

Barratt Homes

**PROPOSED RESIDENTIAL DEVELOPMENT,
HIGGINS BROOK, EAST OF CHIPPING LANE, LONGRIDGE**

Transport Assessment

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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 Higgins Brook.

1.1.2 A full application has been previously submitted for part of the site consisting of 106 dwellings and this site is known as Bowland Meadows which is directly to the east of Chipping Lane. This outline application will cover the whole site and consist of a proposed residential scheme of up to 520 dwellings, relocation of Longridge Cricket Club and a new primary school.

1.1.3 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.

1.1.4 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 an outline 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 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 Chipping Lane in the form of an iron gate leading in to the site.

2.1.3 The existing site is currently bounded to the east by Willows Park Lane, an existing residential development to the south, Chipping Lane to the west and open fields to the north.



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 the main access to the proposed site.

2.2.2 There will also be a secondary residential access provided off Chipping Lane to the north of the main site access junction, this will provide access to a small area of residential units to the northern corner of the site, but also link through to the main internal spine road. The existing Longridge Cricket Club access point to the northern end of Chipping Lane will be maintained at the same location with the internal road alignment being amended to provide access to the new cricket club car parking area.

2.2.3 The proposed site access arrangements can be seen on **Plan 3**.

2.2.4 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 their 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 to swerve to avoid the vehicle and then collided with a lamp post.

Accident Summary

2.3.13 The remaining accidents are 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 outline planning application will consist of up to 520 residential units, including affordable housing and housing for the elderly, relocation of Longridge Cricket Club to provide new cricket ground, pavilion, car park and associated facilities, new primary school, vehicular and pedestrian accesses, landscaping and public open space at Land at Higgins Brook, East of Chipping Lane, Longridge.
- 3.1.2 The proposed development masterplan can be seen on **Plan 4**.
- 3.1.3 The main 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.
- 3.1.4 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.
- 3.1.5 In addition to the main vehicular access off Chipping Lane a secondary vehicular access will also be provided to the north of the main site access junction. The existing priority controlled access to the cricket club will also be maintained with amendment to the internal road alignment which will provide access to the new cricket club car parking area.
- 3.1.6 The proposed site access arrangements can be seen on **Plan 3**.

3.1.7 In addition to the internal network of pedestrian facilities, given that this site essentially forms an extension to the residential provision to the north of Longridge the proposed site will provide connections at the following points:

- Pedestrian/cycle connection at the site access junction off Chipping Lane.
- Pedestrian/Cycle connection on to Chipping Lane connecting to the existing bus stops.
- Direct pedestrian/cycle connection from the site to the existing Sainsbury's food store, this route will be 3 metres wide along with appropriate lighting.
- Pedestrian/cycle connection to Thornfield Avenue.
- Two pedestrian/cycle connections to Redwood Drive.
- Pedestrian/cycle connection to Willows Park Lane.

3.1.8 The proposed site access arrangements in detail can be seen on **Plan 3** with the proposed site layout identified on **Plan 4**. **Plan 5** identifies the proposed gateway feature along Chipping Lane.

3.1.9 **Plan 6** identifies the sites pedestrian access points which link the site to the surrounding areas of Longridge.

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 outline 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 numerous locations around the site. Pedestrian facilities will be provided throughout the site along with numerous connections to the surrounding highway network. To clarify, these connections are identified on **Plan 6** and are as follows:

- Pedestrian/cycle connection at the site access junction off Chipping Lane.
- Pedestrian/Cycle connection on to Chipping Lane connecting to the existing bus stops.
- Direct pedestrian/cycle connection from the site to the existing Sainsbury's food store.
- Pedestrian/cycle connection to Thornfield Avenue.
- Two pedestrian/cycle connections to Redwood Drive.
- Pedestrian/cycle connection to Willows Park Lane.

- 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 a footpath connection to this location from the site will be provided. The bus stop for services heading in to Longridge town centre will be upgraded to quality bus standards and the bus stop for services heading north out of Longridge will be upgraded by providing an area of footway which will replace the verge area where the existing bus stop is located.
- 4.3.3 There are existing bus stops located along Chipping Lane, Inglewhite Road and Willows Park Lane which are identified on **Plan 7**. In addition, the local amenities are identified on **Plan 8**. 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 9**. 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 9**, 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 and Booths supermarkets.

- 4.3.8 It should also be noted that as part of this residential scheme there will also be the provision of a new primary school which will provide approximately 210 school places. This will cater for the whole residential site with all properties being within a 400 metre walking distance or less, this will reduce the need to travel to/from the site to surrounding schools and reduce the number of trips arriving and departing during the peak periods.
- 4.3.9 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.
- 4.3.10 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.
- 4.3.11 It has been demonstrated that the site's walking catchment covers residential, retail, education 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. The provision of the proposed school on site will encourage pedestrian/cycle trips within the site and ultimately reduce car borne trips to/from the site during the peak hour periods.
- 4.4 Accessibility by Cycle**
- 4.4.1 Cycling has the potential to replace short car journeys, particularly those under 5 kilometres. The proposed layout will be designed to provide numerous connections to the existing infrastructure surrounding the site in order to encourage travel by cycle.
- 4.4.2 **Plan 10** 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 10** 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 and Willows Park Lane, 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 7**.

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	84	39	123
Cyclist	0.008	0.005	0.013	4	3	7
PT User	0.004	0.064	0.068	2	33	35

Table 4.3 – Weekday Peak Hour Multi – Modal Trip Generation for Proposed Residential Development (520 Units)

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

Mode	Weekday Peak Hour
Pedestrian	75%
Cyclist	4%
Public Transport	21%
Total	100%

Table 4.4 – Proportional Modal Split for Residential Scheme (520 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 bus services within 400 metres of the site which are located along Chipping Lane/Inglewhite Road and Willows Park Lane along with 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, 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 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 It should be noted that it is considered that applying growth along with including numerous committed development schemes in the Longridge area will overestimate the likely future traffic growth and provide an element of double counting. As such, it is considered that applying traffic growth will provide an extremely robust assessment and over predict the future traffic flows.

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

5.3.5 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 LCC and Ribble Valley Council have requested that the following eight committed developments are considered within our assessment:

- Fox Strategic Land & Property – Whittingham Road, Longridge (200 Dwellings).
- David Wilson Homes – Whittingham Road, Whittingham (78 Dwellings).
- Residential and Employment Site, Whittingham Hospital.
- Miller Homes, Land of Preston Road (58 Dwellings).
- Spout Farm, Preston (32 Dwellings).
- Land bound by Dilworth Lane (49 Dwellings).
- Inglewhite Road/Fox Land (190 Dwellings).
- Chapel Hill (52 Dwellings).

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 The distribution for the proposed residential trips has now been agreed with LCC officers and the methodology originally adopted and the agreed results area set out below.

5.6.2 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.

5.6.3 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**.

5.6.4 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 along with the distribution percentages that have been agreed with LCC:

- Inglewhite Road 3.5%
- B5269 Whittingham Road 26.9%
- B6244 Preston Road 37.0%
- King Street/Calder Avenue 18.2%
- Chipping Lane 14.4%
- **Total 100%**

5.7 Development Trip Generation

5.7.1 As previously stated it is proposed to provide up to 520 residential units, including affordable housing and housing for the elderly, relocation of Longridge Cricket Club to provide new cricket ground, pavilion, car park and associated facilities, new primary school, vehicular and pedestrian accesses, landscaping and public open space.

Residential Trips

- 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 (520 units)					
	Trip Rates/Household			Traffic Flows		
	Arr	Dep	2-Way	Arr	Dep	2-Way
Weekday AM Peak	0.144	0.420	0.564	75	218	293
Weekday PM Peak	0.404	0.219	0.623	210	114	324

Table 5.3 – Traffic Generation for Proposed Residential Scheme (520 Dwellings – Outline Application)

- 5.7.4 **Figures 15** and **16** identify the residential traffic generation associated with the outline application for the weekday AM and PM peak hours. It should be noted that no allowance has been made for the affordable housing and housing for the elderly. As such, again a robust approach has been adopted in order to calculate the proposed residential trip generation.

Primary School Trips

- 5.7.5 It has been advised that the proposed residential development will require approximately 190 primary school places. As such, as part of the residential development scheme it is proposed to provide a primary school within the site, this school will predominately serve the proposed site.

5.7.6 The trip rates for the proposed residential element do not include any sites which have a primary school on site. Therefore, the residential trips already make an allowance for school trips in the weekday AM and PM peak hour periods arriving and departing the site.

5.7.7 Providing a primary school within a short walk (400 metres and less) within the site will significantly reduce the number of residential trips arriving and departing the site and retain trips within the site. However, in order to provide a robust assessment no trip reduction for the primary school has been applied.

Cricket Club Trips

5.7.8 As part of the development scheme it is proposed relocate the existing Longridge Cricket Club within the site to provide new cricket ground, pavilion, car park and associated facilities.

5.7.9 Given that the cricket club proposals are simply improving the existing facilities there will be no additional trips associated with the club. Any trips associated with the cricket club that are visiting the club during the weekday peak hour periods have already been counted for within the surveyed flows.

5.8 Assessment Flows

5.8.1 In order to establish the assessment flow scenarios the proposed traffic associated with the outline application the development flows have 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 It should be noted that all of the residential units will not be completed in 2016, as such, this 2016 analysis should be considered as extremely robust.

5.8.3 In order to calculate the 2025 assessment flows, the trips associated with the proposed residential scheme 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.

5.8.4 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 520 units are built out.

5.9.3 As previously stated it is proposed to provide a main site access junction off Chipping Lane with a right turning ghost island facility along with a secondary simple priority controlled junction to the north. In order to provide a robust assessment it has been assumed that all of the development trips use the main site access junction.

5.9.4 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	0.400	0.66	0.210	0.26	0.404	0.67	0.211	0.27
Chipping Ln – Right In	0.100	0.11	0.278	0.38	0.101	0.11	0.280	0.39

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

5.9.5 As can be seen from Table 5.5 the proposed site access junction off Chipping Lane can accommodate the outline application scheme in both future design years with no material impact to the operation of Chipping Lane.

Existing Junction with Inglewhite Road/Chipping Lane

5.9.6 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.

5.9.7 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	0.108	0.12	0.650	0.09	0.153	0.18	0.118	0.13
Iglewhite Road – Right Out	0.358	0.56	0.359	0.56	0.407	0.68	0.292	0.41
Chipping Lane – Right In	0.069	0.07	0.084	0.09	0.200	0.25	0.166	0.20

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

5.9.8 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	0.114	0.13	0.078	0.08	0.170	0.20	0.263	0.35
Iglewhite Road – Right Out	0.386	0.62	0.428	0.74	0.466	0.86	0.465	0.68
Chipping Lane – Right In	0.072	0.08	0.095	0.10	0.211	0.27	0.173	0.21

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

5.9.9 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 outline residential scheme in place.

Existing Junction with Inglewhite Road/Sainsbury’s Access

5.9.10 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.

5.9.11 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)	0.46	0.85	0.45	0.83	0.62	1.64	0.55	1.19
Sainsbury’s Access	0.13	0.15	0.38	0.61	0.14	0.17	0.40	0.68
Inglewhite Rd (NB)	0.44	0.77	0.59	1.40	0.49	0.95	0.74	2.73

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

5.9.12 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)	0.52	1.07	0.51	1.05	0.68	2.10	0.61	1.54
Sainsbury's Access	0.15	0.18	0.44	0.79	0.17	0.21	0.47	0.88
Inglewhite Rd (NB)	0.49	0.95	0.66	1.93	0.54	1.16	0.81	4.14

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

5.9.13 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

5.9.14 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.

5.9.15 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)	0.57	1.33	0.64	1.73	0.73	2.66	0.64	1.74
Berry Lane	0.95	12.33	0.94	11.43	1.08	42.20	1.05	42.20
Inglewhite Rd (NB)	0.48	0.91	0.72	2.51	0.52	1.05	0.78	3.36

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

5.9.16 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)	0.65	1.81	0.73	2.63	0.81	4.01	0.82	4.35
Berry Lane	1.12	57.10	1.09	51.29	1.27	106.99	1.23	105.23
Inglewhite Rd (NB)	0.53	1.14	0.82	4.26	0.57	1.30	0.94	11.24

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

5.9.17 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.

- 5.9.18 The junction results identify an increase in vehicular queues on the Berry Lane approach arm. However, the proposals only potentially add an additional vehicle every 3 minutes on Berry Lane in the weekday AM peak hour and an additional vehicle every minute in the weekday PM peak hour.
- 5.9.19 It is considered that the additional queues identified in Table 5.10 and 5.11 which are taken from the ARCADY outputs are overestimating the predicted queues as the baseline outputs are already at capacity. It should be noted that ARCADY is essentially a comparative tool developed using empirical data and once the RFC on an arm exceeds 1, limitations in the time-dependent queuing theory becomes apparent.
- 5.9.20 In reality the assessment have assumed all of the residential development trips are ingressing and egressing the site during the peak hour, when in fact if there were any congestion at certain location within the town centre, vehicles would then seek alternative routes as well as travelling outside of the peaks hours, resulting in peak spreading, vehicles are unlikely to simply join the back of a queue of traffic at the busiest times of the day.
- 5.9.21 It is considered that the proposals will not have a severe impact to the operation of this existing junction with the proposed development resulting in less than 3 additional vehicles per minute during the weekday peak hour periods.

Existing Junction with Berry Lane/Calder Avenue

- 5.9.22 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.
- 5.9.23 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)	0.27	0.36	0.55	1.24	0.32	0.46	0.58	1.38
Calder Avenue	0.27	0.37	0.27	0.37	0.28	0.38	0.28	0.38
Berry Lane (NB)	0.43	0.76	0.45	0.82	0.45	0.81	0.50	0.98

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

5.9.24 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)	0.30	0.42	0.63	1.67	0.35	0.53	0.65	1.87
Calder Avenue	0.31	0.44	0.32	0.47	0.32	0.46	0.32	0.48
Berry Lane (NB)	0.49	0.96	0.51	1.05	0.51	1.03	0.56	1.26

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

5.9.25 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.

5.9.26 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.

Junction with Derby Rd/Whittingham Rd/Kestor Lane

5.9.27 As part of the consented David Wilson Homes application (06/2012/0544) there is a package of highway works at this existing roundabout junction, as such, this consented junction arrangement will be considered as the baseline scenario. The consented junction arrangement is identified as **Plan 10**.

5.9.28 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.

5.9.29 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	1.58	0.62	1.59	0.71	2.44	0.67	1.98
Kestor Lane	0.56	1.26	0.43	0.76	0.59	1.42	0.45	0.80
Preston Road	0.65	1.87	0.92	10.25	0.69	2.15	1.01	34.42
Whittingham Road	0.52	1.10	0.60	1.30	0.53	1.13	0.63	1.65

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

5.9.30 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)	0.71	2.39	0.71	2.41	0.81	4.08	0.76	3.07
Kestor Lane	0.65	1.85	0.50	1.00	0.69	2.17	0.51	1.05
Preston Road	0.74	2.82	1.04	52.01	0.76	3.05	1.13	120.56
Whittingham Road	0.58	1.37	0.68	2.10	0.58	1.39	0.69	2.20

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

- 5.9.31 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 1.5 vehicles every minute at this location.
- 5.9.32 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.

5.9.33 Again, it is considered that the ARCADY model results, once the junction is offering a reduced level of capacity then overestimates the potential vehicle queues. For example, on the Preston Road approach during the weekday AM peak hour the development proposals will only add an additional vehicle every minute and during the weekday PM peak hour 1 vehicle every minute on the busiest approach arms. As such, it is considered that the proposed additional residential trips at this junction are considered not to provide a severe impact.

Existing Junction with Preston Road/Chapel Hill

5.9.34 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.

5.9.35 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)	0.95	14.60	0.69	2.24	1.06	55.87	0.74	2.80
Chapel Hill	0.72	2.53	0.38	0.60	0.75	2.93	0.39	0.64
Preston Road (NB)	0.80	4.00	1.15	136.58	0.83	4.82	1.24	212.34

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

5.9.36 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)	1.08	63.62	0.78	3.42	1.19	137.08	0.83	4.51
Chapel Hill	0.82	4.26	0.44	0.80	0.83	4.52	0.46	0.86
Preston Road (NB)	0.90	7.90	1.28	247.00	0.93	10.80	1.37	324.17

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

- 5.9.37 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 with a reduced level of 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.
- 5.9.38 The residential scheme will only result in around 1.4 additional vehicles every minute during the peak hour periods.
- 5.9.39 For example, during the weekday AM peak the proposed residential scheme will generate around 1 additional vehicle every minute travelling south and around 1 additional vehicle every minute travelling north in to Longridge town centre during the weekday PM peak hours.
- 5.9.40 Again, it is considered that this assessment has provided an extremely robust analysis, with traffic growth and committed development included, which effectively results in double counting, no allowance has been made for peak spreading or any allowance for trips taking alternative routes during the peak hours.
- 5.9.41 This junction will only offer a reduced level of service for a short period of time during the peak periods and the junction will actually operate with no capacity issues for the majority of the day. As such, it is considered that the level of impact as a result of the residential scheme is not considered to be severe.

Existing Junction with Berry Lane/Market Place/King Street

5.9.42 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.

5.9.43 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	0.422	0.73	0.520	1.07	0.487	0.94	0.547	1.19
King Street – Ahead and Right	0.378	0.70	0.313	0.49	0.403	0.78	0.276	0.40

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

5.9.44 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	0.483	0.93	0.558	1.25	0.550	1.21	0.645	1.78
King Street – Ahead and Right	0.431	0.90	0.320	0.51	0.457	1.01	0.431	0.86

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

5.9.45 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

5.9.46 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.

5.9.47 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	0.115	0.13	0.143	0.17	0.163	0.19	0.253	0.34
Inglewhite Rd – Ahead and Right	0.024	0.02	0.017	0.02	0.025	0.03	0.016	0.02

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

5.9.48 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	0.130	0.15	0.163	0.19	0.181	0.22	0.258	0.35
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

5.9.49 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

5.9.50 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.

5.9.51 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	0.197	0.24	0.158	0.19	0.201	0.25	0.252	0.33
Whittingham Road – Ahead and Right	0.058	0.06	0.043	0.05	0.058	0.06	0.044	0.05

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

5.9.52 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	0.228	0.29	0.185	0.23	0.408	0.68	0.281	0.39
Whittingham Road – Ahead and Right	0.066	0.07	0.049	0.05	0.066	0.07	0.050	0.05

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

5.9.53 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 outline application.
- 5.10.6 The existing priority controlled junction with Inglewhite Road and Chipping Lane currently operates within capacity and as part of the outline application scheme this junction will continue to operate within capacity with the proposed scheme in place.
- 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 Berry 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 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 not have a severe impact with only around 2 additional vehicles every minute 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 2 additional vehicles every minute 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 proposals 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 not result in a severe 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 As well as the main vehicular access off Chipping Lane a secondary vehicular access will also be provided to the north of the main site access junction. The existing priority controlled access to the cricket club will also be maintained with amendments to the internal road alignment which will provide access to the new cricket club car parking area.

6.2.4 In addition to the internal network of pedestrian facilities, given that this site essentially forms an extension to the residential provision to the north of Longridge the proposed site will provide connections at the following points:

- Pedestrian/cycle connection at the site access junction off Chipping Lane.
- Pedestrian/Cycle connection on to Chipping Lane connecting to the existing bus stops.

- Direct pedestrian/cycle connection from the site to the existing Sainsbury's food store.
- Pedestrian/cycle connection to Thornfield Avenue.
- Two pedestrian/cycle connections to Redwood Drive.
- Pedestrian/cycle connection to Willows Park Lane.

6.2.5 The proposed site access arrangement in detail can be seen on **Plan 3**, the proposed site layout can be seen on **Plan 4** and the proposed pedestrian/cycle connection points are identified on **Plan 5**.

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 proposed outline application, the car parking provision will be provided in accordance with the Council's car parking standards.

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 of up to 520 residential units, including affordable housing and housing for the elderly, relocation of Longridge Cricket Club to provide new cricket ground, pavilion, car park and associated facilities, new primary school, vehicular and pedestrian accesses, landscaping and public open space.

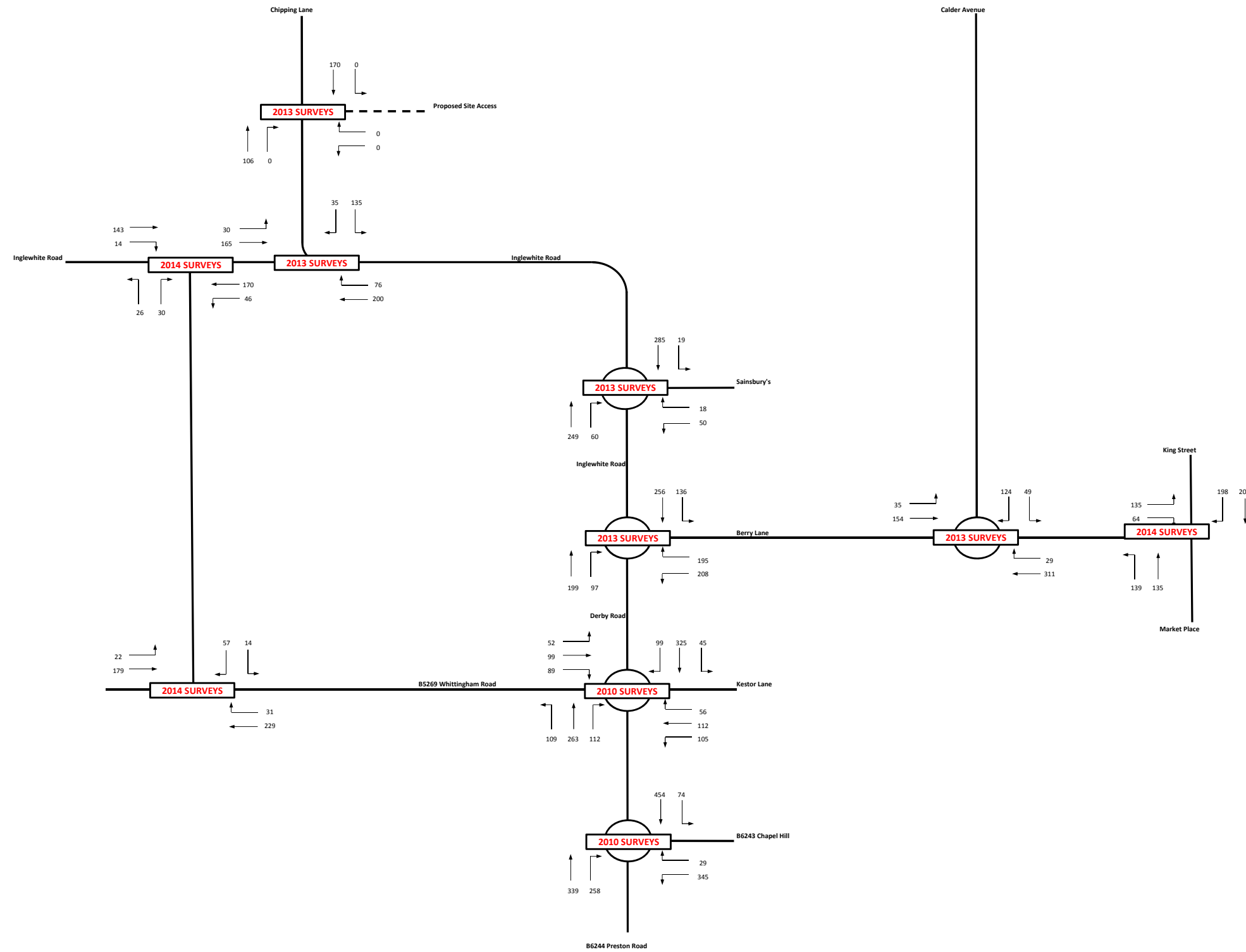
7.1.2 The conclusions can be summarised as follows:

- 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;
- The sustainable credential of the site will also be strengthened with the provision of the primary school on site which will reduce the need to travel to/from the site during the highway networks peak hour periods.
- 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 will not have a material impact to the operation to the majority of the existing highway network in and around Longridge. Where a reduce level of service is offered it is considered that the level of impact is not severe.

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

FIGURES

OUTLINE APPLICATION

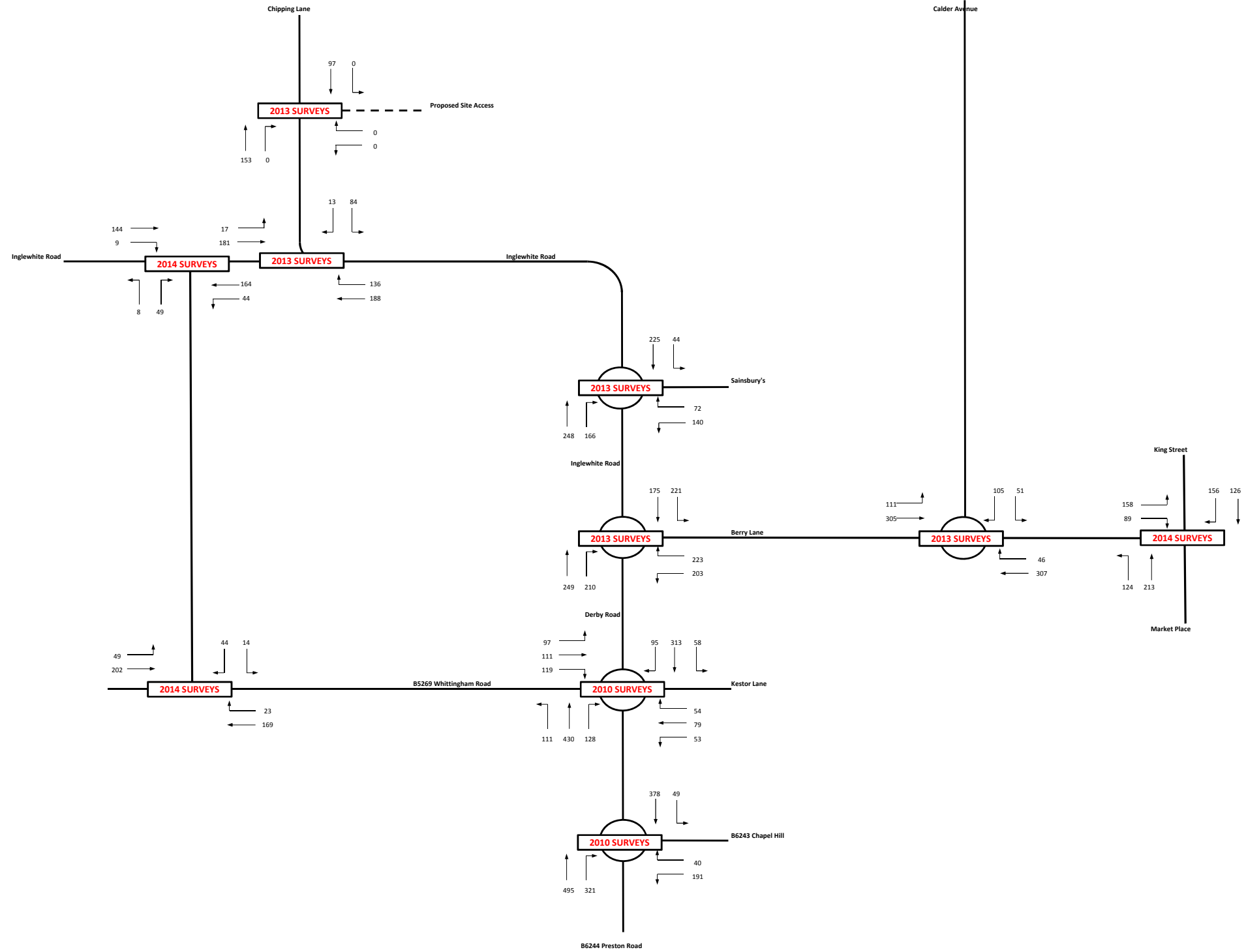


PCUs

Figure 1

Surveyed Traffic Flows
(Weekday AM Peak 0800 to 0900)

OUTLINE APPLICATION

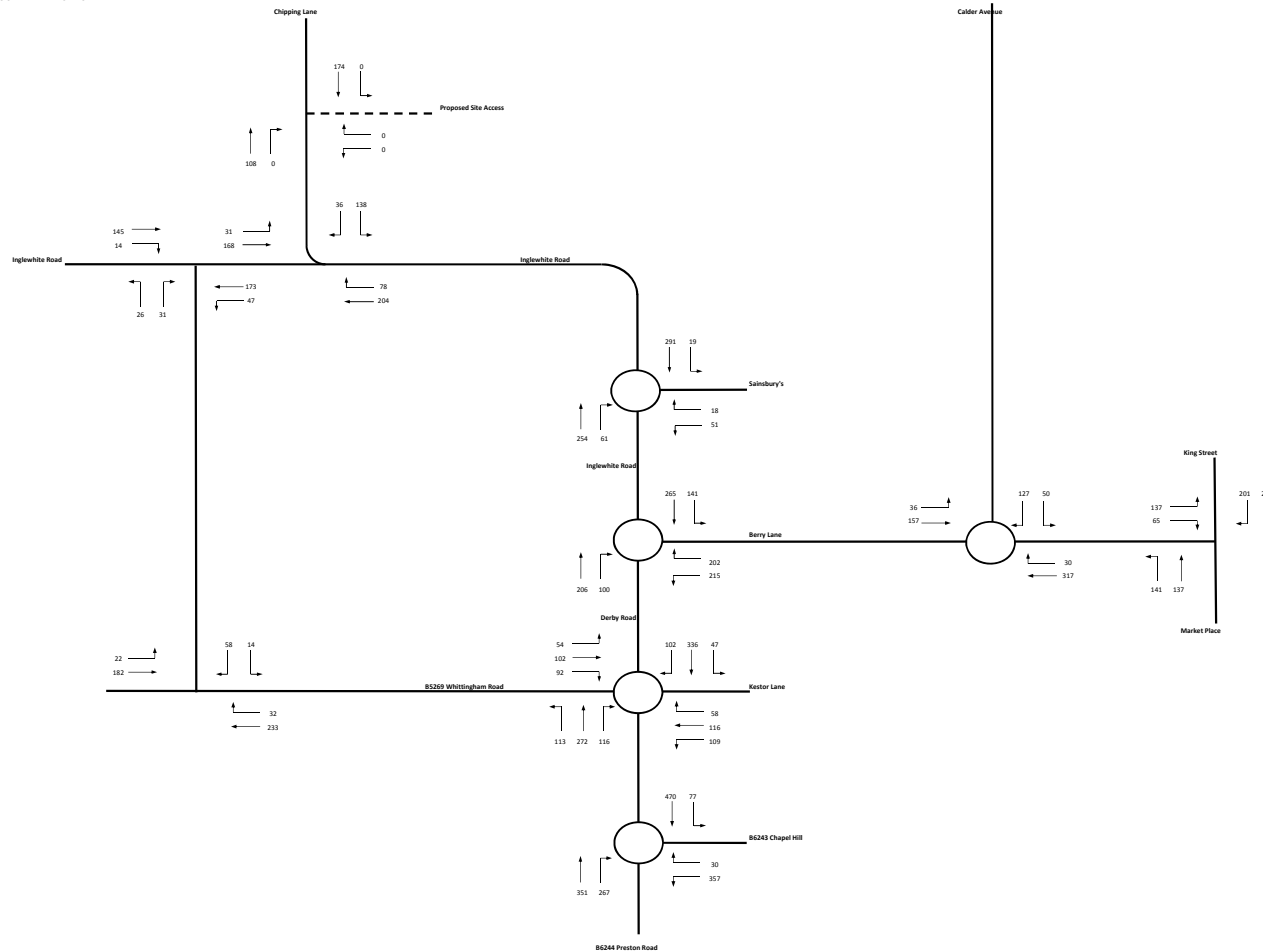


PCUs

Figure 2

Surveyed Traffic Flows
(Weekday PM Peak 1700 to 1800)

OUTLINE APPLICATION

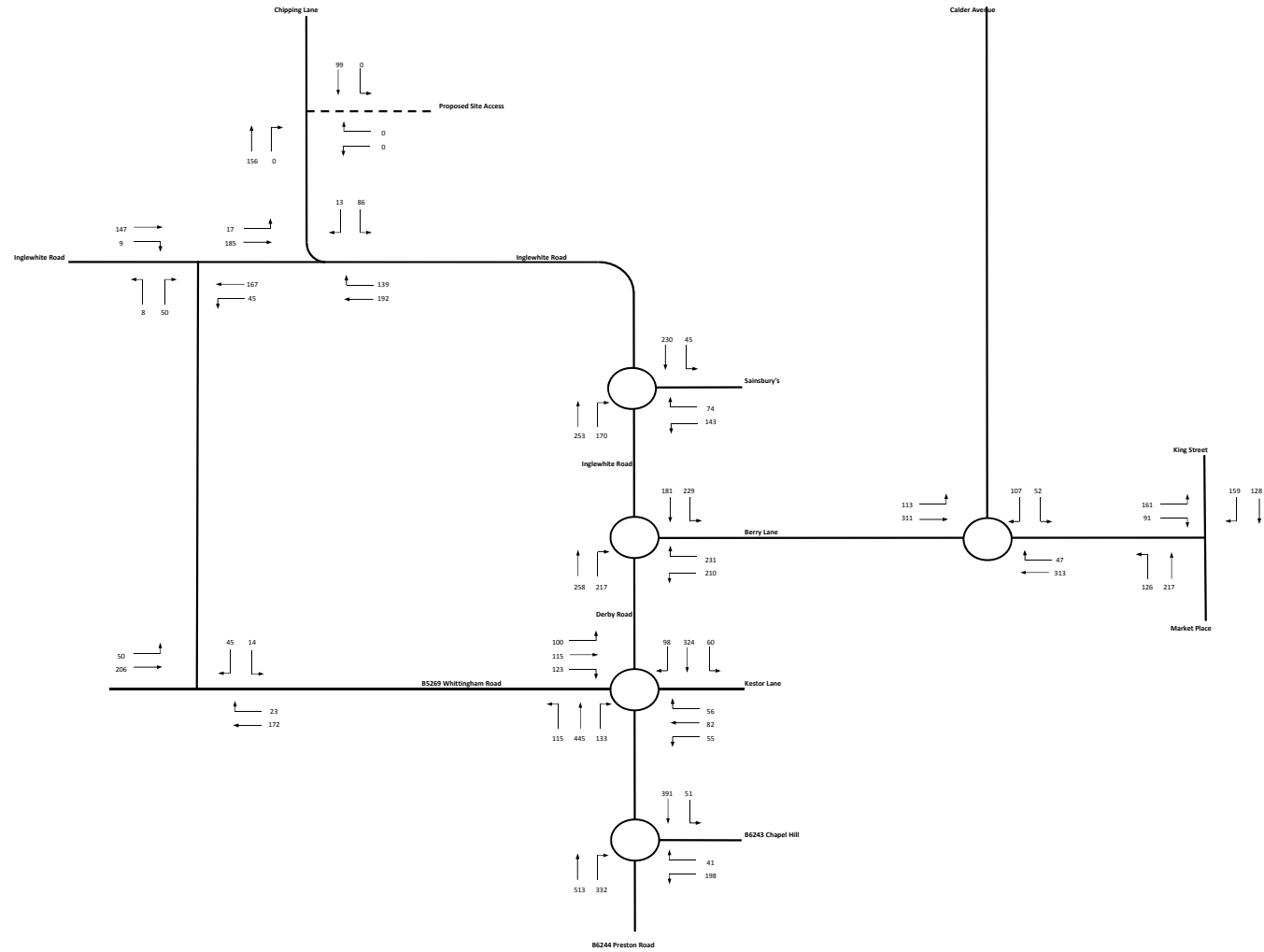


NTM TEMPRO Growth Factor 2010 to 2016 = 1.034
 NTM TEMPRO Growth Factor 2013 to 2016 = 1.021
 NTM TEMPRO Growth Factor 2014 to 2016 = 1.017
 PCUs

Figure 3

2016 Growthed Flows
 (Weekday AM Peak 0800 to 0900)

OUTLINE APPLICATION

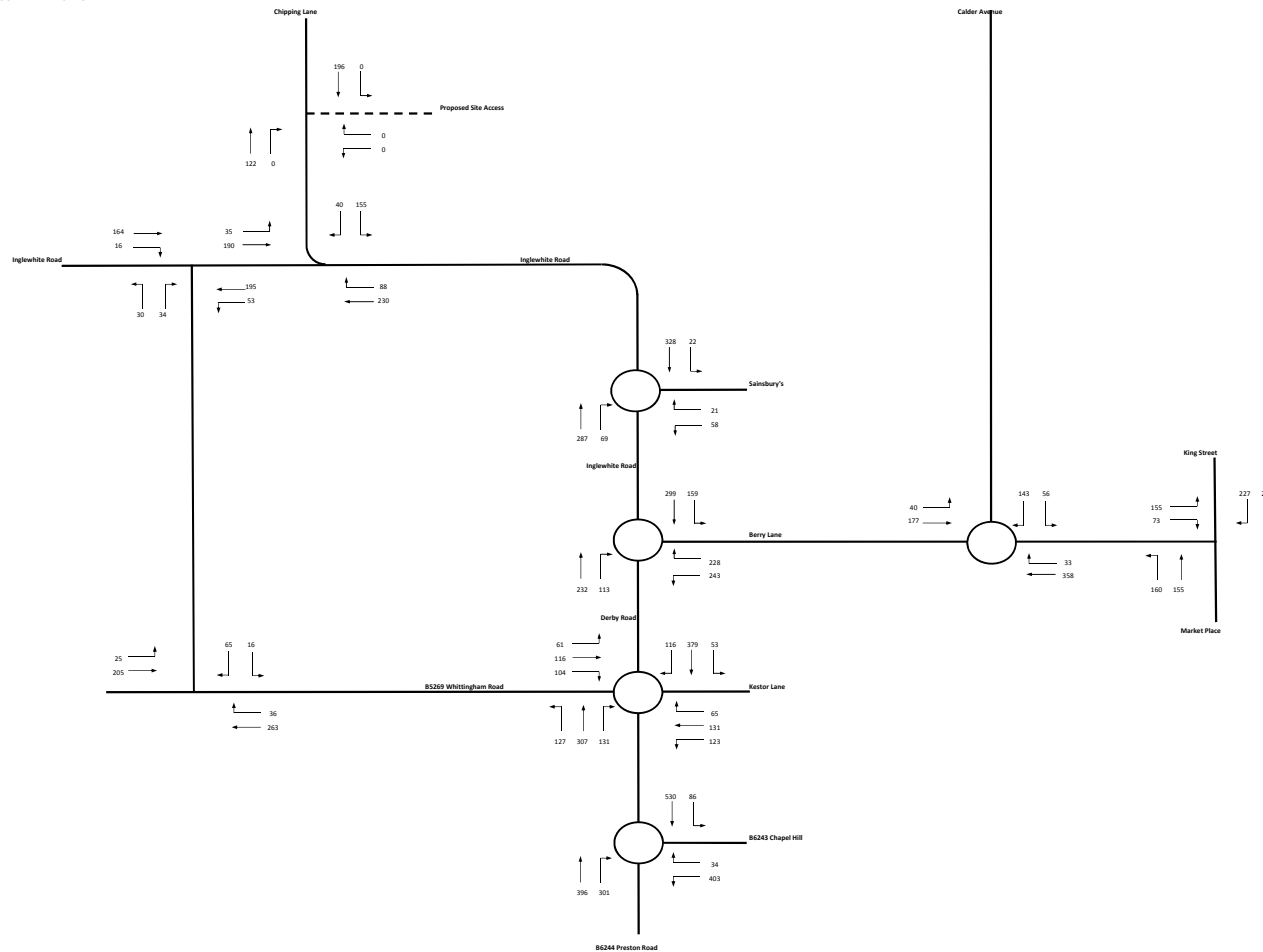


NTM TEMPRO Growth Factor 2010 to 2016 = 1.04
 NTM TEMPRO Growth Factor 2013 to 2016 = 1.02
 NTM TEMPRO Growth Factor 2014 to 2016 = 1.02
 PCUs

Figure 4

2016 Growth Flows
 (Weekday PM Peak 1700 to 1800)

OUTLINE APPLICATION

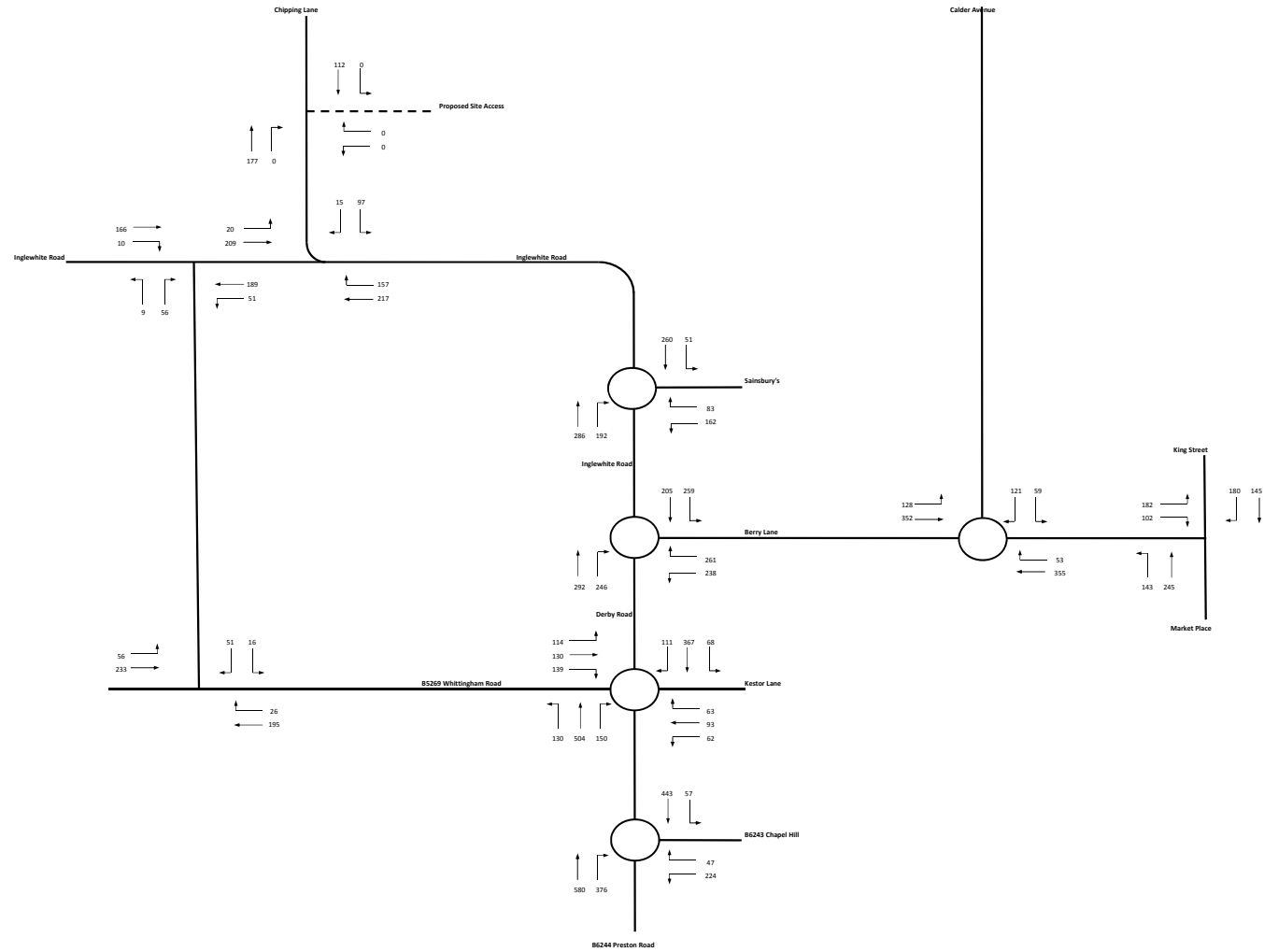


NTM TEMPRO Growth Factor 2010 to 2025 = 1.167
 NTM TEMPRO Growth Factor 2013 to 2025 = 1.152
 NTM TEMPRO Growth Factor 2014 to 2025 = 1.148
 PCUs

Figure 5

2025 Growthed Flows
 (Weekday AM Peak 0800 to 0900)

OUTLINE APPLICATION

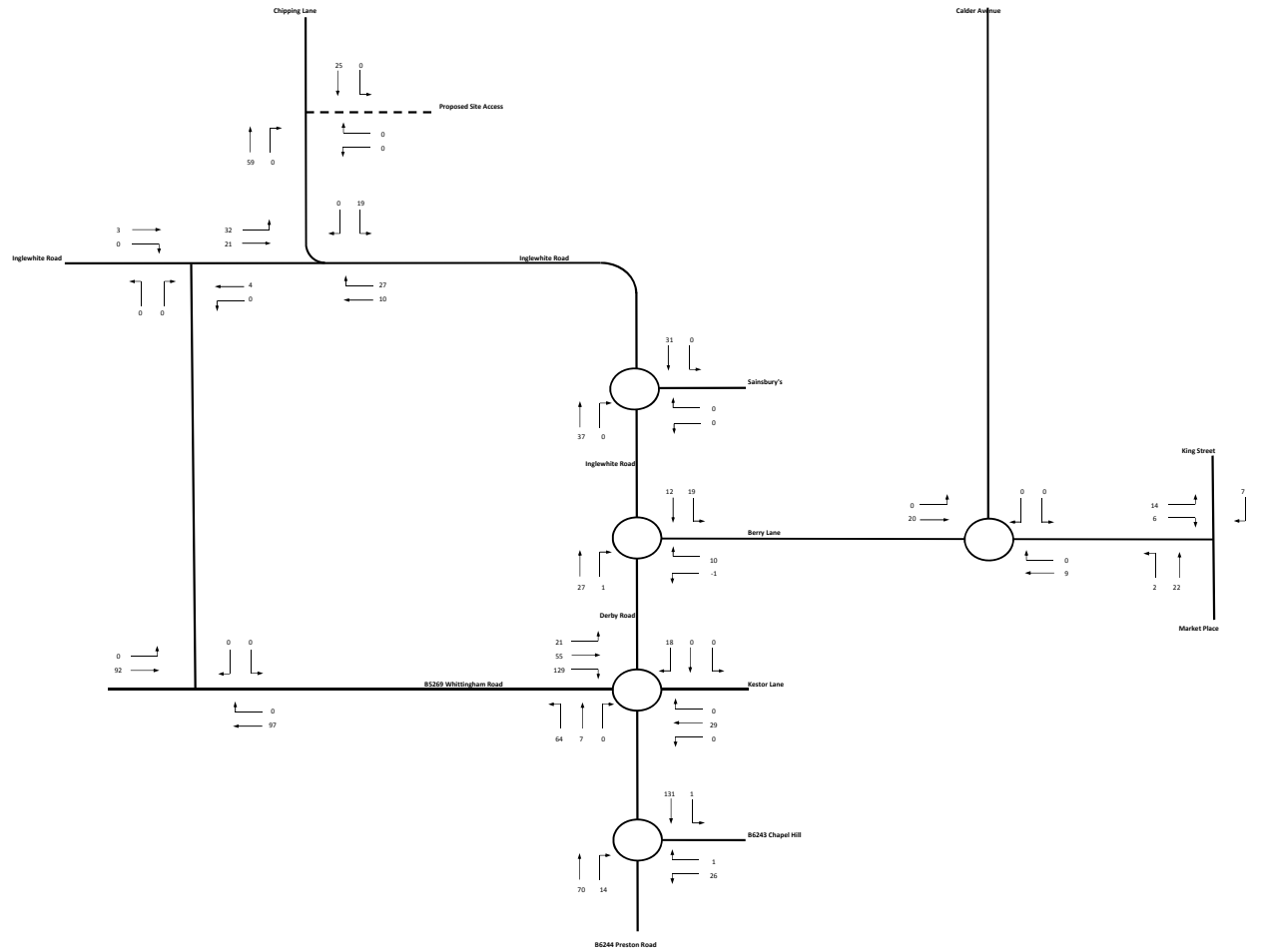


NTM TEMPRO Growth Factor 2010 to 2025 = 1.17
 NTM TEMPRO Growth Factor 2013 to 2025 = 1.16
 NTM TEMPRO Growth Factor 2014 to 2025 = 1.15
PCUs

Figure 6

**2025 Growth Flows
 (Weekday PM Peak 1700 to 1800)**

OUTLINE APPLICATION

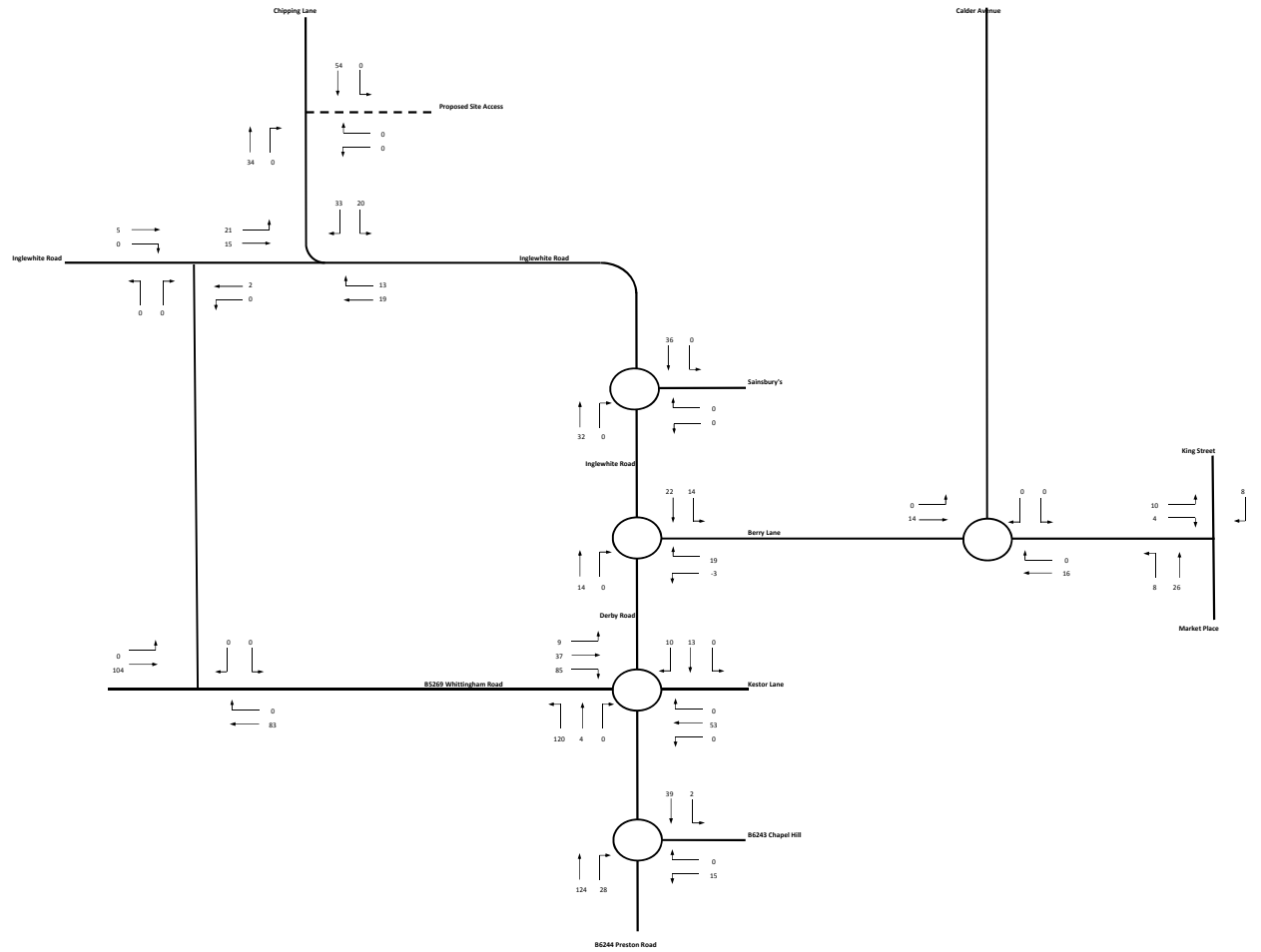


PCUs

Figure 7

Committed Developments
(Weekday AM Peak 0800 to 0900)

OUTLINE APPLICATION

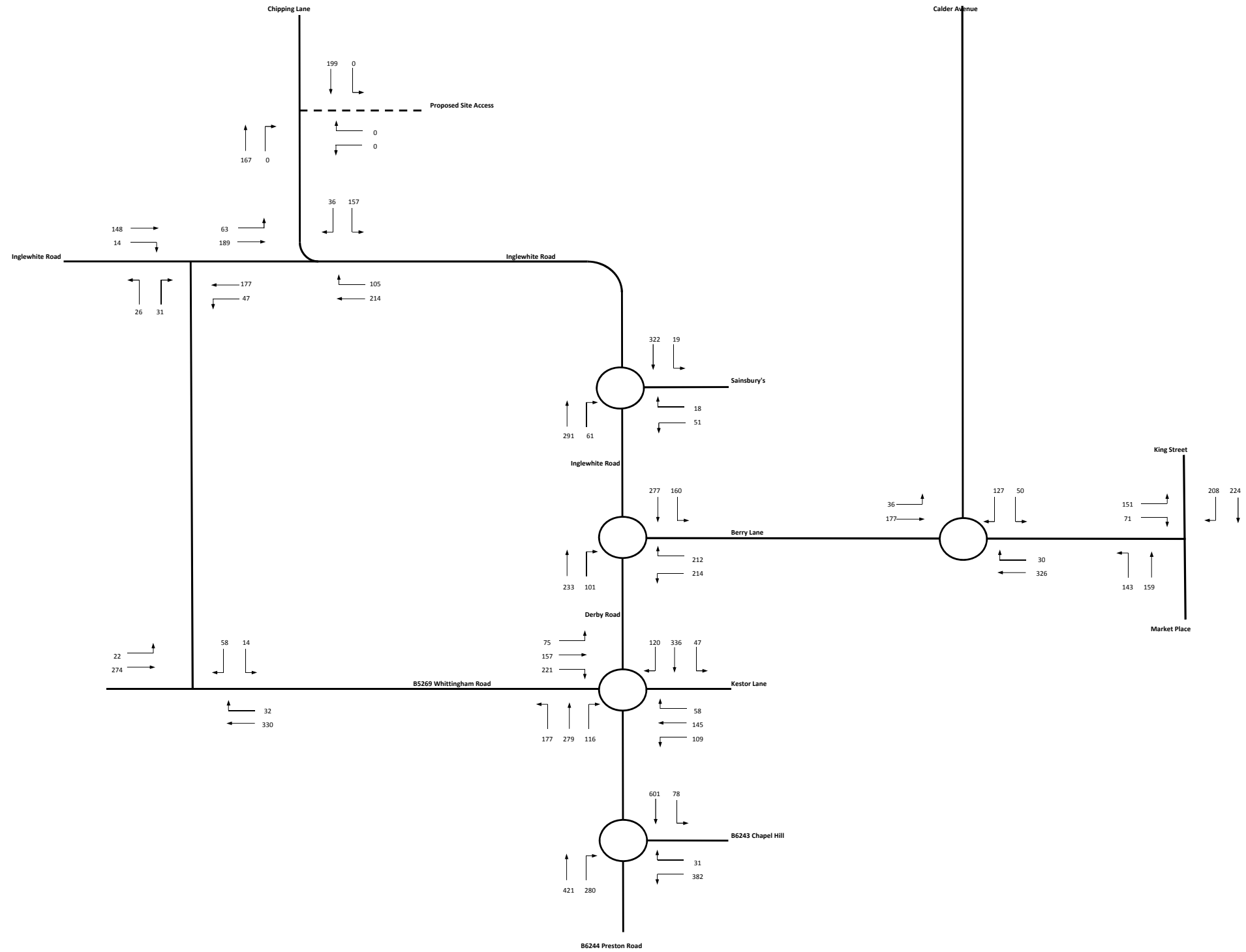


PCUs

Figure 8

Committed Developments
(Weekday PM Peak 1700 to 1800)

OUTLINE APPLICATION

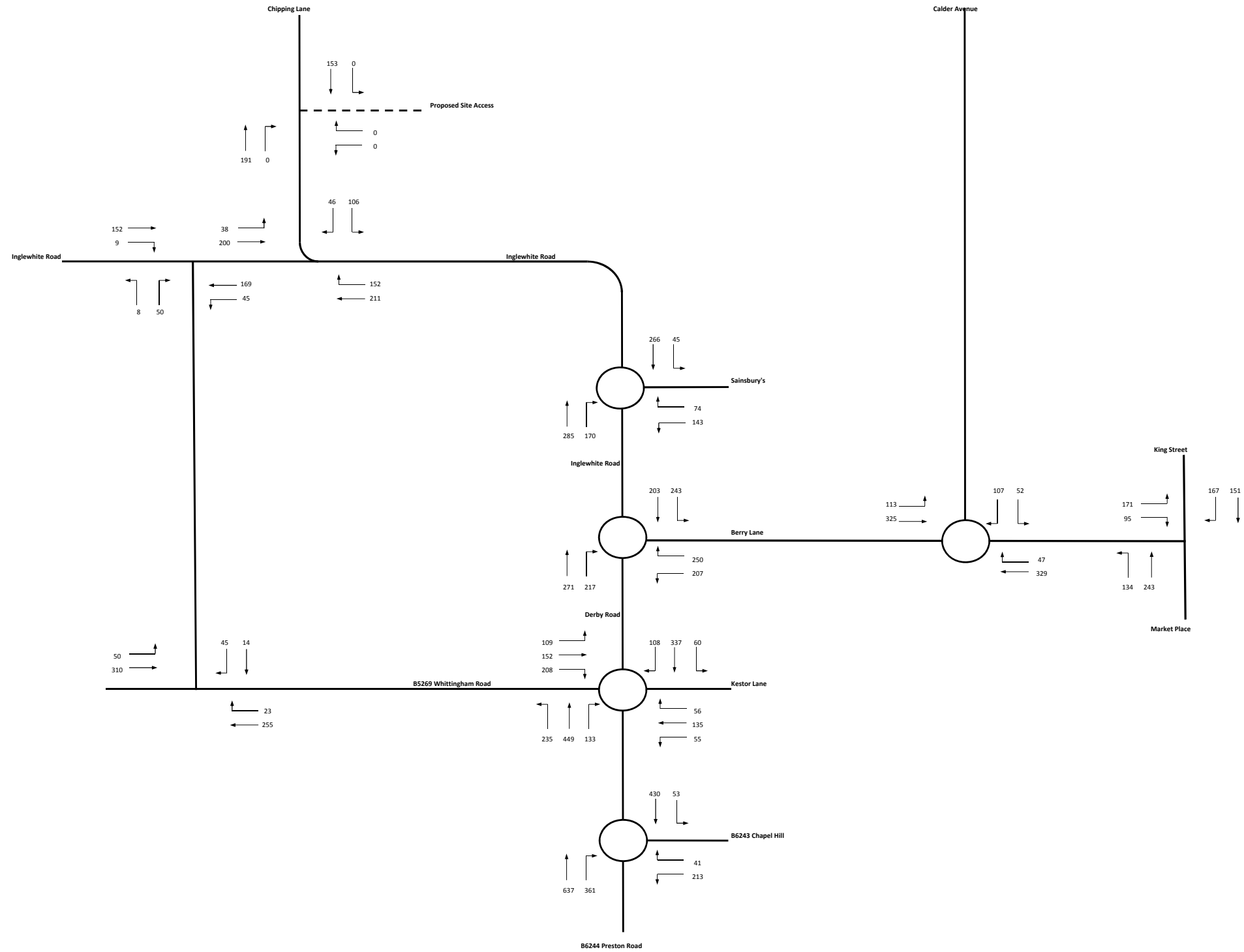


PCUs

Figure 9

2016 Baseline Flows
(Weekday AM Peak 0800 to 0900)

OUTLINE APPLICATION

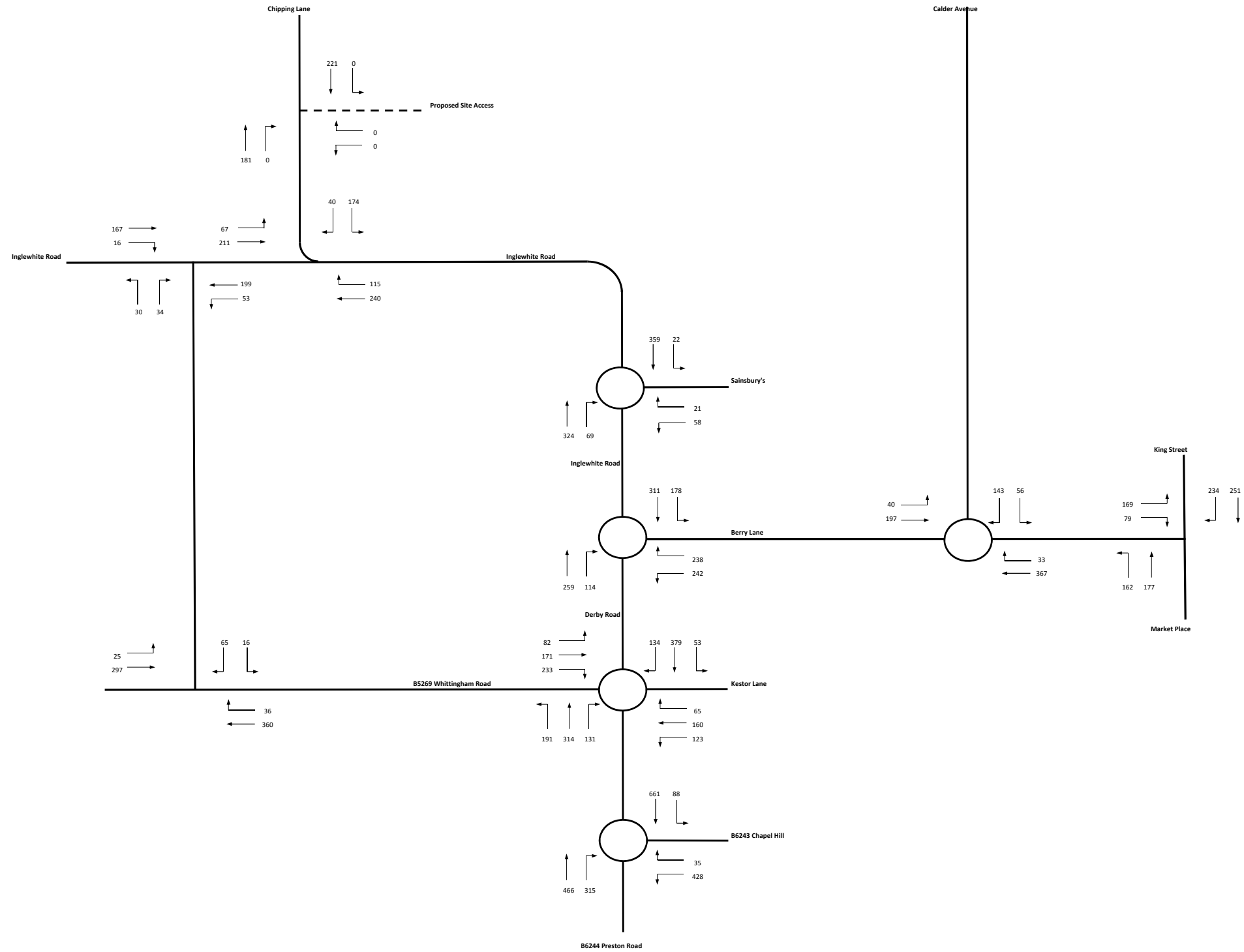


PCUs

Figure 10

2016 Baseline Flows
(Weekday PM Peak 1700 to 1800)

OUTLINE APPLICATION

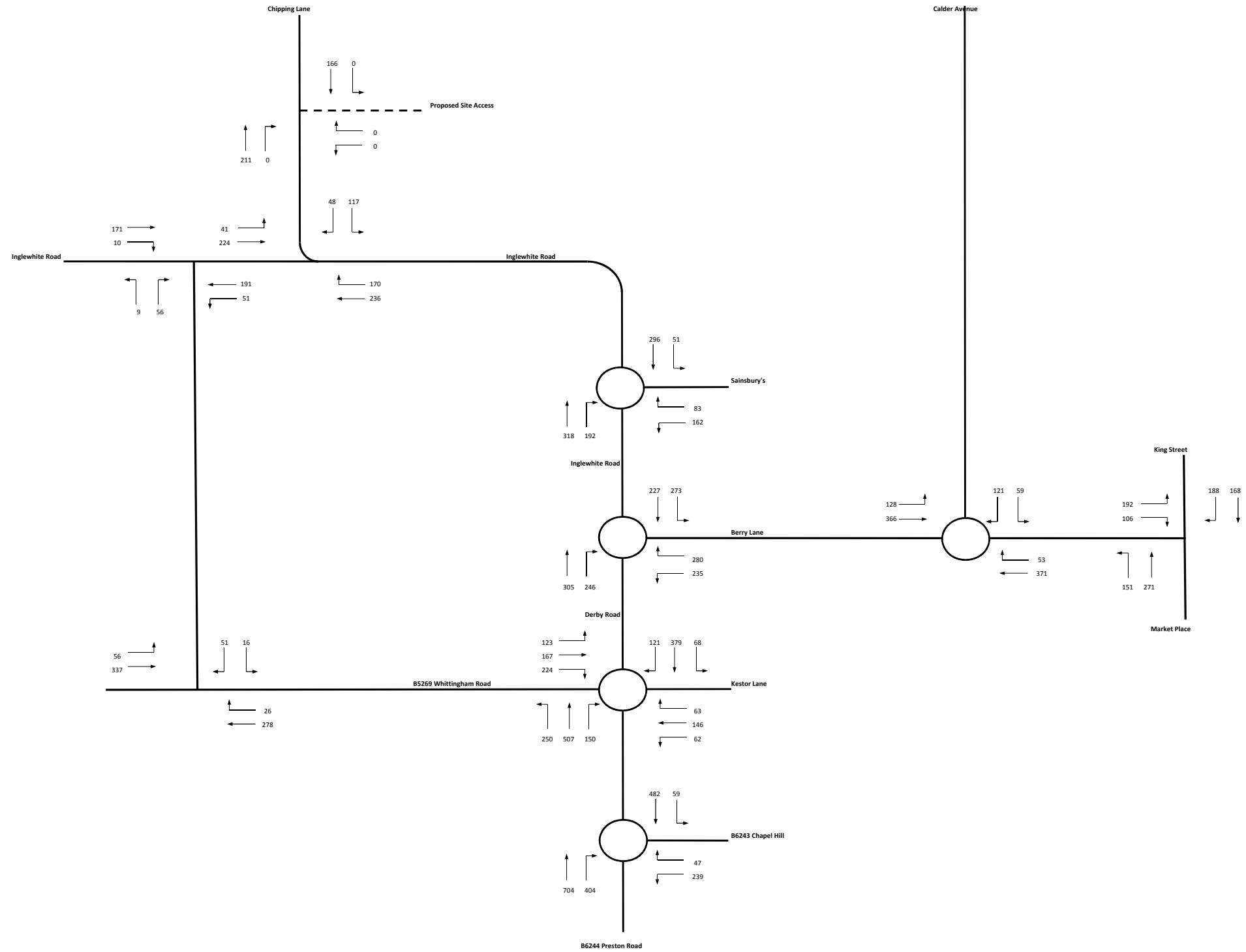


PCUs

Figure 11

2025 Baseline Flows
(Weekday AM Peak 0800 to 0900)

OUTLINE APPLICATION

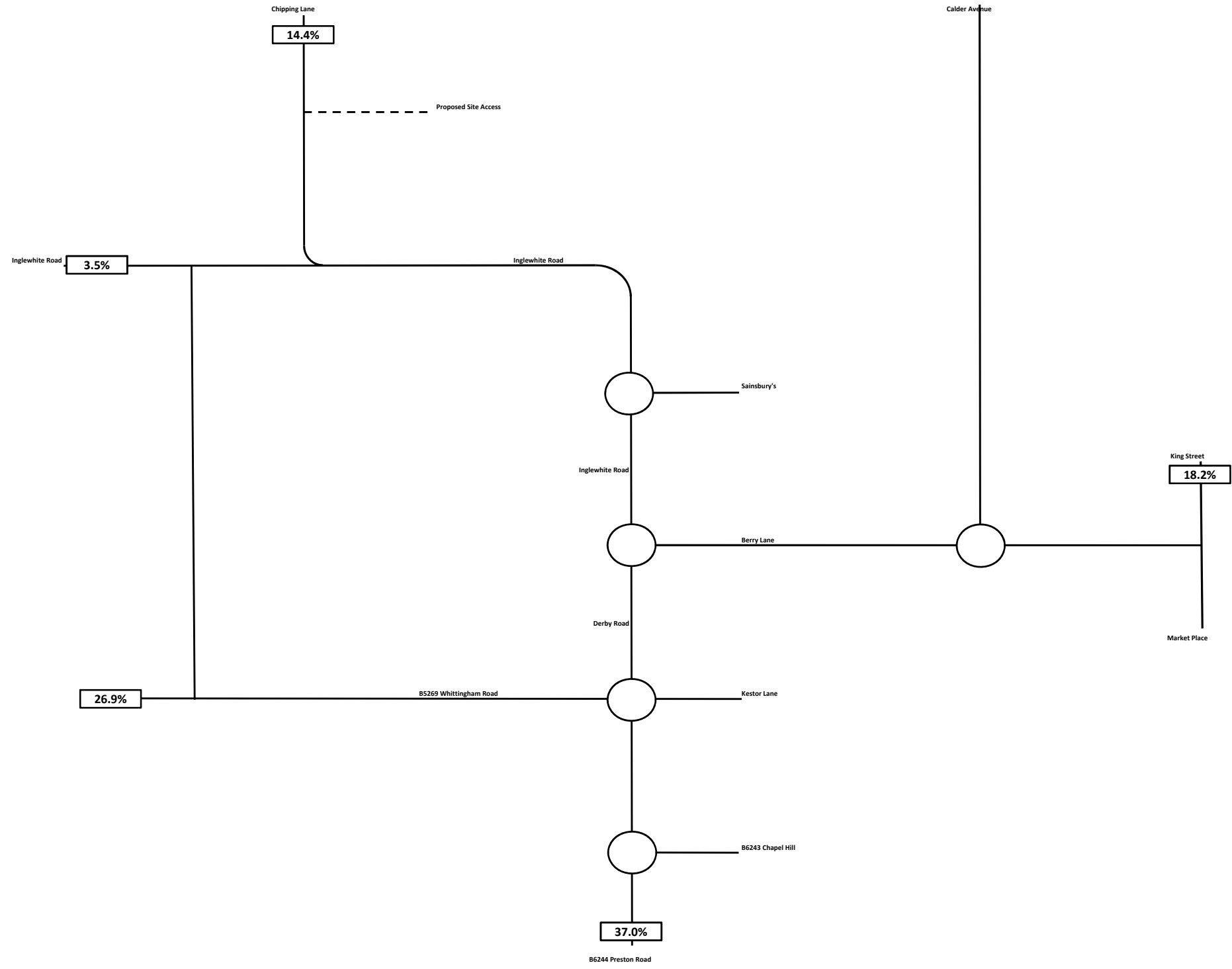


PCUs

Figure 12

2025 Baseline Flows
(Weekday PM Peak 1700 to 1800)

OUTLINE APPLICATION

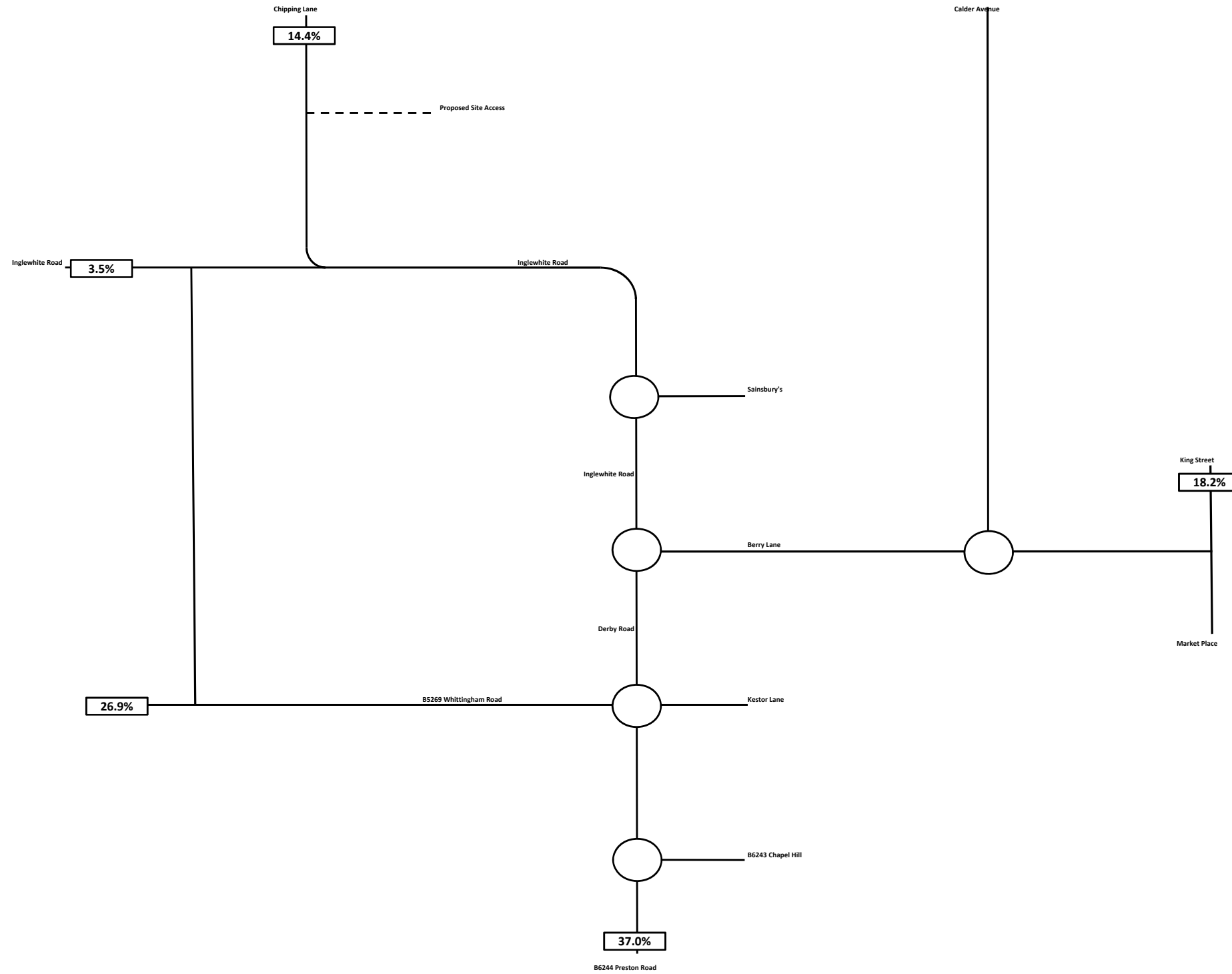


PCUs

Figure 13

Distribution
(Weekday AM Peak 0800 to 0900)

OUTLINE APPLICATION

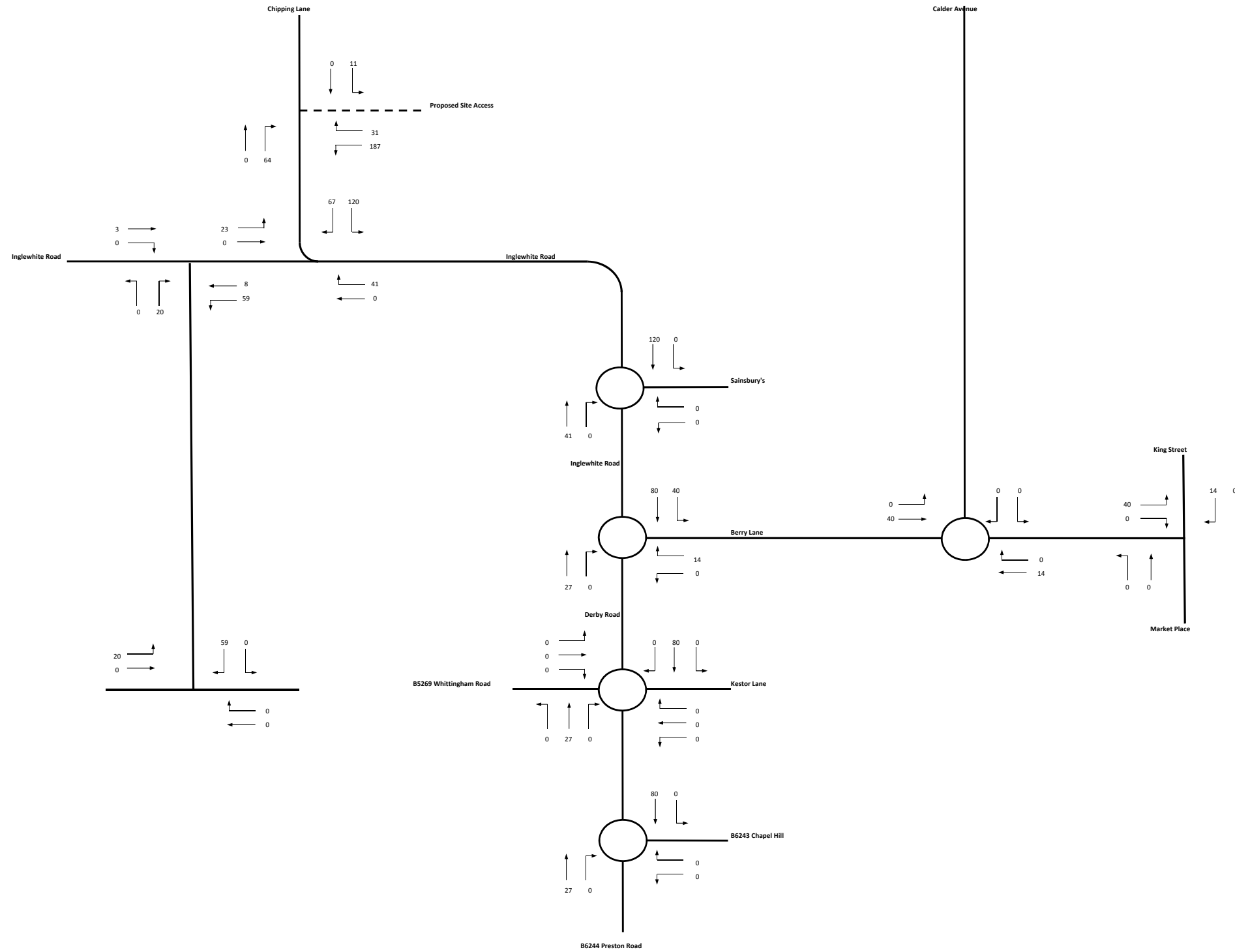


PCUs

Figure 14

Distribution
(Weekday PM Peak 1700 to 1800)

OUTLINE APPLICATION

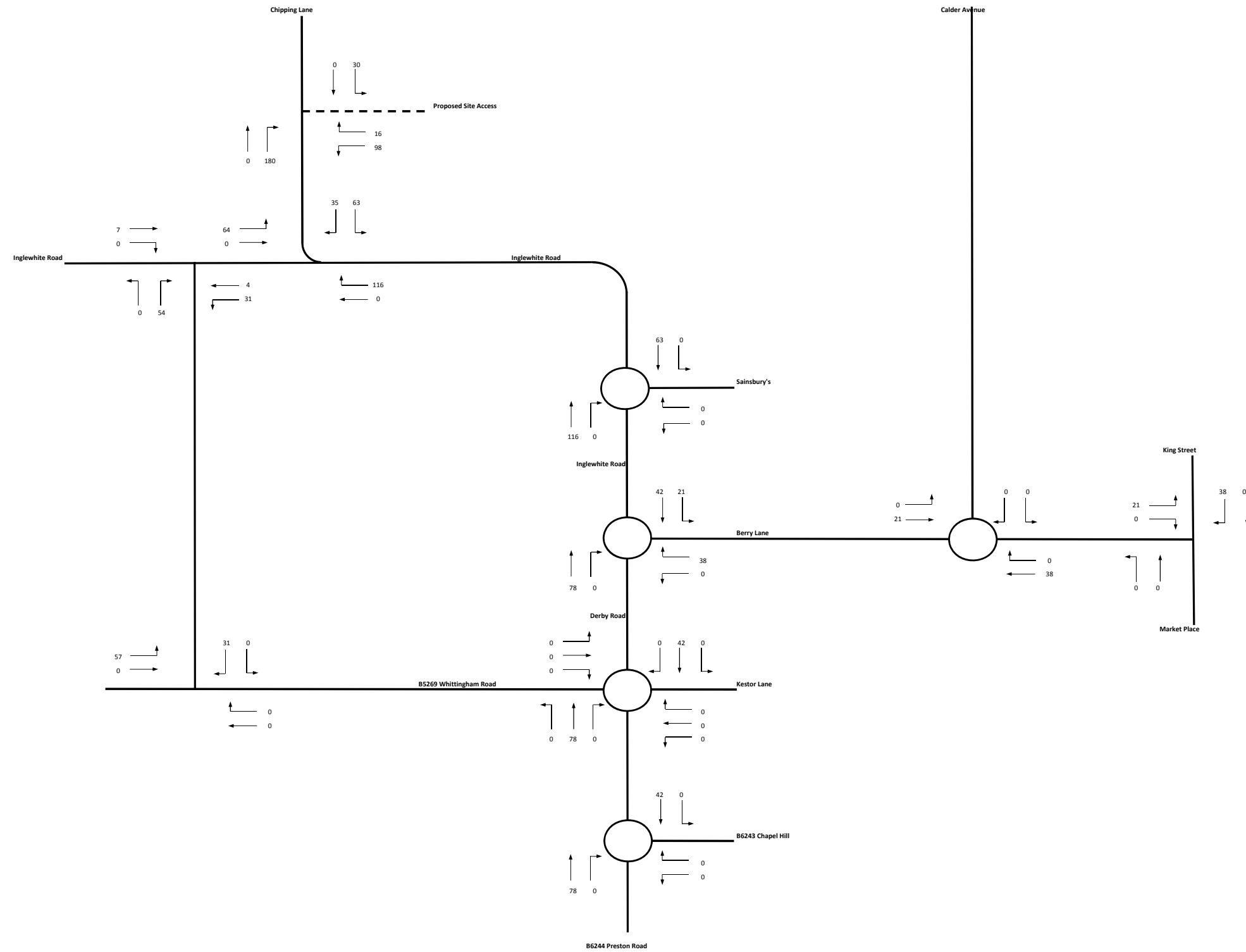


PCUs

Figure 15

Proposed Residential Development (520 Houses)
(Weekday AM Peak 0800 to 0900)

OUTLINE APPLICATION

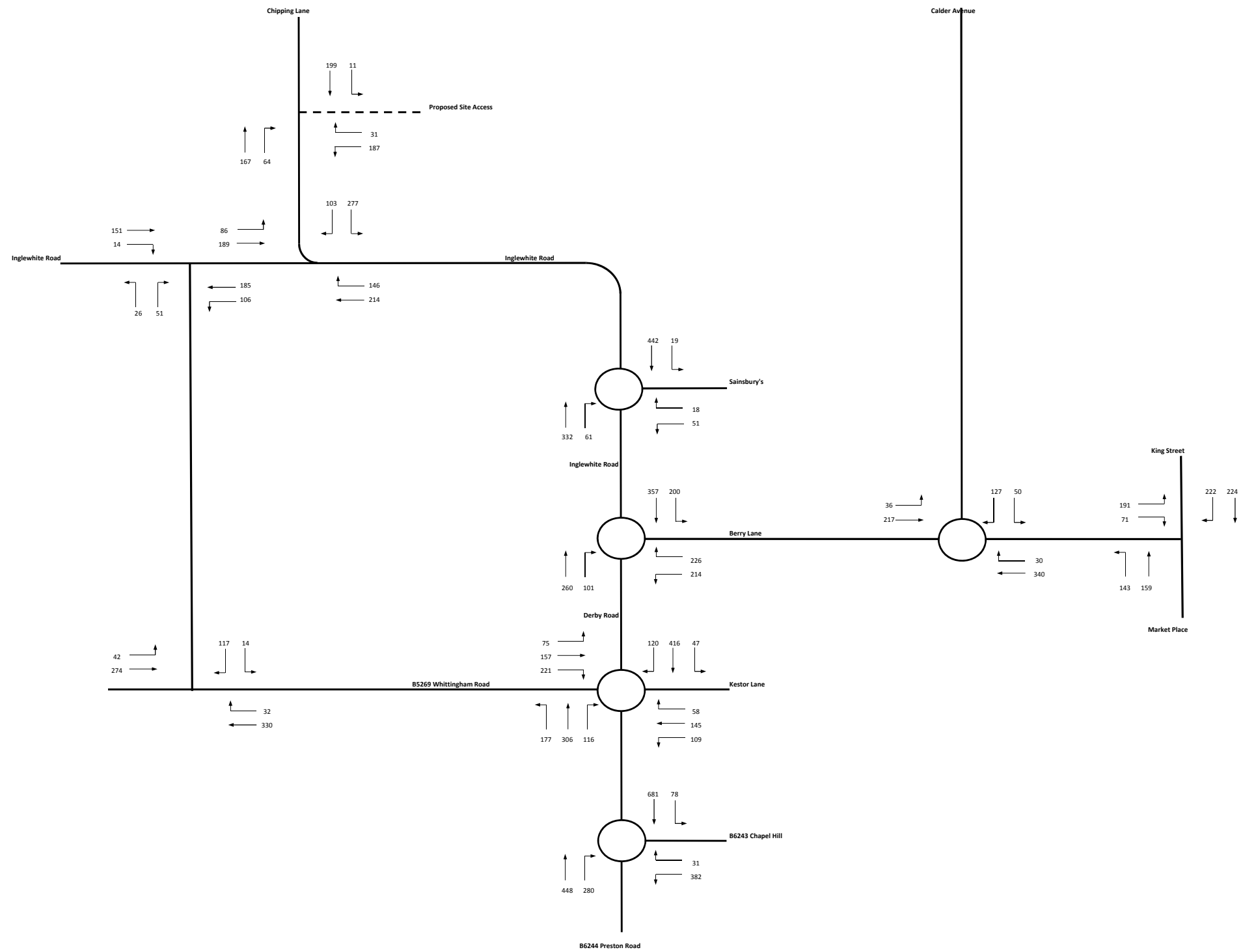


PCUs

Figure 16

Proposed Residential Development (520 Houses)
(Weekday PM Peak 1700 to 1800)

OUTLINE APPLICATION

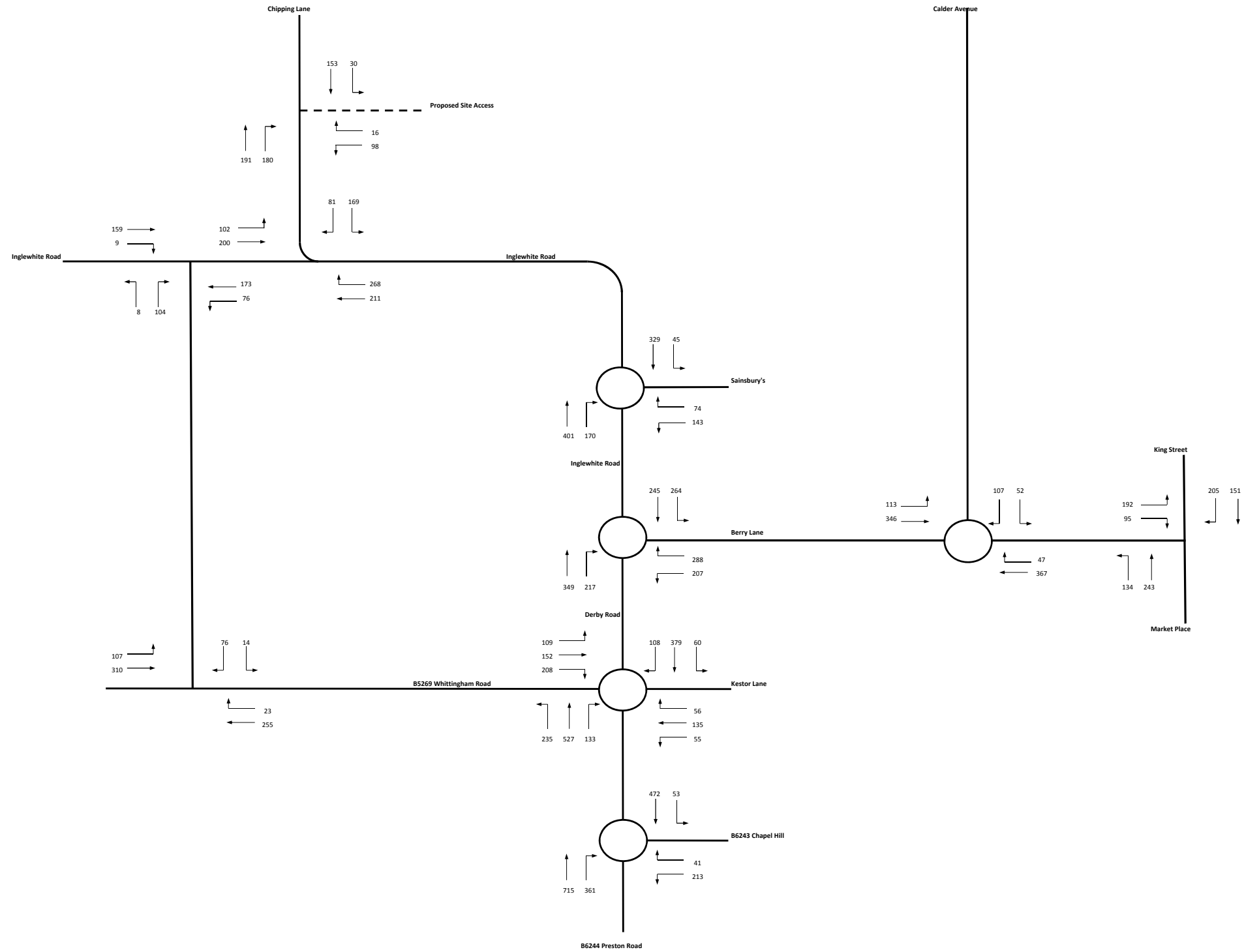


PCUs

Figure 17

2016 Assessment Flows
(Weekday AM Peak 0800 to 0900)

OUTLINE APPLICATION

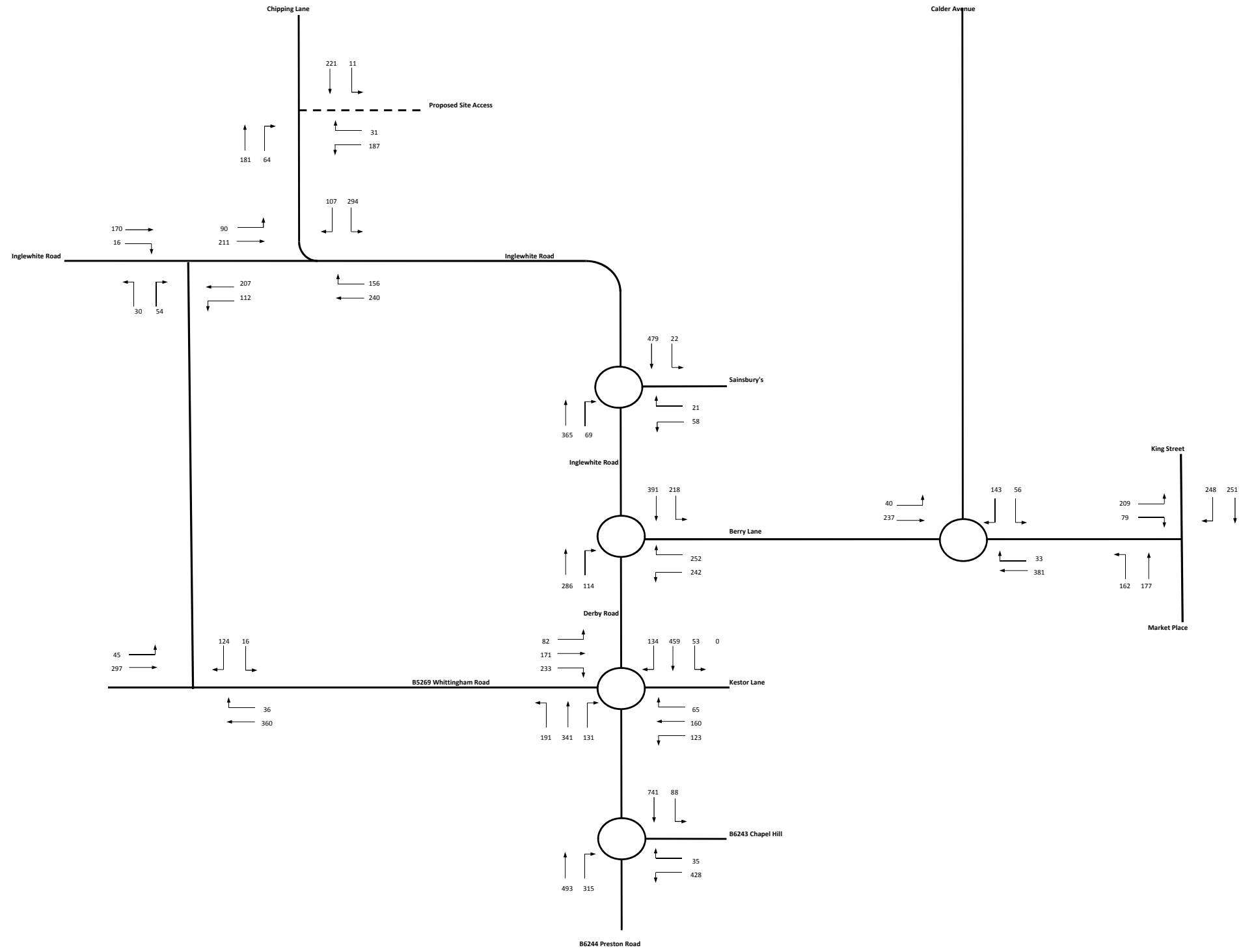


PCUs

Figure 18

2016 Assessment Flows
(Weekday PM Peak 1700 to 1800)

OUTLINE APPLICATION



PCUs

Figure 19

2025 Assessment Flows
(Weekday AM Peak 0800 to 0900)

OUTLINE APPLICATION

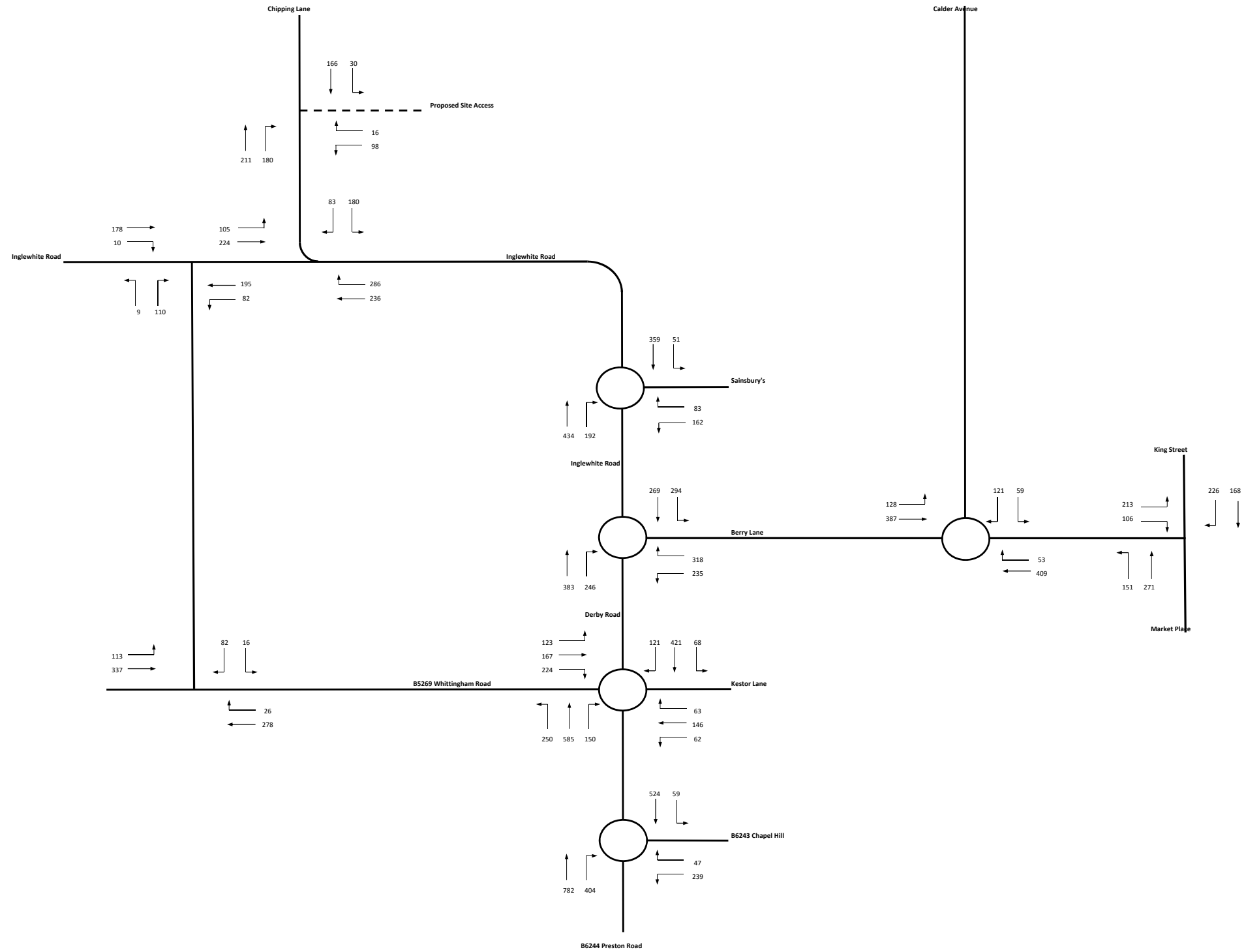
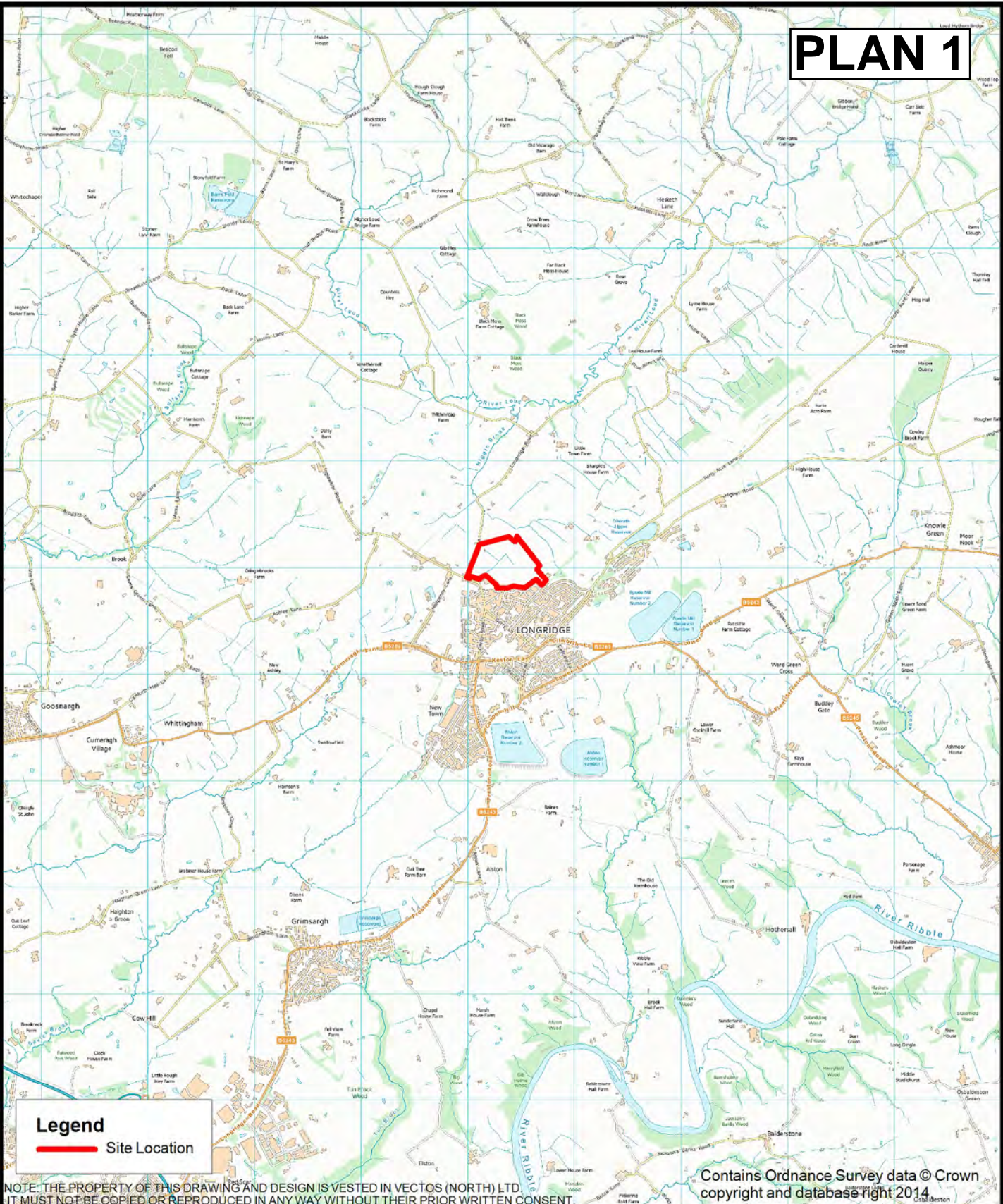


Figure 20

2025 Assessment Flows
(Weekday PM Peak 1700 to 1800)

PLANS

PLAN 1



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CLIENT:

Barratt Homes

DRAWING TITLE:

Site Location

PROJECT TITLE:

**Proposed Residential Development
Chipping Lane, Longridge**



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

DRAWN:	CHECKED:	DATE
HF	DL	July 14

SCALE:
1:50000 at A4

DRAWING NO:	REVISION:
VN30277-300	

PLAN 2



CLIENT:
Barratt Homes

DRAWING TITLE:
Site Location (Local Context)

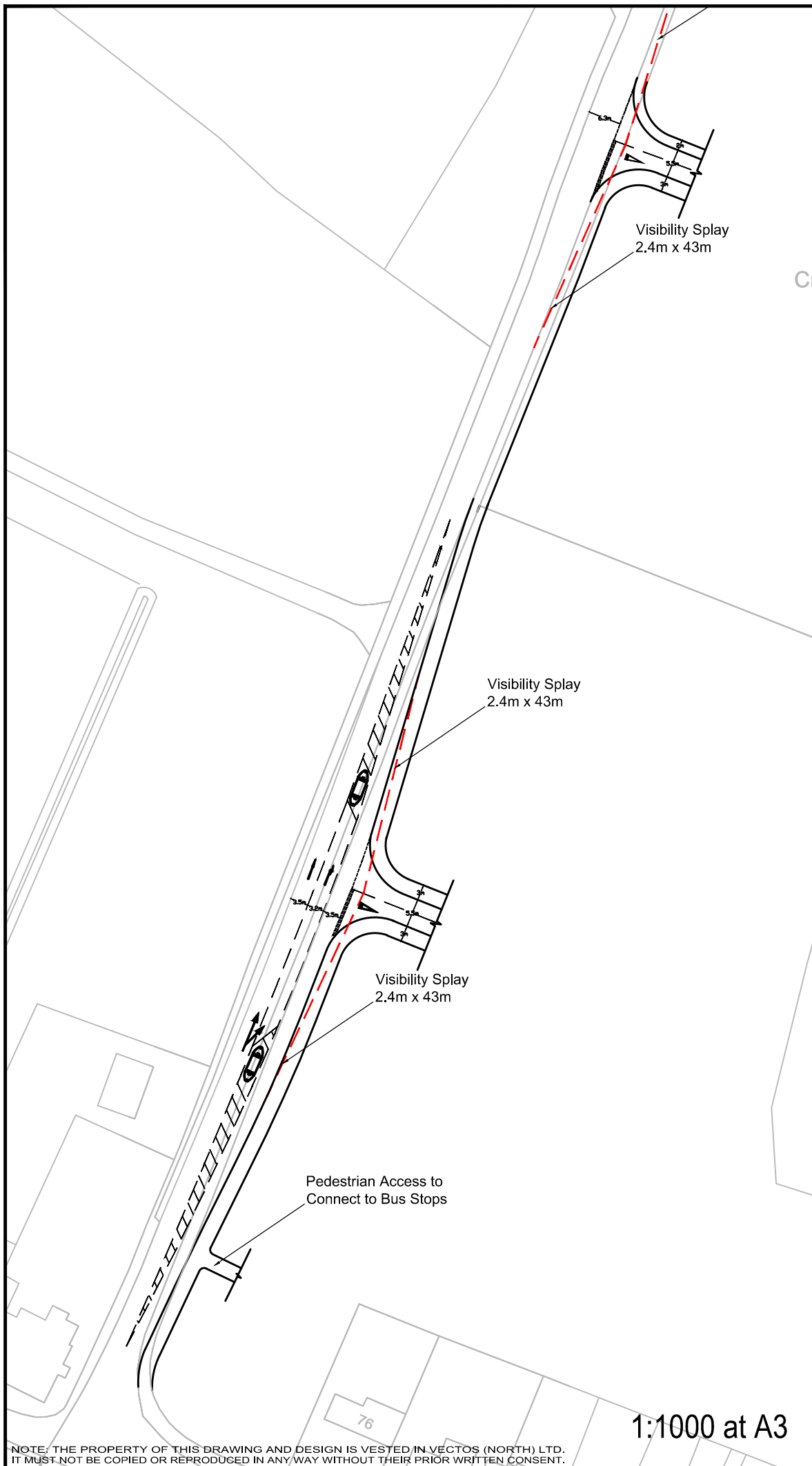
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**Proposed Residential Development
Chipping Lane, Longridge**

DRAWN: HF	CHECKED: DL	DATE July 14	SCALE: N.T.S
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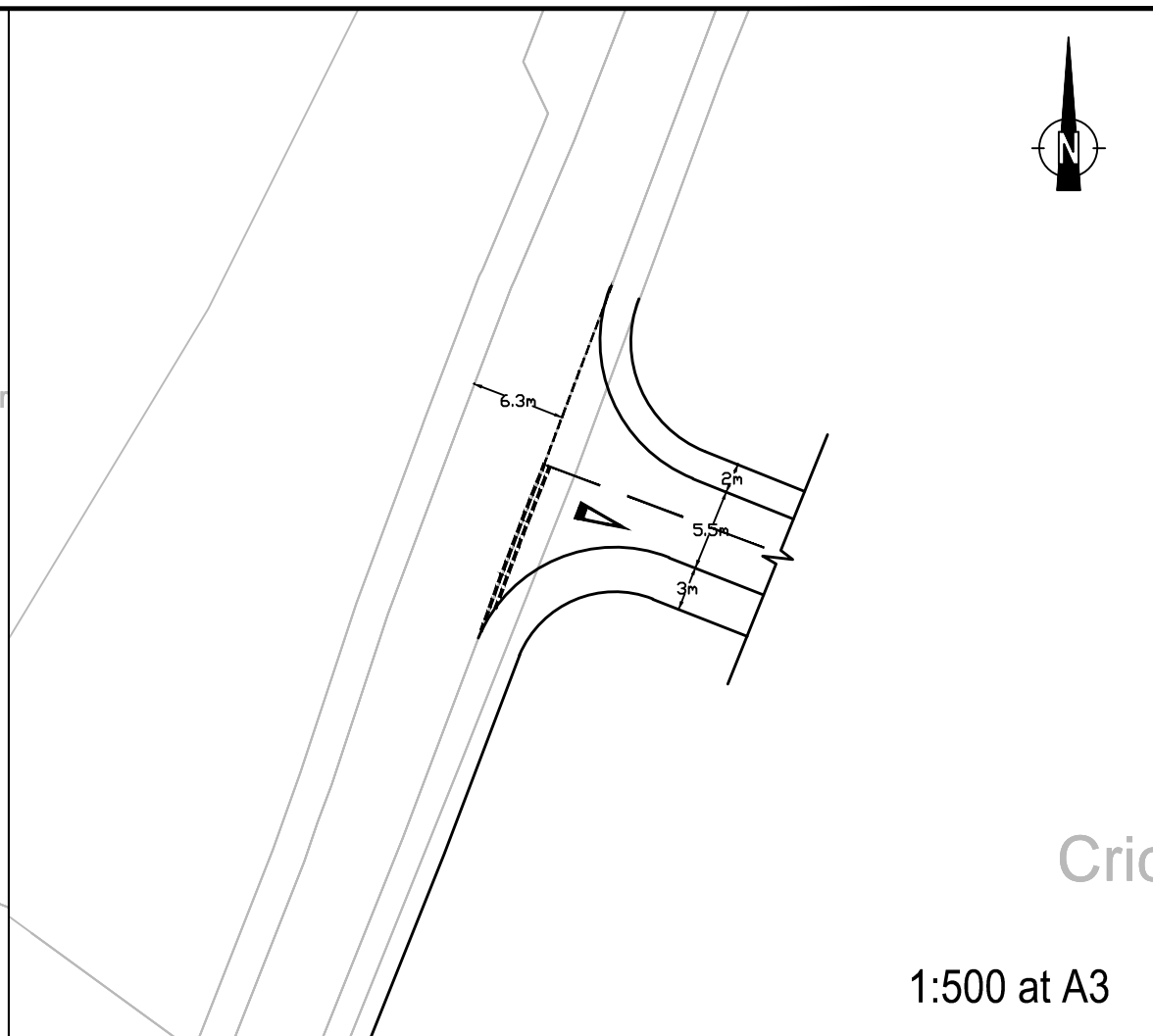
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t:0161 22801008 e:manchester@vectos.co.uk

DRAWING NO: VN30277-301	REVISION: .
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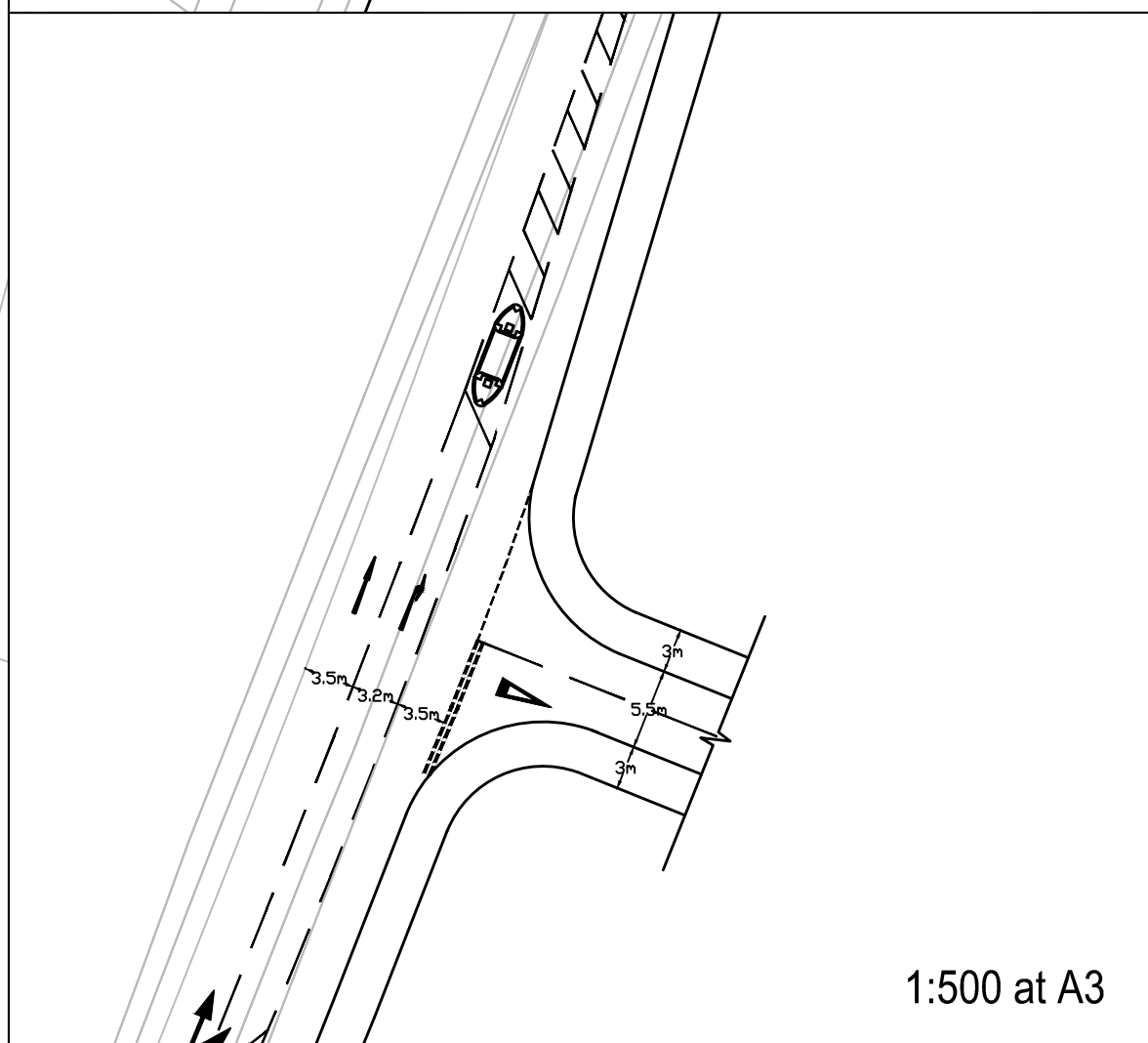


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1:500 at A3



1:500 at A3



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 2. White lining is indicative only.

PLAN 3

REV.	DETAILS	DRAWN	CHECKED	DATE

CLIENT:
Barratt Homes

PROJECT:
**Proposed Residential Development
 Chipping Lane, Longridge**

DRAWING TITLE:
Potential Access

SCALES:
As shown at A3

DRAWN: HS CHECKED: DL DATE: 10.07.13

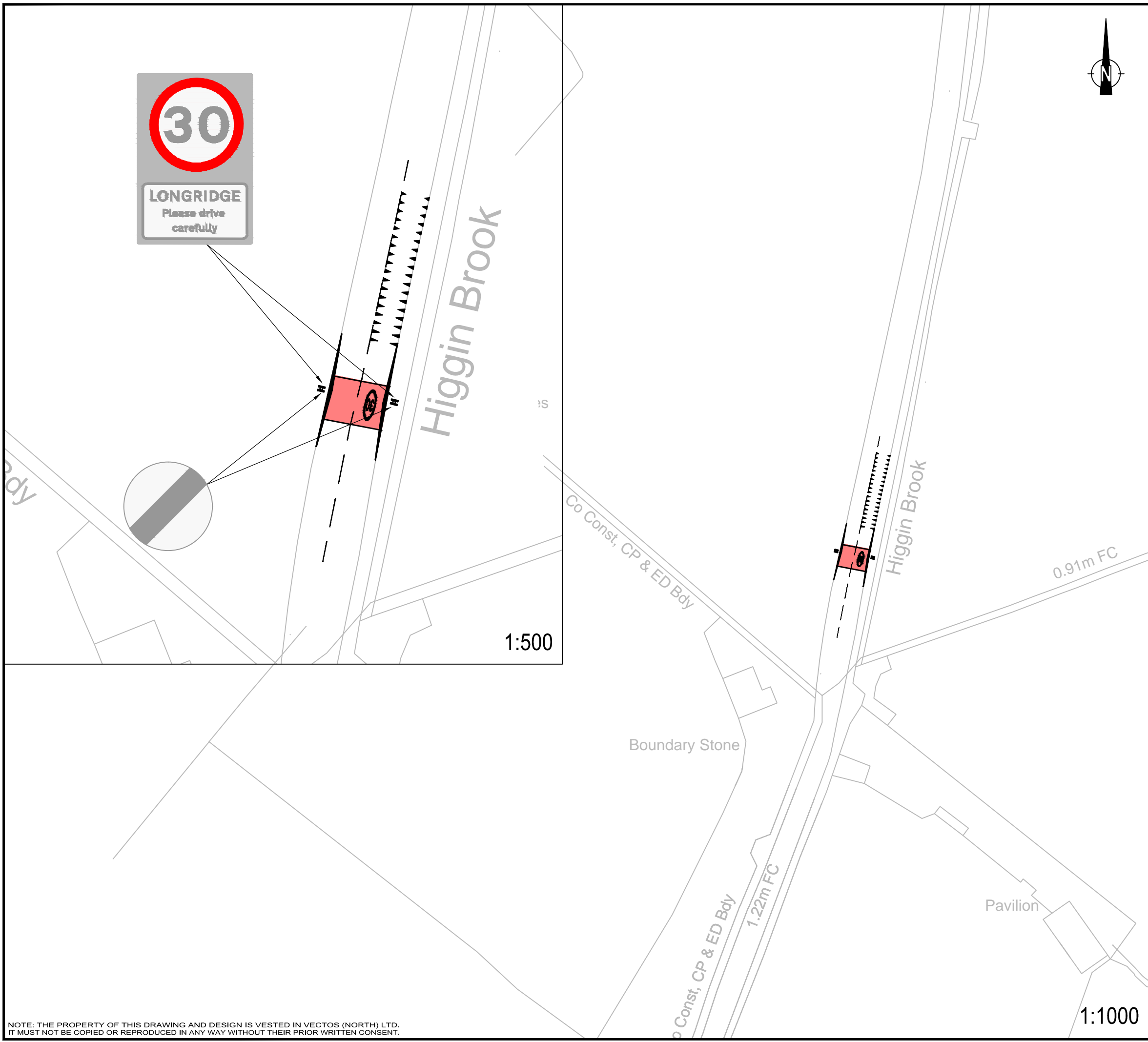


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Figure 08/01: Illustrative Masterplan/Indicative Layout



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PLAN 5

REV.	DETAILS	DRAWN	CHECKED	DATE

CLIENT:
Barratt Homes

PROJECT:
**Proposed Residential Development
 Chipping Lane, Longridge**

DRAWING TITLE:
Gateway Feature

SCALES:
As shown at A3

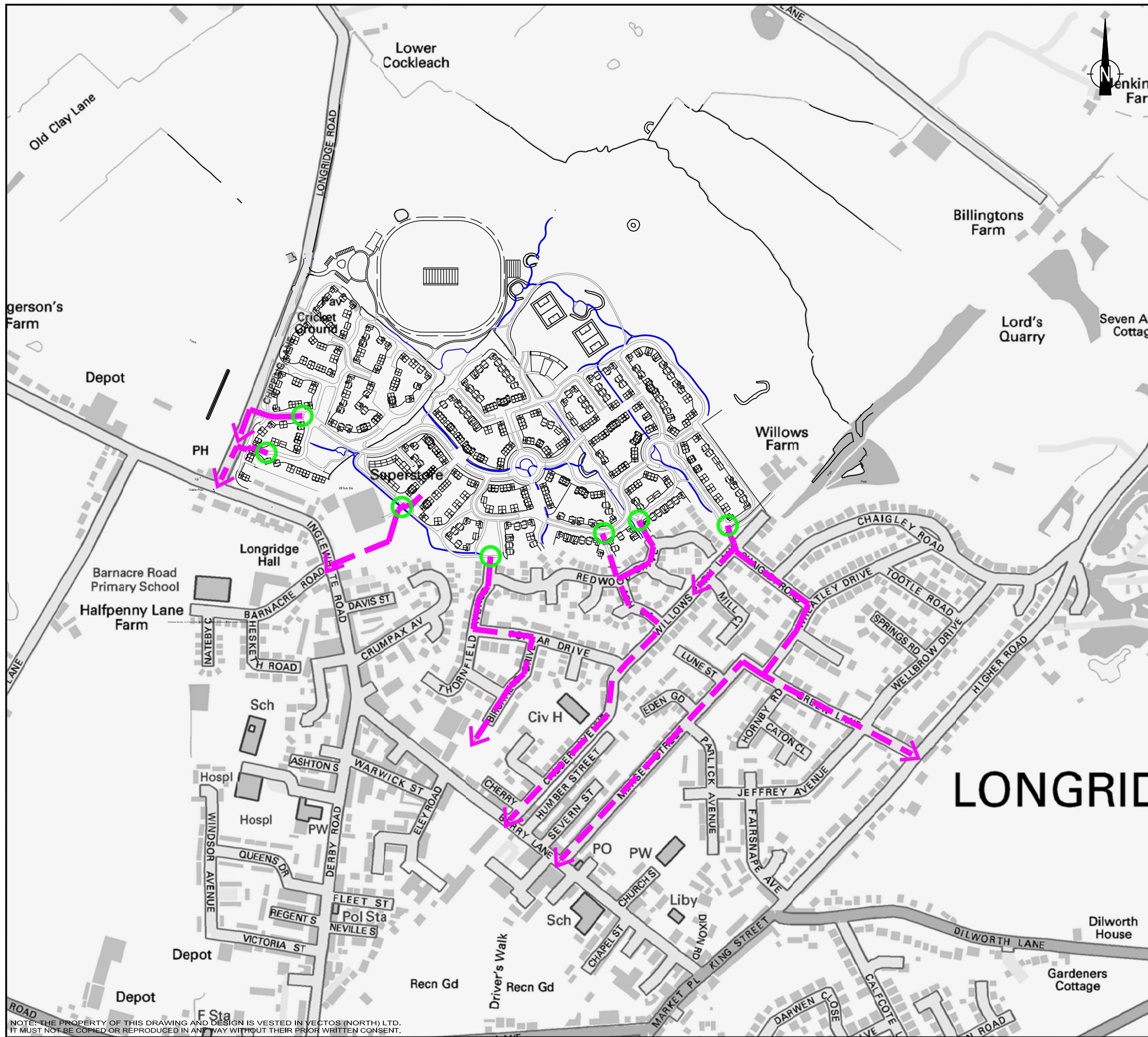
DRAWN: HS CHECKED: DL DATE: 10.07.13



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PLAN 6

REV.	A	Layout amendments.	HS	DL	05.08.14
		DETAILS	DRAWN	CHECKED	DATE

CLIENT:
Barratt Homes

PROJECT:
**Proposed Residential Development,
 Chipping Lane, Longridge**

DRAWING TITLE:
Pedestrian Connection Plan

SCALES:
N.T.S

DRAWN: HS CHECKED: DL DATE: May 14

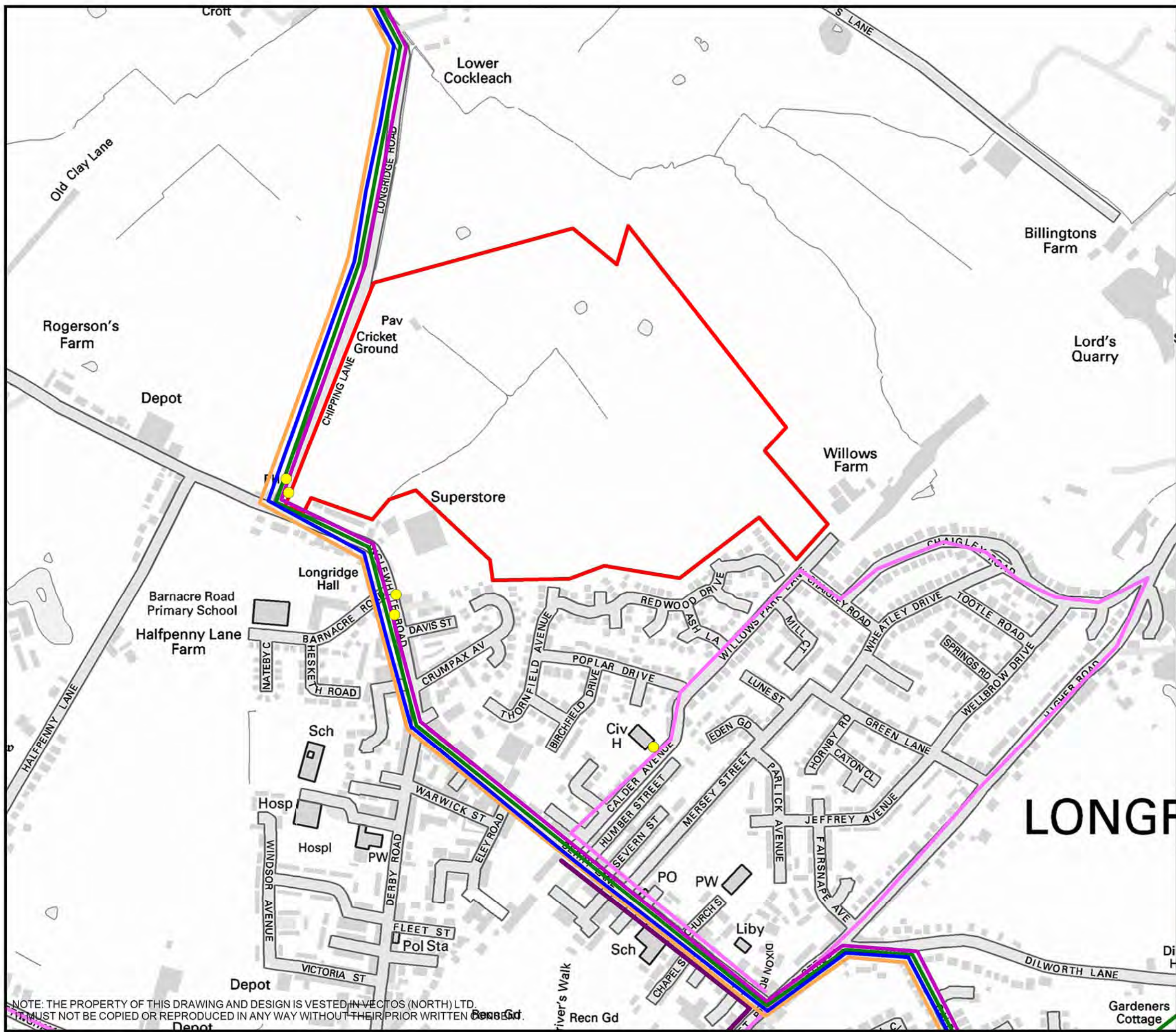


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DRAWING NUMBER: **VN30277-110** REVISION: **A**

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- Legend**
- Site Location
 - Bus Stop within 400m
 - 5 Bus Service
 - 5A Bus Service
 - 5B Bus Service
 - 35 Bus Service
 - 4 Bus Service
 - 1 Bus Service



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CLIENT:

Barratt Homes

PROJECT TITLE:

Proposed Residential Development
Chipping Lane, Longridge

DRAWING TITLE:

Bus Routes Local Context

SCALE:

N.T.S

DRAWN:	HF	CHECKED:	DL	DATE:	July 14
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DRAWING NO:

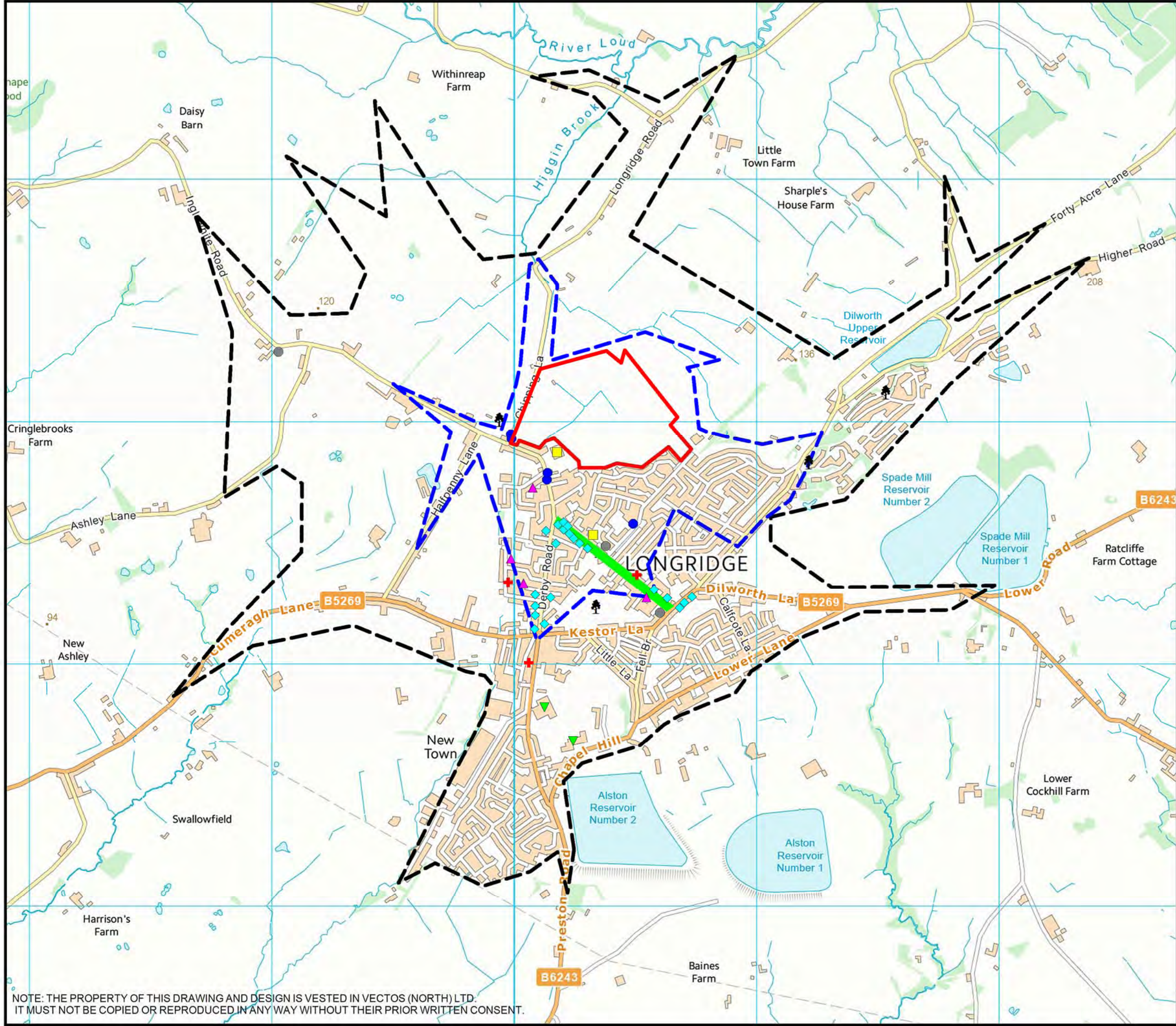
vectos
transport planning specialists

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

REVISION:

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- Legend**
- Site Location
 - ◆ Retail
 - + Health
 - ▲ Primary School
 - ▼ secondary School
 - 🌳 Recreation Leisure
 - Supermarket
 - Community Facilities
 - BusStops
 - Town Centre
 - 800m Catchment
 - 2km Catchment



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CLIENT:
Barratt Homes

PROJECT TITLE:
**Proposed Residential Development
Chipping Lane, Longridge**

DRAWING TITLE:
Local Amenities

SCALE:
1:15000 at A3

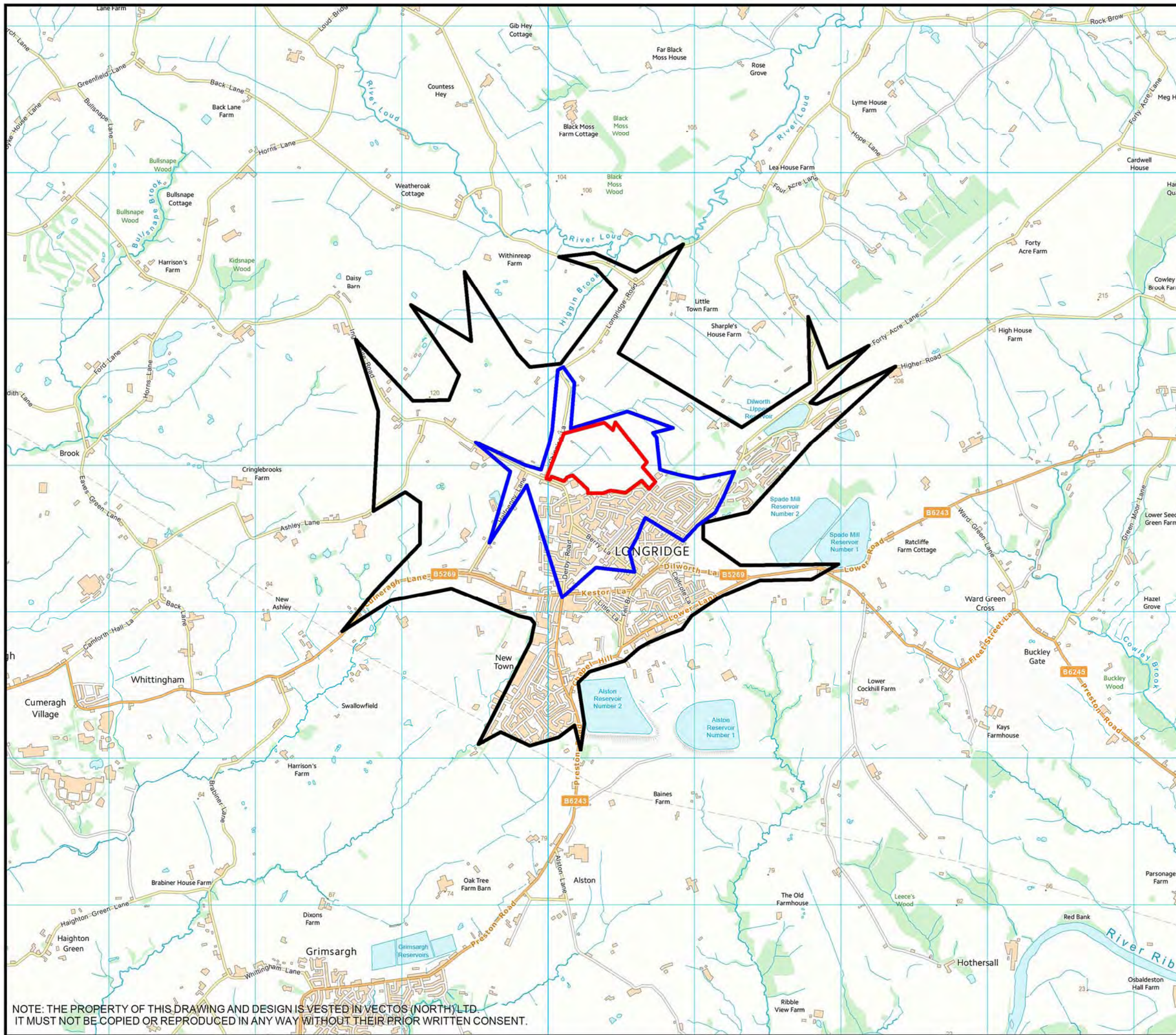
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- Legend**
- Site Location
 - 800m Catchment
 - 2km Catchment

PLAN 9

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CLIENT:
Barratt Homes

PROJECT TITLE:
**Proposed Residential Development
 Chipping Lane, Longridge**

DRAWING TITLE:
2km Pedestrian Catchment

SCALE:
1:25000 at A3

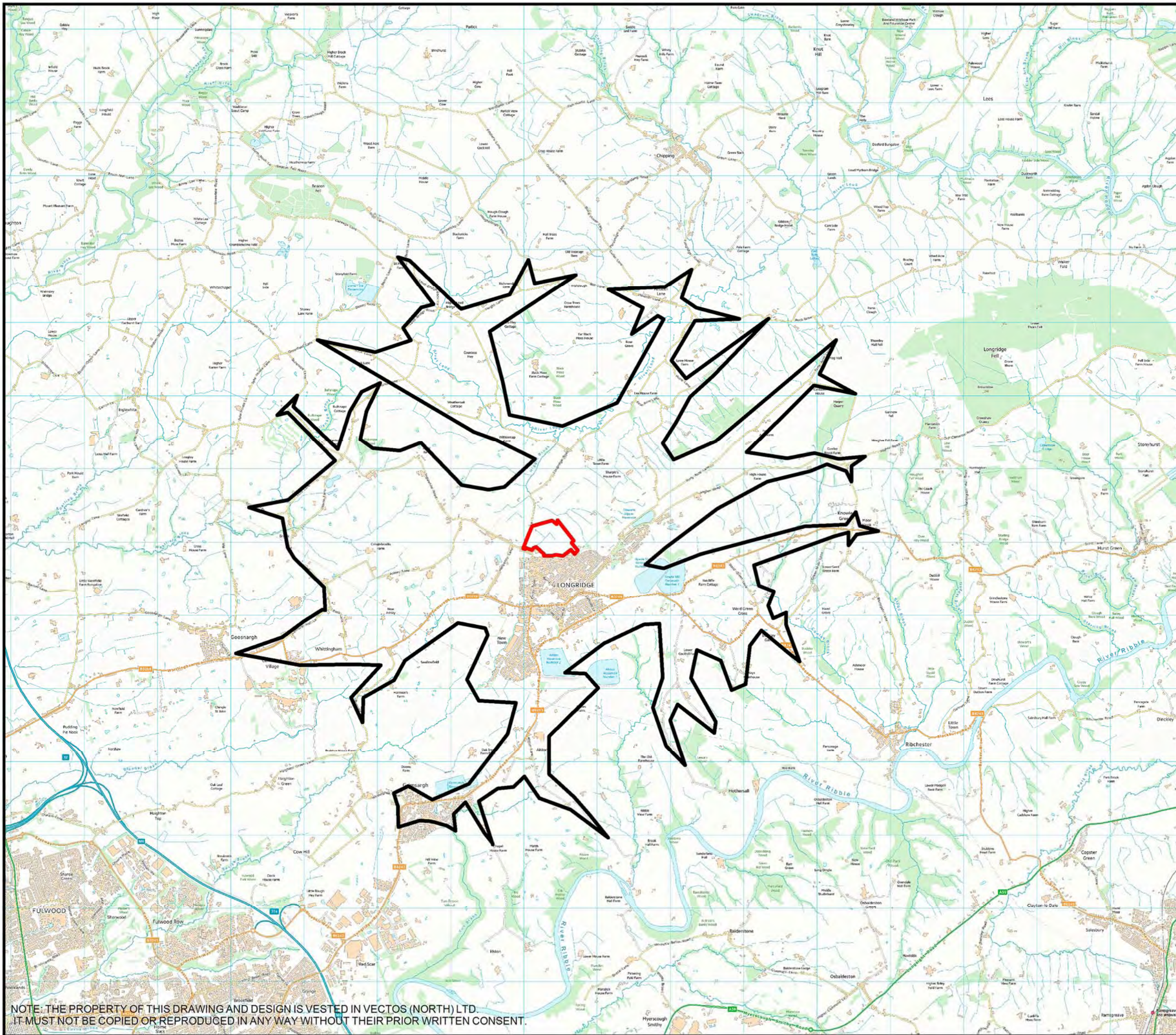
DRAWN: HF	CHECKED: DL	DATE: July 14
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DRAWING NO: VN30277-G302	REVISION:
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Legend
 Site Location
 5km Catchment

PLAN 10

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CLIENT:

Barratt Homes

PROJECT TITLE:

**Proposed Residential Development
 Chipping Lane, Longridge**

DRAWING TITLE:

5km Cycle Catchment

SCALE:
1:50000 at A3

DRAWN: HF	CHECKED: DL	DATE: July 14
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DRAWING NO:
VN30277-G303

REVISION:





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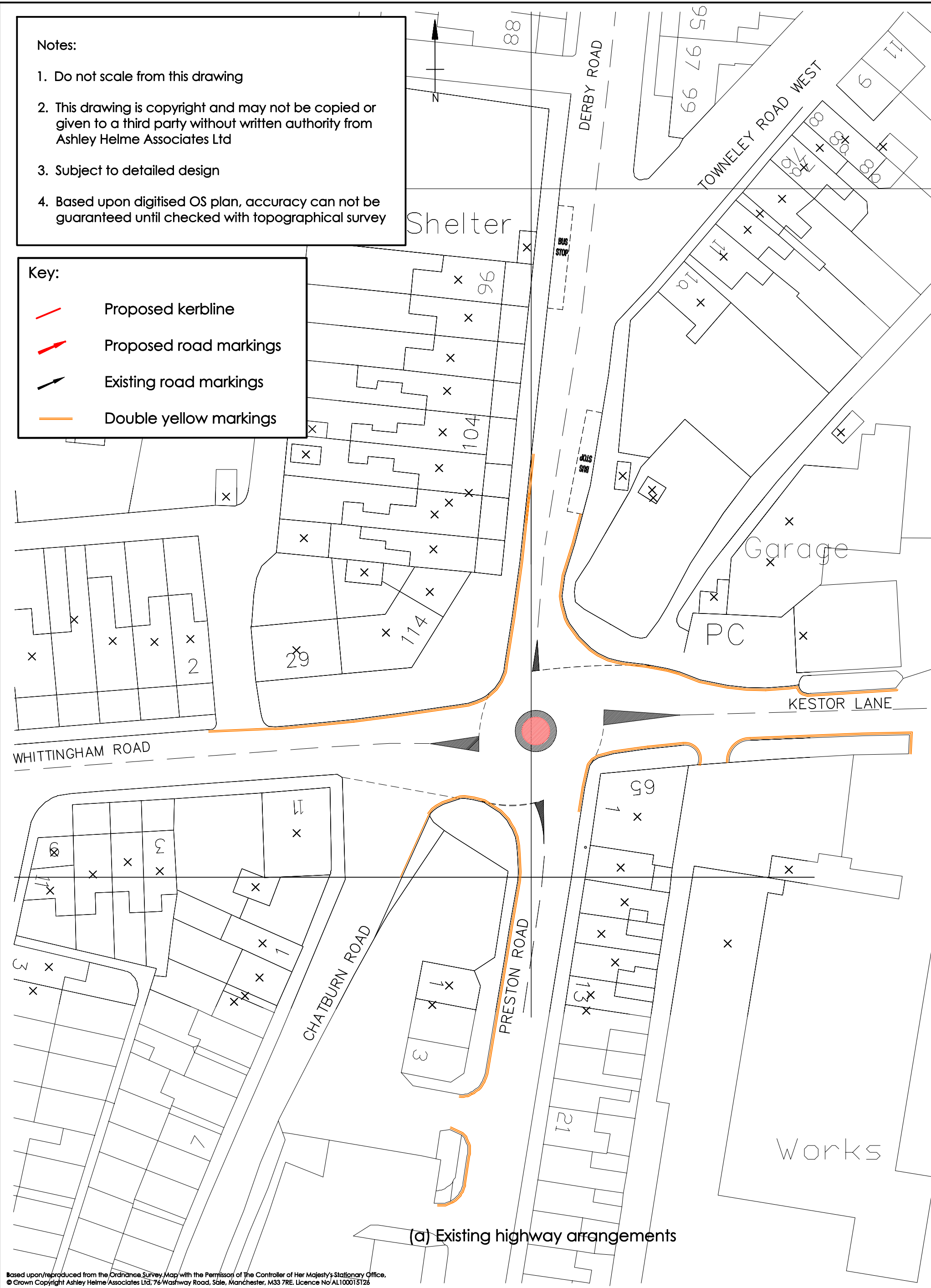
PLAN 11

Notes:

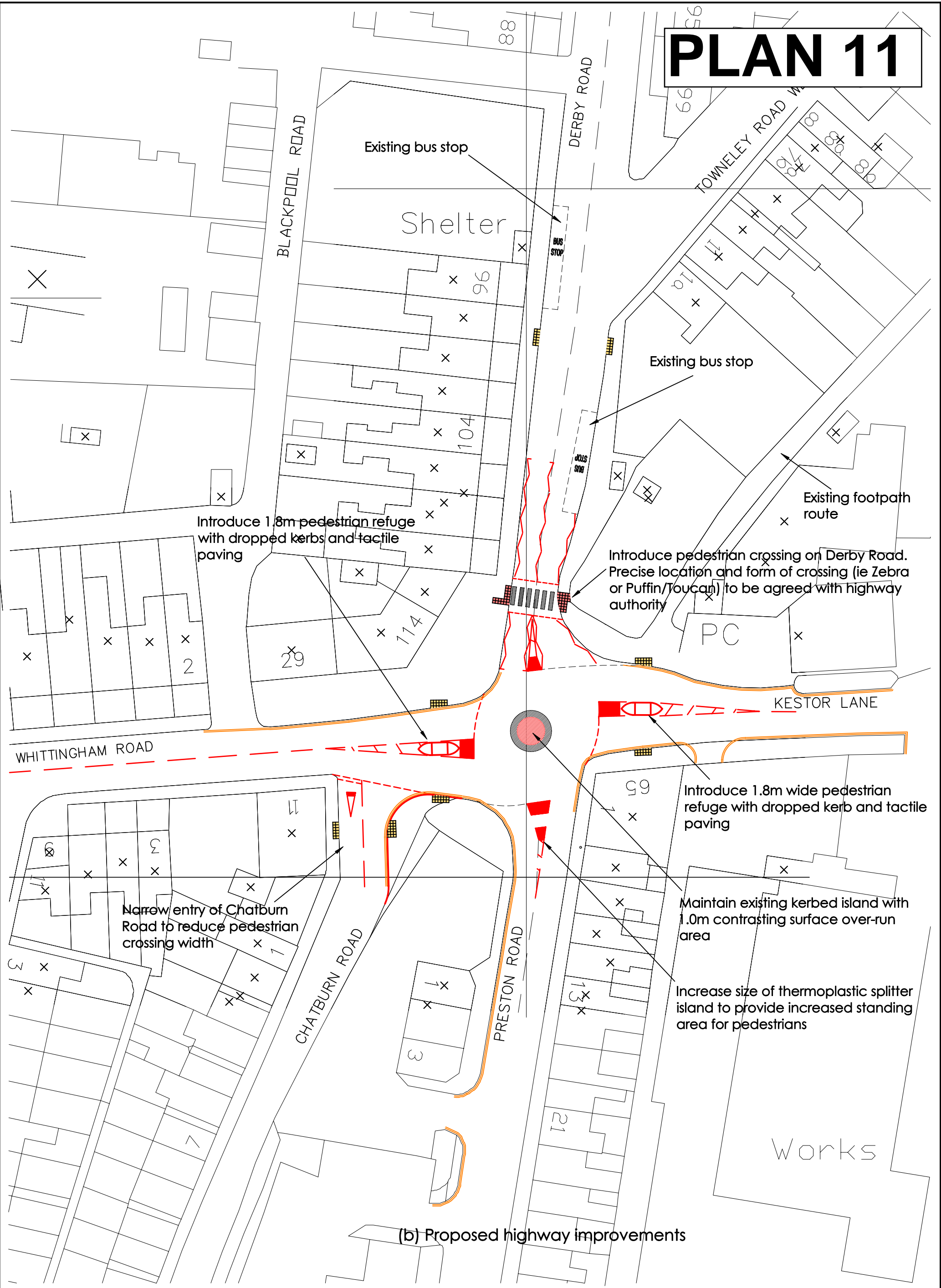
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Key:

-  Proposed kerblines
-  Proposed road markings
-  Existing road markings
-  Double yellow markings



(a) Existing highway arrangements



(b) Proposed highway improvements

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Project	WHITTINGHAM ROAD, LONGRIDGE
Client	FOX STRATEGIC LAND & PROPERTY

Title	STONEBRIDGE ROUNDABOUT EXISTING & PROPOSED ARRANGEMENTS
-------	---

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 76 washway road, sale, manchester, m33 7re
 e: aha@ashleyhelme.co.uk t: 0161 972 0552 f: 0161 972 0553

Dwg No	1242/25	Rev	
Date	JULY 2011	Scale	1:500@A2