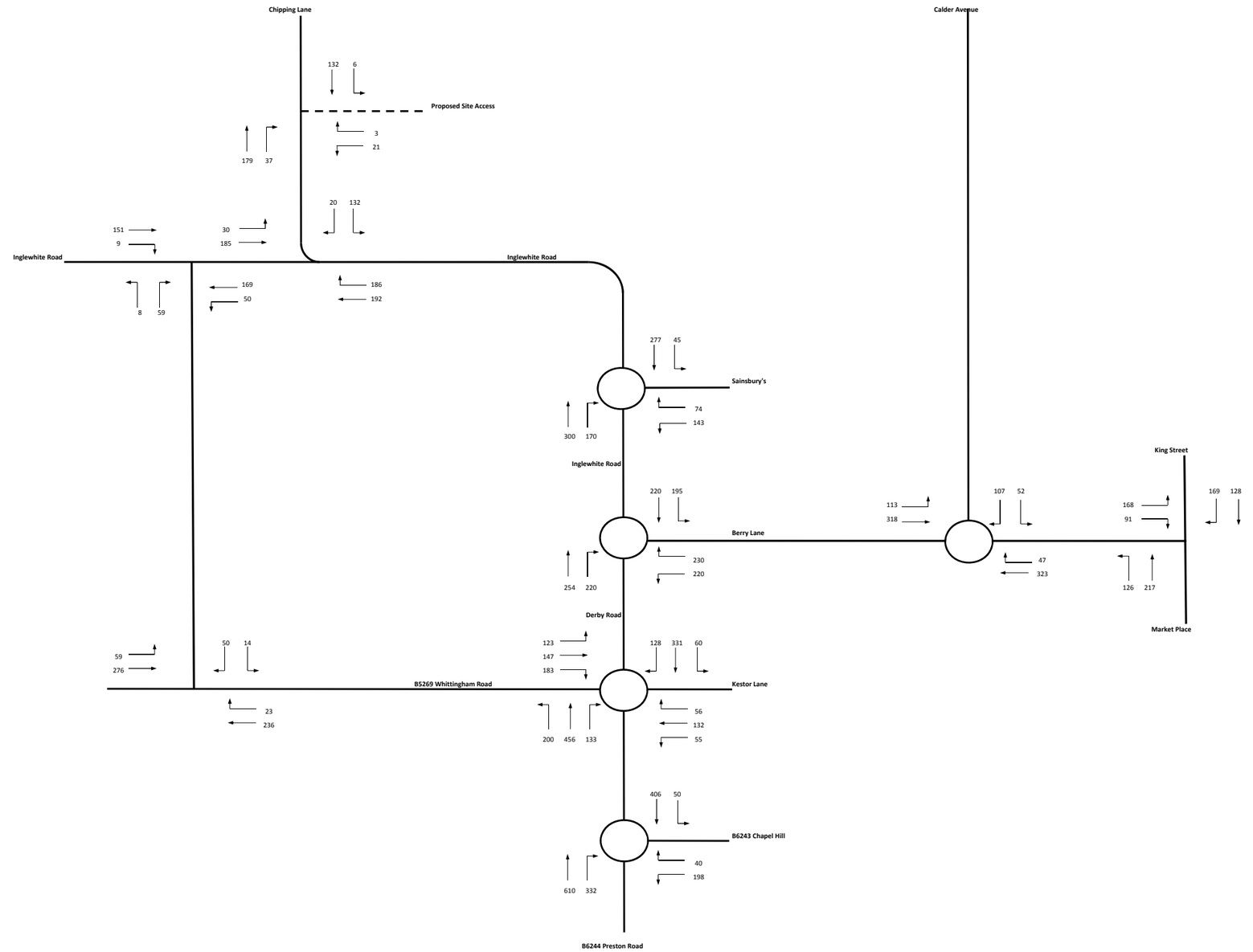


PCUs

Figure 17 **2016 Assessment Flows (Weekday AM Peak 0800 to 0900)**

vectos transport planning specialists
3rd Floor Oxford Place, 61 Oxford Street, Manchester M1 6EQ Tel: 0161 228 1008 www.vectos.co.uk

FULL APPLICATION

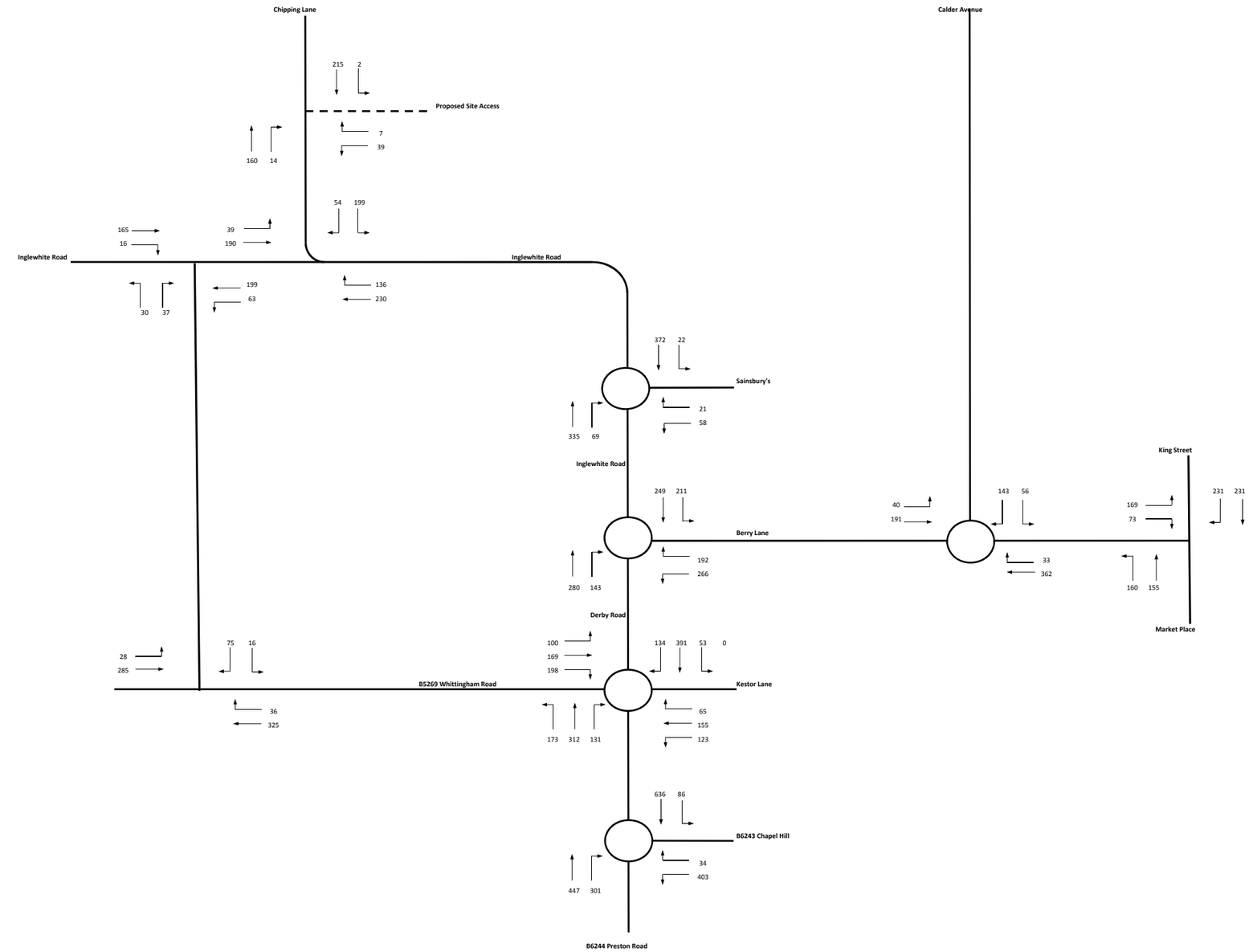


PCUs

Figure 18 **2016 Assessment Flows (Weekday PM Peak 1700 to 1800)**

vectos transport planning specialists
3rd Floor Oxford Place, 61 Oxford Street, Manchester M1 6EQ Tel: 0161 228 1008 www.vectos.co.uk

FULL APPLICATION

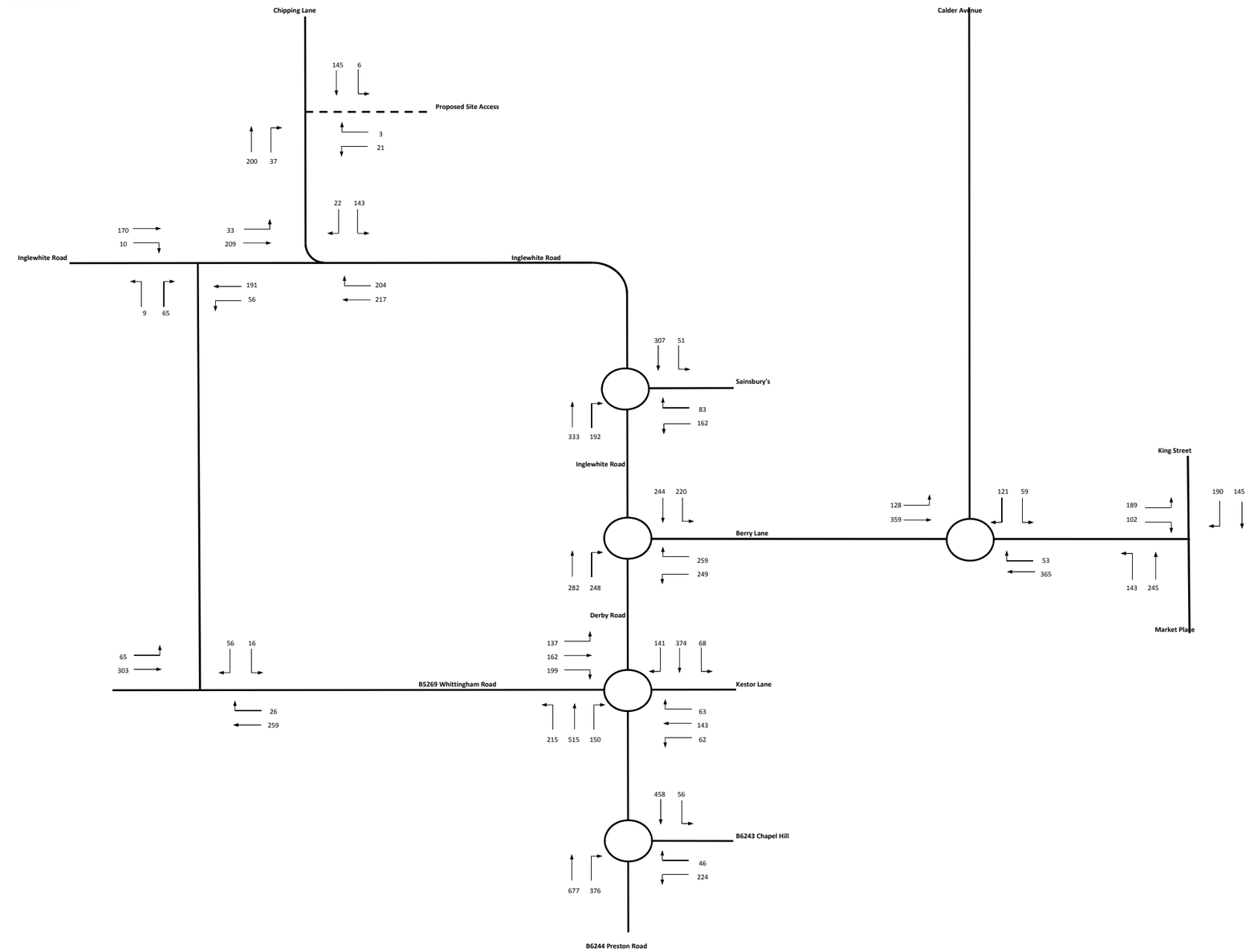


PCUs

Figure 19 **2025 Assessment Flows (Weekday AM Peak 0800 to 0900)**

vectos transport planning specialists
3rd Floor Oxford Place, 61 Oxford Street, Manchester M1 6EQ Tel: 0161 228 1008 www.vectos.co.uk

FULL APPLICATION

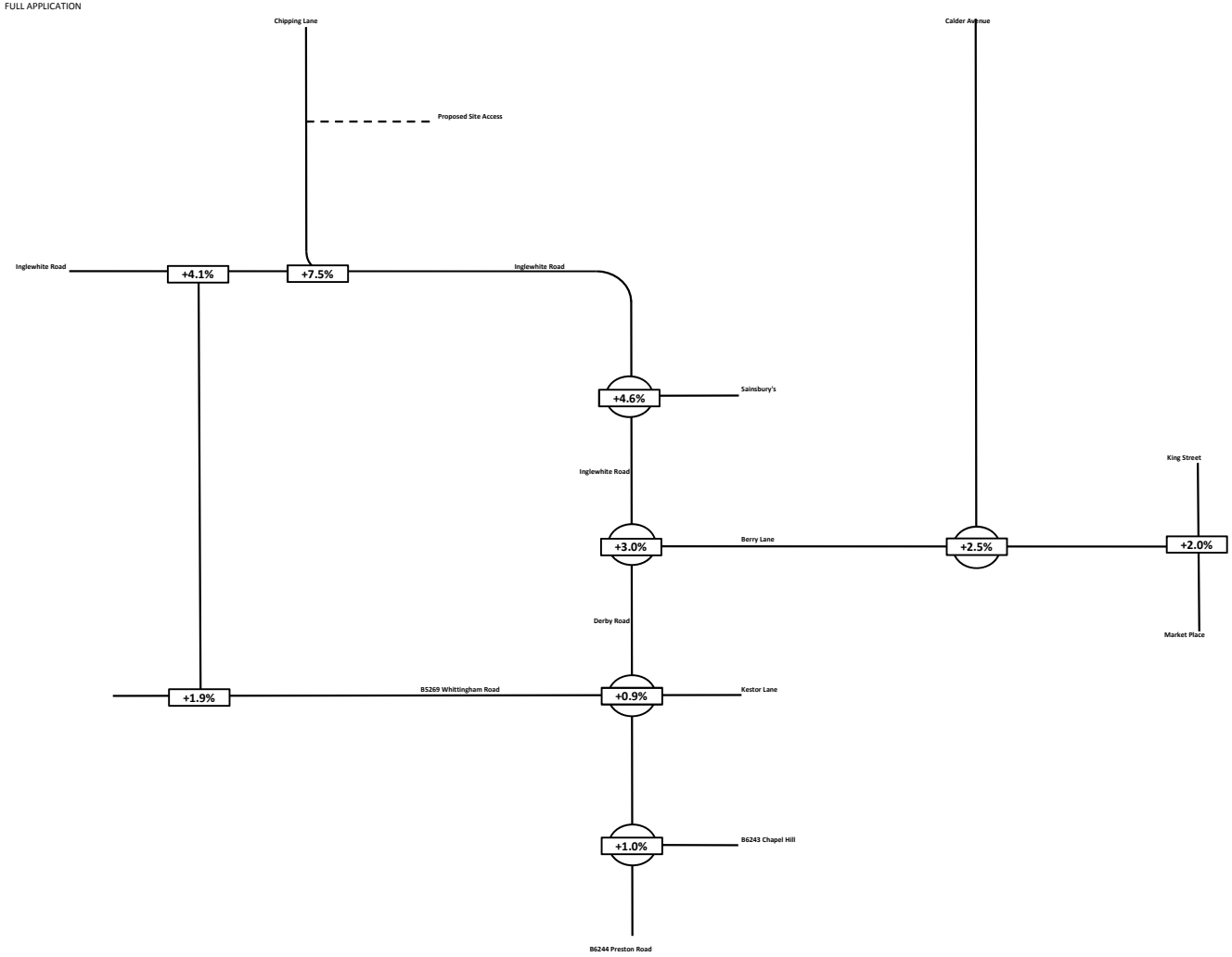


PCUs

Figure 20 **2025 Assessment Flows (Weekday PM Peak 1700 to 1800)**

vectos transport planning specialists
3rd Floor Oxford Place, 61 Oxford Street, Manchester M1 6EQ Tel: 0161 228 1008 www.vectos.co.uk

FULL APPLICATION

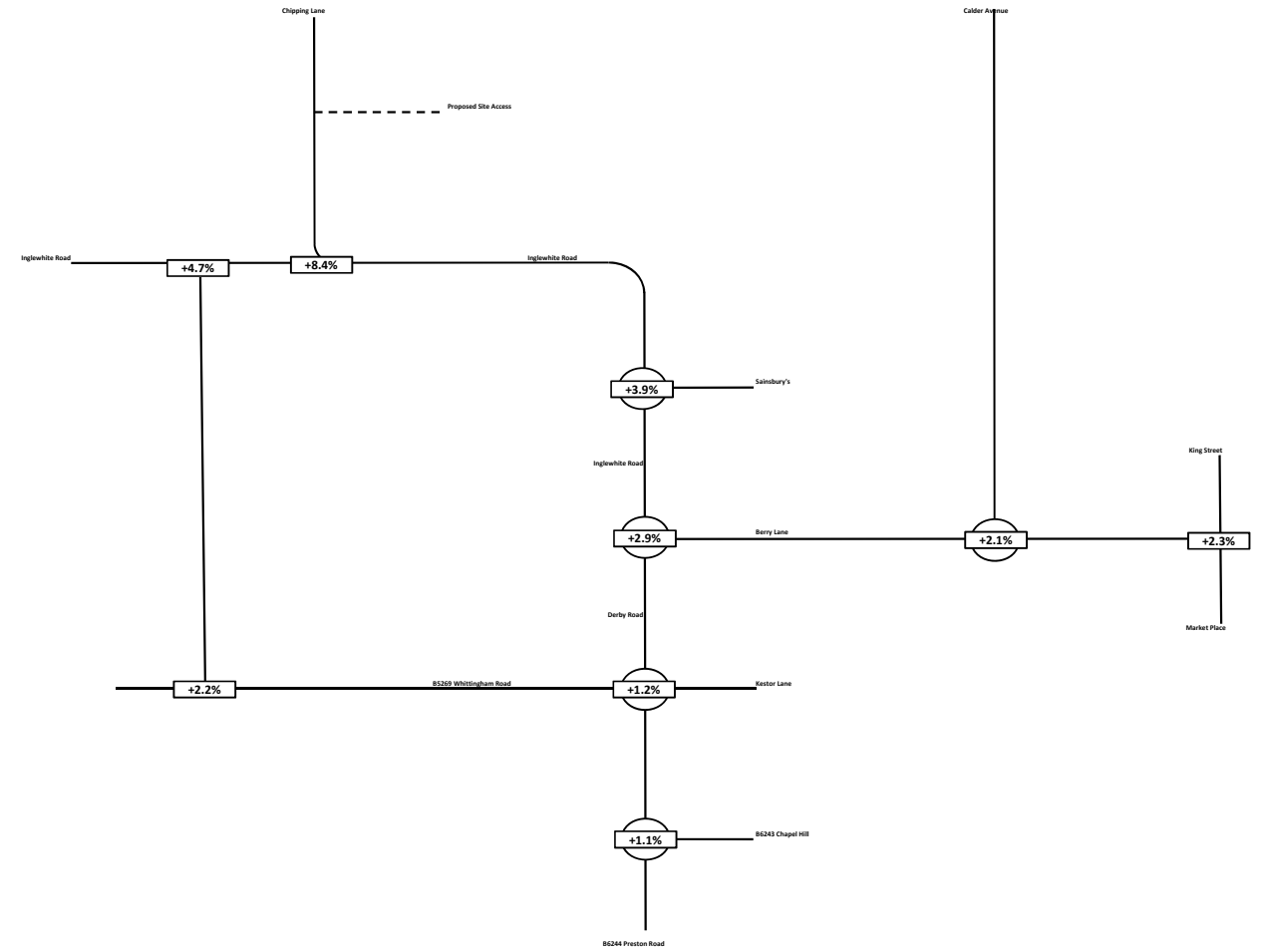


PCUs

Figure 21 **Percentage Net Impact (Weekday AM Peak 0800 to 0900)**

vectos transport planning specialists
3rd Floor Oxford Place, 61 Oxford Street, Manchester M1 6EQ Tel: 0161 228 1008 www.vectos.co.uk

FULL APPLICATION



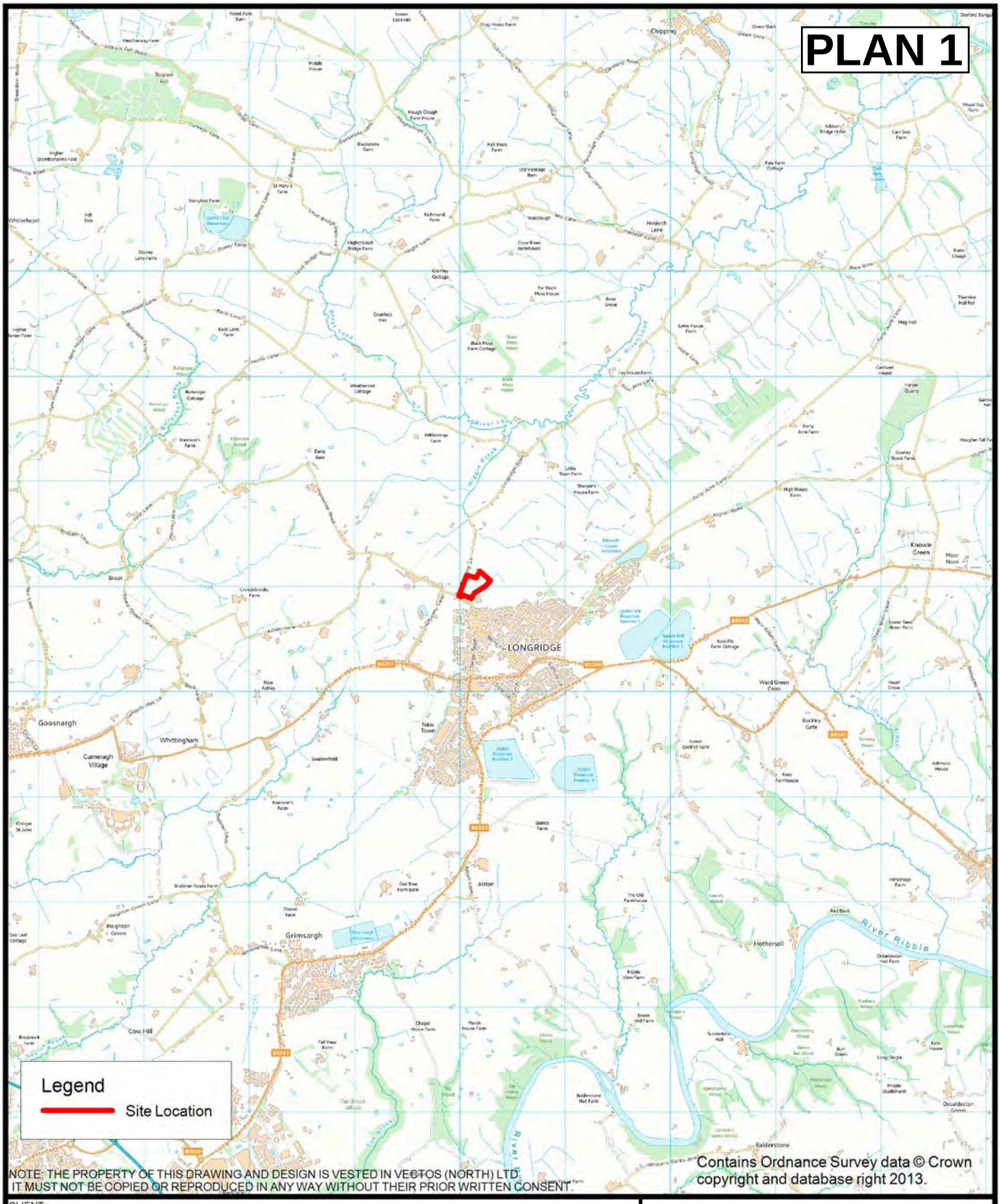
PCUs

Figure 22 **Percentage Net Impact (Weekday PM Peak 1700 to 1800)**

3rd Floor Oxford Place, 61 Oxford Street, Manchester M1 6EQ Tel: 0161 228 1008 www.vectos.co.uk

PLANS

PLAN 1



CLIENT:

Barratt Homes

DRAWING TITLE:

Site Location

PROJECT TITLE:

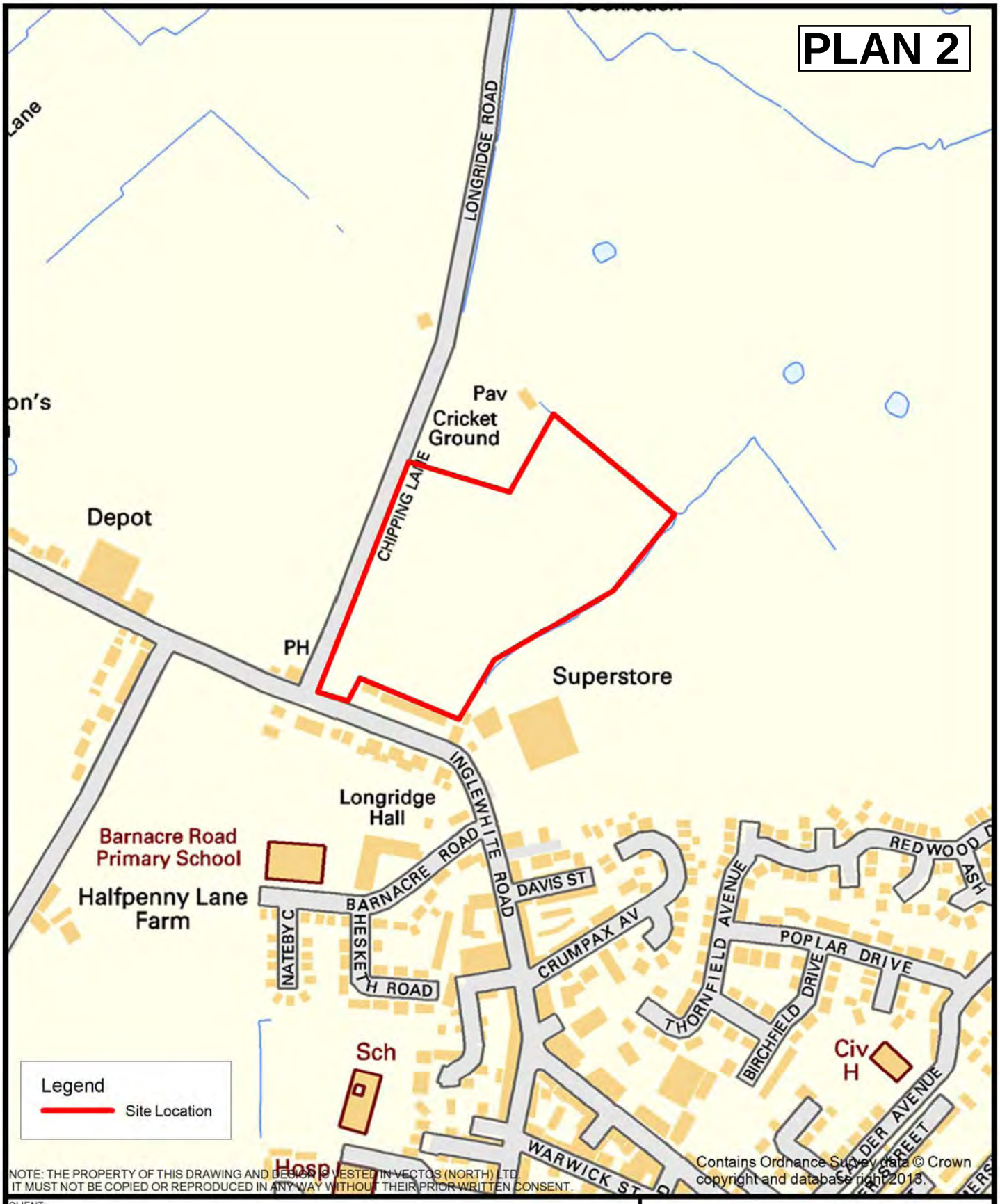
Proposed Residential Development, Chipping Lane, Longridge

vectos transport planning specialists

Oxford Place, 61 Oxford Street, Manchester M1 6EQ
t:0161 22801008 e:manchester@vectos.co.uk

DRAWN:	CHECKED:	DATE	SCALE:	DRAWING NO:	REVISION:
HF	DL	April 14	1:50000 at A4	VN30277-G200	.

PLAN 2



CLIENT:
Barratt Homes

DRAWING TITLE:
Site Location (Local Context)

PROJECT TITLE:
Proposed Residential Development,
Chipping Lane, Longridge

vectos
transport planning specialists
Oxford Place, 61 Oxford Street, Manchester M1 6EQ
t:0161 22801008 e:manchester@vectos.co.uk

DRAWN:	CHECKED:	DATE	SCALE:	DRAWING NO:	REVISION:
HF	DL	April 14	N.T.S	VN30277-G201	.

Notes:

1. This is not a construction drawing and is intended for illustrative purposes only.
2. White lining is indicative only.

PLAN 3

REV.	DETAILS	DRAWN	CHECKED	DATE
A	Refuges added	HF	DL	09.04.14

CLIENT:

Barratt Homes

PROJECT:

Proposed Residential Development
Chipping Lane, Longridge

DRAWING TITLE:

Potential Access

SCALES:

1:1000 at A3

DRAWN:	CHECKED:	DATE:
HS	DL	28.11.13

vectos
transport planning specialists

Oxford Place, 61 Oxford Street, Manchester M1 6EQ
t: 0161 228 1008 e: manchester@vectos.co.uk

DRAWING NUMBER:	REVISION:
VN30277-100	A

Longridge, Bowland Meadows

PLAN 4

Legend

- Proposed dwelling and house type code.
- (A) Dwelling handing shown per construction dwg
- (O) Dwelling handing opposite to construction dwg
- * Dual aspect gable position.
- Access / Door To dwelling.
- Proposed tarmac with red chipping finish.
- Herringbone block paving.
- 1800mm high curved Brick wall.
- 1800mm high Brick wall with piers and timber fence infill panels.
- 1800mm high close boarded fence
- Line to delineate application site boundary.
- Timber gates to be erected to rear gardens. (as indicated on site layout).
- Indicative position of new tree planting. (Refer to Landscape Layout for further details).
- Indicates existing trees to be retained and protected during construction at all times.
- Indicates existing trees to be removed
- A-B Indicates 1.8 metre high close boarded fence to be erected between points
- C-D-E Indicates 9 metre high fencing to cricket pitch boundary

House Type	Bed no.		No.	Sqft	Total Sqft	Percentage Split
Bar	3	Barwick	14	881	12334	13.21%
TBH	3	The Boat House	1	881	881	0.94%
TCL	3	The Carpenters Lodge	14	956	13384	13.21%
Oak	4	Oakham	8	1002	8016	7.55%
TCH	4	The Cobblers House	2	1002	2004	1.89%
Bre	3	Brentwood	1	1161	1161	0.94%
Tav	4	Tavistock	2	1134	2268	1.89%
Hel	4	Helmsley	4	1108	4432	3.77%
Som	4	Somerton	4	1170	4680	3.77%
Faw	4	Fawley	5	1195	5975	4.72%
Ic	4	Ivy Cottage	3	1203	3609	2.83%
Gui	4	Guisborough	4	1213	4852	3.77%
TGH	4	The Gate House	8	1243	9944	7.55%
Cam	4	Cambridge	4	1424	5696	3.77%
Affordables						
Ash	2	Ashford	13	634	8242	12.26%
RC	2	River Cottage	3	634	1902	2.83%
Bam	3	Bampton	14	737	10318	13.21%
TSC	3	The Sheppard Cottage	2	737	1474	1.89%
		Total	**106**		**101172**	**100.00%**

BARRATT HOMES
built around you

Baldwin Design
Consultancy Ltd

Suite 109-110 Lovell House, Birchwood Park, Birchwood, Warrington WA3 6FW Tel: 01942 719513 e-mail: graham.baldwin@bdc.gb.com

Revision:

A. Emergency access relocated. Accessway added and connected to form loop. Various plot subs and moved. 07.03.14

B. Turning head moved outside line of existing hedge to form feature square at development ending. Building foorprint to the south moved further away from existing ditch and top of bank. 11.03.14

C. Spayed foot way added to Chipping Lane. Prive drives to plots 2 & 73 moved 20 metres back with development junction. Arrival square amended to provide 90 degree crossings. Block paved overrun areas substituted to red tarmac. Square feature to development ending amended. Footway substituted with grass verge along main loop road facing proposed park. 14.03.14

D. Emergency access removed. Private drive to replace accessway fronting plots 11-14. Private drive extended to serve plots 1, 2 & 15-17. Link road removed adjacent to cricket pitch and replaced with turning heads to each accessway either side. Private drive to plots 34-39 altered. 21.03.14

E. House Type names updated to reflect Chipping Lane elevations 31.03.14

F. Further amendments to house type names 07.04.14

G. Interface dimensions added. 08.04.14

H. Plot 2 & 17 moved. Plot 1, 15 & 16 substituted. Ghost islands added to Chipping Lane. Cricket fencing added. Pedestrian link added to Sainsburys car park. Site limits extended to include village meadow. 09.04.14

Project Title:
Residential Redevelopment

Address:
Longridge, Bowland Meadows

Drawing:
Site Layout

Drawing No:
BH/LP1/SL/01

Drawn:	Date:
SB	Date: 14/02/14
Scale:	**Paper Size:**
1:500	A0

Legend

- Site_Location
- Bus Stop within 400m of Site
- 5 Bus Service
- 5A Bus Service
- 5B Bus Service
- 35 Bus Service
- 4 Bus Service
- 1 Bus Service

PLAN 5

This is not a construction drawing and is intended for illustrative purposes only.

CLIENT:

Barratt Homes

PROJECT TITLE:

Proposed Residential Development, Chipping Lane, Longridge

DRAWING TITLE:

Bus Routes (Local Context)

SCALE: N.T.S

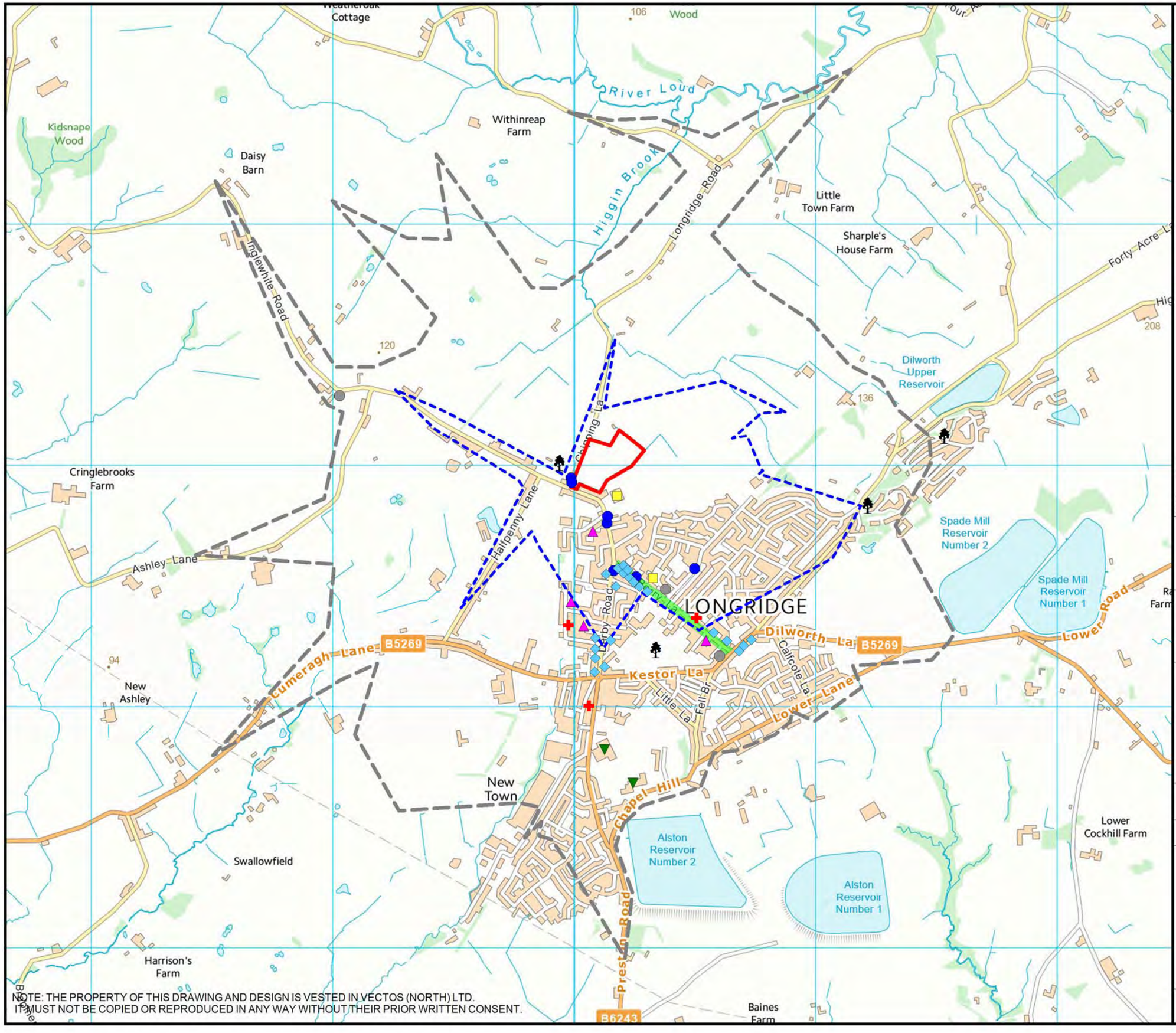
DRAWN:	CHECKED:	DATE:
HF	DL	April 14

vectos transport planning specialists

Oxford Place, 61 Oxford Street, Manchester M1 6EQ
t:0161 22801008 e:manchester@vectos.co.uk

DRAWING NO: VN30271-G205

REVISION:



PLAN 6

This is not a construction drawing and is intended for illustrative purposes only.

CLIENT:

Barratt Homes

PROJECT TITLE:

Proposed Residential Development, Chipping Lane, Longridge

DRAWING TITLE:

Local Amenities

SCALE:

1:1500 at A3

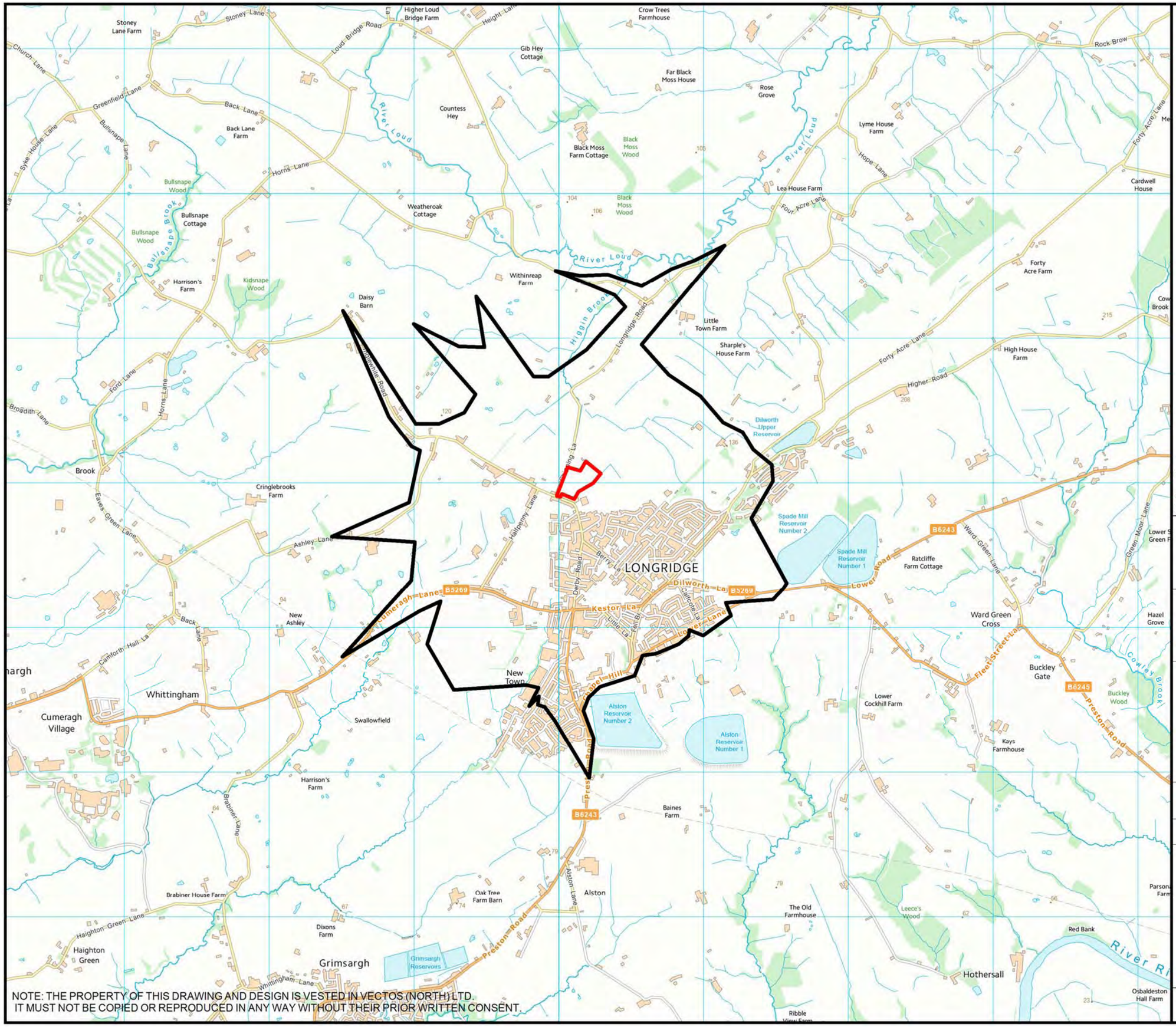
DRAWN:	CHECKED:	DATE:
HF	DL	April 14

vectos transport planning specialists

Oxford Place, 61 Oxford Street, Manchester M1 6EQ
t:0161 22801008 e:manchester@vectos.co.uk

DRAWING NO: VN30277-G204

REVISION:



Legend

Site Location

2km Catchment

PLAN 7

This is not a construction drawing and is intended for illustrative purposes only.

CLIENT:

Barratt Homes

PROJECT TITLE:

Proposed Residential Development, Chipping Lane, Longridge

DRAWING TITLE:

2km Pedestrian Catchment

SCALE:

1:25000 at A3

DRAWN:	CHECKED:	DATE:
HF	DL	April 14

vectos transport planning specialists

Oxford Place, 61 Oxford Street, Manchester M1 6EQ
t:0161 22801008 e:manchester@vectos.co.uk

DRAWING NO: VN30277-G202

REVISION:

Legend

Site Location

5km Catchment

PLAN 8

This is not a construction drawing and is intended for illustrative purposes only.

CLIENT:

Barratt Homes

PROJECT TITLE:

Proposed Residential Development, Chipping Lane, Longridge

DRAWING TITLE:

5km Cycle Catchment

SCALE:

1:50000 at A3

DRAWN:	CHECKED:	DATE:
HF	DL	April 14

vectos
transport planning specialists

Oxford Place, 61 Oxford Street, Manchester M1 6EQ
t:0161 22801008 e:manchester@vectos.co.uk

DRAWING NO: VN30277-G203

REVISION: