



Residential Development  
Land off Salmons Lane West, Caterham

**Transport Assessment**

For

Croydon and District Education Trust

## Document Control Sheet

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Motion  
84 North Street  
Guildford  
GU1 4AU  
T 01483 531300  
F 01483 531333  
E [info@motion.co.uk](mailto:info@motion.co.uk)  
W [www.motion.co.uk](http://www.motion.co.uk)

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## 1.0 Introduction

- 1.1 This Transport Assessment has been prepared by Motion on behalf of Croydon and District Education Trust in relation to the development of 87 residential dwellings on Land off Salmons Lane West, Caterham (herein referred to as 'the site'). This report considers the highway and transport related matters in respect of the proposed development.
- 1.2 The site is located on the northern edge of Caterham, to the west of Whyteleafe. The site is located on land that previously formed part of Kenley Aerodrome, and now forms the grounds of One School Global, Kenley or is otherwise vacant land. The school will be retained, with the school building falling outside of the application boundary. The site benefits from close proximity to the A22, Whyteleafe and Whyteleafe South railway stations, as well as multiple amenities within the residential area of Caterham. The site is located within the administrative authorities of Tandridge District Council (TDC - Local Planning Authority) and Surrey County Council (SCC - Local Highway Authority).
- 1.3 The proposals seek permission for the construction of 87 dwellings on the site. Access will be achieved via Victor Beamish Avenue, which is accessed from Salmons Lane West. Appropriate levels of car and cycle parking will be provided in accordance with relevant standards.
- 1.4 The site has been identified by Tandridge District Council as a draft allocation for housing in its forthcoming Local Plan. Discussions have been undertaken with SCC as part of a pre-application request for advice. Relevant comments are referenced where appropriate within this report.
- 1.5 This Transport Assessment has been prepared to address the highway aspects relating to the above proposals, specifically the proximity of the site to sustainable transport modes, as well as the impact of the proposal in traffic, parking and servicing terms.
- 1.6 The remainder of this Transport Assessment is structured as follows:
  - ▶ Section 2 considers the relevant transport policy at national, regional and local level;
  - ▶ Section 3 identifies the baseline transport conditions in the area;
  - ▶ Section 4 explains the development proposals;
  - ▶ Section 5 considers the trip generation potential of the proposals;
  - ▶ Section 6 assesses the impact of the development on the function of local junctions;
  - ▶ Section 7 provides a summary and conclusion.

## 2.0 Policy Context

2.1 There are a number of documents which contain planning policies relevant to transport. The key policy documents which set out the context for this development are as follows:

- ▶ National Planning Policy Framework – July 2021;
- ▶ Tandridge District Council's 'Core Strategy' – October 2008;
- ▶ Tandridge District Council's 'Local Plan Part 2 – Detailed Policies' – July 2014;
- ▶ Tandridge District Council's emerging 'Local Plan 2033' – January 2019; and
- ▶ Tandridge District Council's 'Parking Standards – Supplementary Planning Document' – September 2012.

### National Policy

#### National Planning Policy Framework

2.2 The National Planning Policy Framework (NPPF) July 2021 sets out the Government's planning policies for England and how they are expected to be applied.

2.3 The NPPF presumes in favour of sustainable development and is a material consideration in planning decisions. Section 9 of the NPPF deals with 'Promoting Sustainable Transport', with Paragraph 104 stating:

*"Transport issues should be considered from the earliest stages of plan-making and development proposals, so that:*

*a) the potential impacts of development on transport networks can be addressed;*

*b) opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated;*

*c) opportunities to promote walking, cycling and public transport use are identified and pursued;*

*d) the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains; and*

*e) patterns of movement, streets, parking and other transport considerations are integral to the design of schemes, and contribute to making high quality places."*

2.4 Off-street parking provision is referred to by Paragraph 107 which states that local planning authorities should take into account the following if setting local parking standards for development:

*"a) the accessibility of the development;*

*b) the type, mix and use of the development;*

*c) the availability of and opportunities for public transport;*

*d) local car ownership levels; and*

*e) the need to ensure an adequate provision of spaces for charging plug-in and other ultra low emission vehicles"*

2.5 Paragraph 108 states:

*"Maximum parking standards for residential and non-residential development should only be set where there is a clear and compelling justification that they are necessary for managing the local road network, or for optimising the density of development in city and town centres and other locations that are well served by public transport."*

2.6 Paragraph 110 addresses the relationship between development and sustainable transport as follows:

*"In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:*

*a) appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;*

*b) safe and suitable access to the site can be achieved for all users; and*

*c) any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree."*

2.7 Paragraph 111 states:

*"Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe."*

2.8 Paragraph 112 suggests that development should be located and designed where practical to, among other things, give priority to pedestrians and cycle movements, have access to high quality public transport facilities, create safe and secure layouts which minimise conflicts between traffic and cyclists or pedestrians and consider the needs of people with disabilities by all modes of transport. Additionally, allow efficient delivery of goods and access by emergency vehicles and be designed to enable charging of plug-in and other ultra-low emission vehicles.

2.9 Paragraph 113 states:

*"All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed."*

## **Local Policy**

### **Core Strategy**

2.10 The Tandridge District Core Strategy was adopted in October 2008. It sets out key planning policies for the District. Policy TSP 12 relates to managing travel demand and states that:

*"The Council will require new development to:*

*▶ Make improvements, where appropriate, to the existing infrastructure network, including road and rail, facilities for bus users, pedestrians and cyclists and those with reduced mobility.*

*▶ Have regard to adopted highway design standards and vehicle and other parking standards."*

2.11 The proposal will provide a vehicular access from Town Hill in accordance with relevant design guidance. Parking is dealt with in Section 4, where it is shown that an appropriate number of parking spaces will be provided per dwelling.

### **Local Plan Part 2**

2.12 Tandridge District Council adopted the 'Local Plan Part 2 - Detailed Policies' in July 2014. Of particular relevance is policy DP5, which relates to Highway Safety & Design:

*"Development will be permitted subject to meeting the requirements of all other appropriate Development Plan policies and where the proposal:*

- 1. Complies with the relevant Highway Authority's and any other highways design guidance;*
- 2. Does not unnecessarily impede the free flow of traffic on the existing network or create hazards to that traffic and other road users;*
- 3. Retains or enhances existing footpaths and cycleway links;*
- 4. Provides safe and suitable access to the site which is achievable by all and promotes access by public transport, foot and bicycle to nearby residential, commercial, retail, educational, leisure and recreational areas where appropriate; and*
- 5. Fully funds where appropriate, or contributes towards the costs of any measures required to cost effectively mitigate the significant impacts arising from the development.*

*In accordance with the Council's Local Validation Requirements and national guidance, all development proposals that generate significant amounts of movement should be supported by a Travel Plan and either a Transport Statement or Transport Assessment (proportionate to the scale of the proposed scheme and extent of the transport implications), both of which should be submitted alongside the planning application."*

#### **Emerging Local Plan**

- 2.13 TDC released their emerging 'Local Plan 2033' in January 2019. Since this date, various on-going discussions have taken place between TDC and the Planning Inspectorate. The discussions focus on the need for highway improvements to accommodate likely traffic flow generated by development sites included in the TDC Local Plan. Discussions are on-going.
- 2.14 Chapter 31 'Sustainable Transport and Travel' of the Local Plan sets out transport related policies relevant to the proposed development.
- 2.15 Policy TLP50 'Sustainable Transport and Travel' states:

*"The Council is committed to developing well-integrated communities with sustainable transport which connects people to jobs, services and community facilities, while recognising that Tandridge is a rural District. This will be achieved by taking the following steps:*

- ▶ *Proposals will need to demonstrate how they will ensure that the principle objectives and overall vision of the Surrey Local Transport Plan are met, particularly in relation to active travel and air quality.*
- ▶ *Locating most new development in the Tier 1 and 2 settlements close to services, served by a range of sustainable travel options, such as public transport, walking and cycling, to minimise the need to travel and distance travelled.*
- ▶ *Ensuring development proposals provide appropriate infrastructure measures to mitigate the adverse effects of traffic and other environmental and safety impacts (direct or cumulative).*
- ▶ *Transport Assessments will be required for development proposals, where relevant, to fully assess the impacts of development and identify appropriate mitigation measures."*

### Cycling and Walking

"The Council will support development that includes integrated comprehensive cycle and walking routes. Development proposals shall demonstrate how safe and accessible pedestrian access and cycle routes will be delivered and how they will connect to the wider travel network. Opportunities should be proactively taken to connect with and enhance Public Rights of Way whenever possible, encouraging journeys on foot and active travel.

Developments will provide cycle parking in accordance with the Parking Standards set out in the Surrey Local Transport Plan or updated guidance. Planning applications must include full details of the proposed cycle parking."

### Electric Vehicles

"The provision of charging points for electric vehicles on all developments that result in additional units, both residential and business, will be required in line with the Surrey Local Transport Plan. Developers will be strongly encouraged to go further in order to help the District transition towards the Government's target year of 2040. The installation of electric vehicle charging points at public car parks, supermarket car parks, petrol filling stations and Clacket Lane Services will be supported where it is safe to do so and the visual impact is appropriately mitigated for."

## Parking Standards

### Tandridge Parking Standards SPD

- 2.16 Car parking standards for new developments are contained within the 'Tandridge Parking Standards' Supplementary Planning Document (SPD) dated September 2012. The residential required car parking standards are summarised in Table 2.1 below.

Size of Dwelling	Requirement
1 and 2 bedroom flats	1.5 spaces unallocated OR 2 spaces allocated
3 bed flats	2 spaces unallocated OR 2 spaces allocated plus 0.25 unallocated
1 bed houses	1.5 spaces unallocated OR 1 space allocated PLUS 1 space unallocated per 2 dwellings as a 'legible space'
2 bed houses	2 spaces allocated PLUS 1 space unallocated per 4 dwelling as a 'legible space' OR 1.5 spaces unallocated PLUS 1 space unallocated per 4 dwelling as a 'legible space'
3 bedroom houses	2 spaces allocated PLUS 1 space unallocated per 4 dwelling as a 'legible space'
4+ bedroom houses	3 spaces allocated PLUS 1 space unallocated per 4 dwelling as a 'legible space'

Table 2.1: Tandridge Residential Parking Standards



### Summary

- 2.17 On the basis of the above review, it is evident that the location of a site in relation to sustainable modes of transport is a key consideration when assessing the acceptability of a proposal. Furthermore, appropriate provision should be made for parking and enabling access by more sustainable modes of transport.
- 2.18 The following sections of this report review the accessibility of the site and evaluates whether the development proposals will encourage sustainable modes of transport. In addition to this, a further assessment has been undertaken to establish the impact of the proposals on the local highway network.

### 3.0 Existing Conditions

#### Overview

- 3.1 This section provides information on the site and surrounding area, including a review of the local highway network and opportunities to access the site by more sustainable forms of travel.

#### The Site

- 3.2 The site is located on the northern edge of Caterham, to the west of Whyteleafe. The site is located on land that previously formed part of Kenley Aerodrome, and now forms the grounds of One School Global, Kenley as well as additional vacant land. The school will be retained, with the school building falling outside of the application boundary. The site benefits from close proximity to the A22, Whyteleafe South station and multiple amenities within the residential area of Caterham. The site is located within the administrative authorities of Tandridge District Council (TDC - Local Planning Authority) and Surrey County Council (SCC - Local Highway Authority).
- 3.3 The site in relation to strategic transport links is shown in Figure 3.1 below.

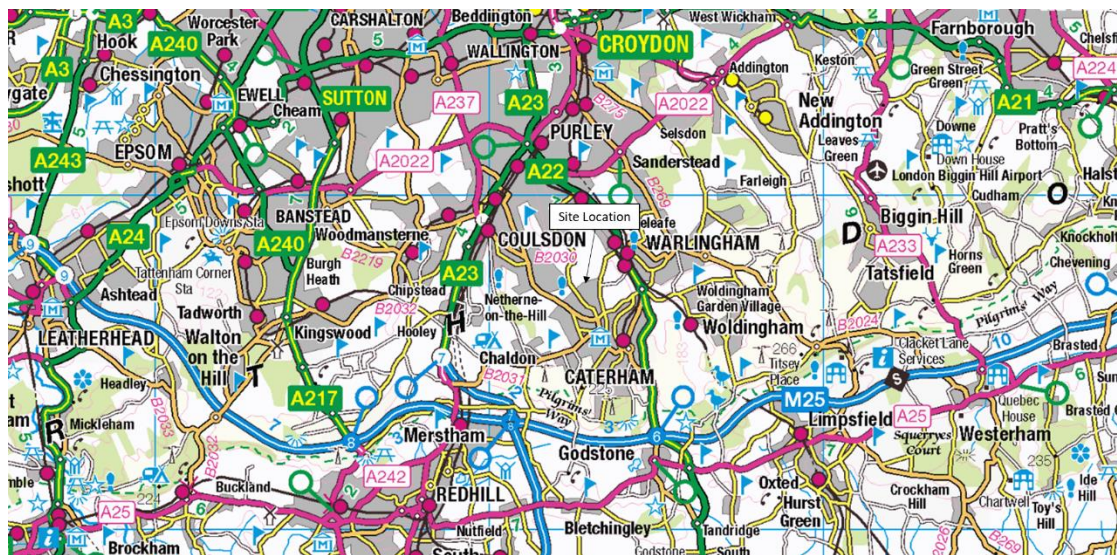


Figure 3.1 – Strategic Site Location

- 3.4 The site is located in a predominately residential area. The site in relation to the local area is shown in Figure 3.2 below.

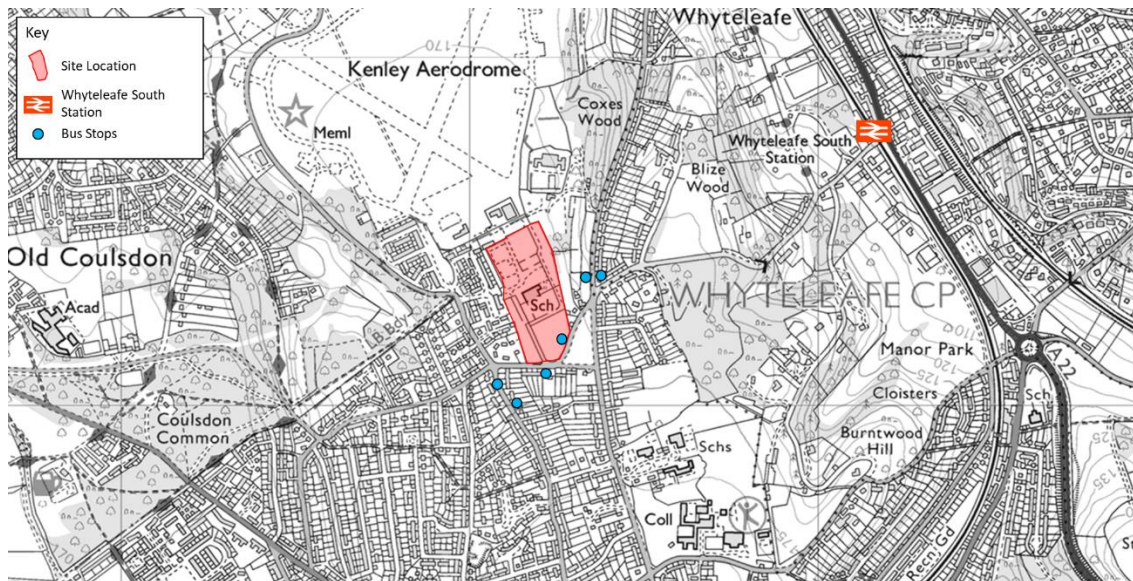


Figure 3.2 – Site Location Plan

### Accessibility by Non-Car Modes

- 3.5 It is generally accepted that walking and cycling provide important alternatives to the private car and should be encouraged to form part of longer journeys via public transport. The Chartered Institution of Highways and Transportation released two documents, 'Planning for Walking' in April 2015 and 'Planning for Cycling' in October 2014. The documents provide an insight into the sustainable methods of transport, including:
- ▶ "Across Britain about 80% of journeys shorter than 1 mile are made wholly on foot...but beyond that distance cars are the dominant modes" (Planning for Walking, 2015).
  - ▶ "Majority of cycling trips are used for short distances, with 80% being less than five miles and with 40% being less than two miles" (Planning for Cycling, 2014)."
- 3.6 The NPPF recognises that "the transport system needs to be balanced in favour of sustainable transport modes, giving people a real choice about how they travel". Furthermore, Manual for Streets identifies 'walkable neighbourhoods' as "having a range of facilities within 10 minutes' (up to about 800m) walking distance of residential areas which residents may access comfortably on foot".
- 3.7 Within Manual for Streets, it is noted that 800 metres is not considered the maximum walking distance for pedestrians, highlighting that walking can replace short car trips, particularly those under 2 kilometres. The National Travel Survey 2020 (NTS) also noted that "81% of all trips under one mile are walks", making it the most frequent mode of travel for very short distances.
- 3.8 The following paragraphs outline the existing opportunities for travel to the site via the more sustainable forms of transport, including on foot, by cycle and public transport.

### Accessibility on Foot

- 3.9 The site is easily accessible on foot due to the footways provided along all local roads. Victor Beamish Avenue is provided with a wide, lit footway along the western edge of the carriageway, which provides access to Salmons Lane West. Salmons Lane West is provided with lit footways along both sides of the carriageway in the vicinity of the site.
- 3.10 Both Buxton Lane (to the west) and Whyteleafe Road (to the east) are provided with lit footways, enabling safe pedestrian access towards Caterham-on-the-Hill town centre.

### Accessibility by Cycle

- 3.11 Government guidance in respect of cycling indicates that people are prepared to cycle up to 8km in order to reach a specified destination. Within 8km of the site, cyclists can reach, Caterham, Warlingham, Whyteleafe, Woldingham, Kenley, Coulsdon and Purley.
- 3.12 While there are no dedicated provisions for cyclists on local roads, the low 30mph speed limits in place along the majority of local roads makes the environment suitable for cycling.

### Access by Bus

- 3.13 The closest bus stop to the site is located on Salmons Lane West and is adjacent to the junction with Victor Beamish Avenue. The stop is provided with a flag and timetable information. The location of this stop and others in the vicinity of the site are shown in Figure 3.2. The details of the services running from these stops are contained in Table 3.1 below.

Service	Route	Approximate Frequency		
		Mon-Fri	Saturday	Sunday
409	Selsdon – Chelsham – Warlingham – Whyteleafe – Caterham – Godstone – Blindley Heath – Lingfield – Felcourt – East Grinstead	Hourly	Hourly	Hourly
411	Selsdon – Chelsham – Warlingham – Whyteleafe – Caterham – Chaldon – Mertsam – Coles Meads – Redhill – Reigate	Hourly	No service	
657	Whyteleafe Station – St Bedes School, Redhill	School Bus	No Service	

Table 3.1 – Local Bus Services

- 3.14 Table 3.1 demonstrates that residents can access buses which provide access to a variety of destinations via frequent services. This includes nearby railway stations, as described below.

### Access by Train

- 3.15 Whyteleafe South station is located a 1.3km from the site, and can be accessed via a 5 minute cycle. Details of train services running from Whyteleafe South station in Table 3.2 below.

Service	Route	Approximate Frequency		
		Mon-Fri	Saturday	Sunday
Caterham	Whyteleafe South – Caterham	Every 30 minutes	Every 30 minutes	Every 30 minutes
London Bridge	Whyteleafe South – Whyteleafe – Kenley – Purley – Purley Oaks – South Croydon – East Croydon – Norwood Junction – London Bridge	Every 30 minutes	Every 30 minutes	Every 30 minutes

Table 3.2 – Train Services from Whyteleafe South Station

- 3.16 It should be noted that both Whyteleafe and Upper Warlingham Stations are located circa 1.8 kilometres from the site, and can be accessed via a 22 minute walk or 8 minute cycle. Whyteleafe Station provides the same services as Whyteleafe South, however it does benefit from a continuous footway connection to the site. Upper Warlingham station provides services to East Grinstead and London Waterloo, and can also be accessed via a continuous walk route.

### Access to Local Amenities

3.17 Due to the site’s location in the residential area of Caterham, there is a variety of amenities within walking distance of the site. The location of a number of these amenities are shown in Figure 3.3 below.

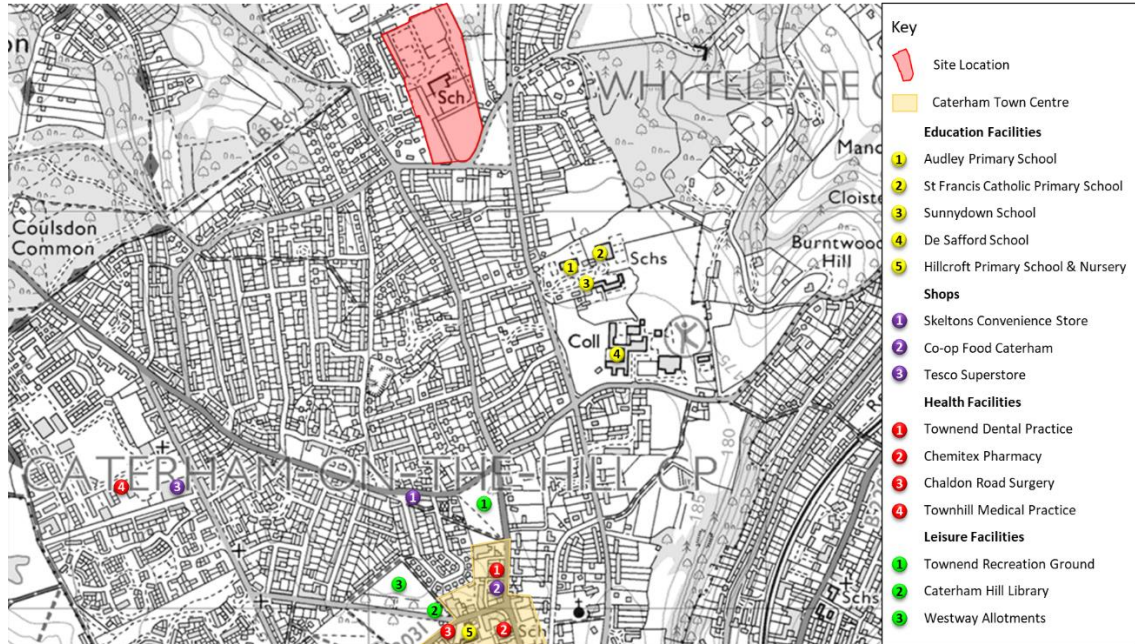


Figure 3.3 – Amenities Map

3.18 The distance these amenities are from the site, alongside the time taken to access them on foot and by cycle are contained in Table 3.3 below.

Amenity	Distance	Walk Time	Cycle Time
<b>Education Facilities</b>			
Audley Primary School	550m	7 minutes	3 minutes
St Francis Catholic Primary School	650m	8 minutes	4 minutes
Sunnydown School	650m	8 minutes	4 minutes
De Stafford School	1,000m	13 minutes	5 minutes
Hillcroft Primary School & Nursery	1,400m	18 minutes	5 minutes
<b>Shops</b>			
Skeltons Convenience Store	1,100m	14 minutes	4 minutes
Co-op Food Caterham	1,300m	16 minutes	4 minutes
Tesco Superstore	1,700m	22 minutes	8 minutes
<b>Health Facilities</b>			
Townend Dental Practice	1,200m	16 minutes	4 minutes
Chemitex Pharmacy	1,400m	17 minutes	5 minutes
Chaldon Road Surgery	1,500m	19 minutes	6 minutes
Townhill Medical Practice	1,600m	21 minutes	7 minutes
<b>Leisure Facilities</b>			
Townend Recreation Ground	1,100m	14 minutes	4 minutes
Caterham Hill Library	1,500m	19 minutes	6 minutes
Westway Allotments	1,600m	20 minutes	6 minutes

Table 3.3 – Amenities within Walking Distance of the Site

3.19 The above indicates that there are a variety of amenities within walking distance of the site, enabling residents to carry out daily tasks by travelling on foot or by cycle. It should be noted that Caterham-on-the-Hill town centre can be accessed via a 1.4km (18 minute walk). Caterham town centre, which contains Caterham station, a Waitrose and further amenities is located 2.4km from the site, and can be accessed via a 31 minute walk or 10 minute cycle.

### Key Routes to Amenities

3.20 In order to demonstrate the level of accessibility of the proposed site, the key routes to local amenities have been identified and described. These routes are shown in Figure 3.4 below.

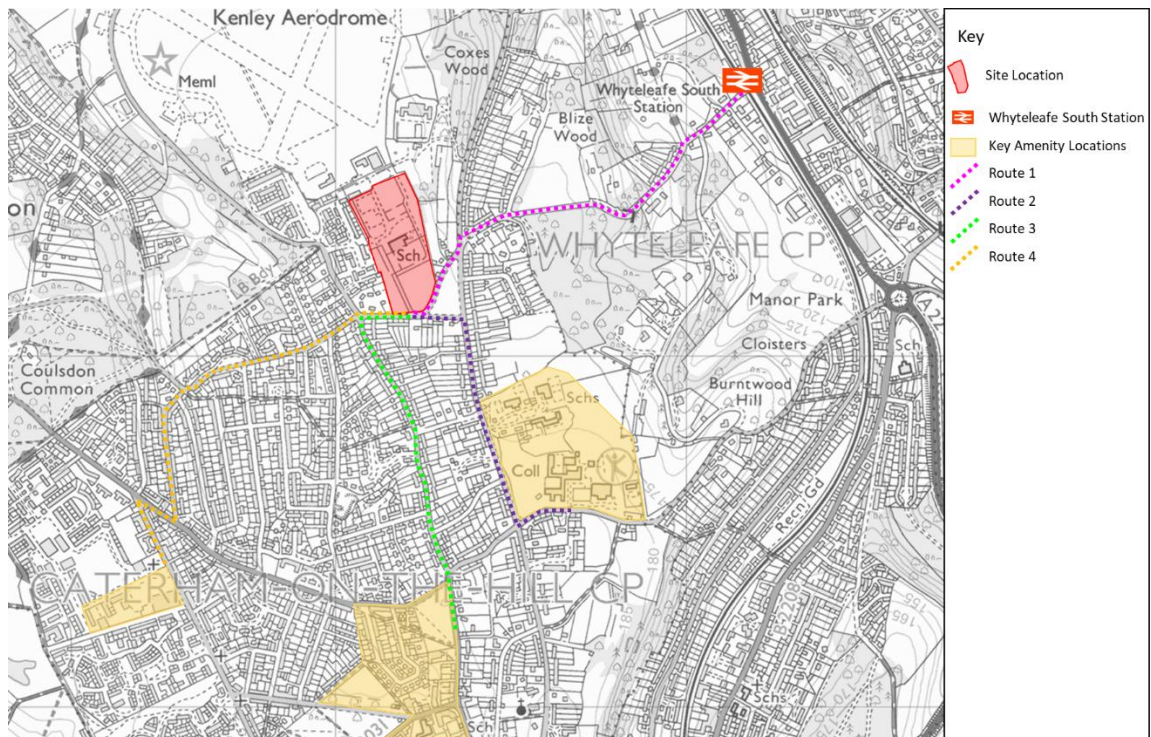


Figure 3.4 – Routes to Key Amenities

#### Route 1

3.21 This route provides access from the site to Whyteleafe South Station. Salmons Lane is provided with a footway along the western edge of the road. There are no crossing points provided across Whyteleafe Hill in the vicinity of the road’s junction with Salmons Lane. Salmons Lane (to the east of Whyteleafe Hill) is not provided with footways between Whyteleafe Hill and Whyteleafe South Station. As such whilst Whyteleafe South Station is the closest railway station to the site, it is only likely to be used by residents travelling via cycle and not on-foot.

3.22 The provision of a dropped kerb/tactile paving to improve crossing facilities on Whyteleafe Hill is reviewed in Section 4 of this report.

#### Route 2

3.23 Salmons Lane West is provided with footways along the southern edge of the carriageway between Victor Beamish Avenue and Whyteleafe Road. Whyteleafe Road is provided with footways along both sides of the carriageway for 200m south of the junction, the western footway continues beyond this point. Approximately 25m north of the access to Audley Primary School, Sunningdown School and St Francis Catholic Primary School, a signalised pedestrian crossing is provided, enabling safe pedestrian access to the school. A signalised pedestrian crossing is provided on each of the arms of the Whyteleafe Road/

Burntwood Lane junction. Burntwood Lane is provided with wide, lit footways along both sides of the carriageway, with a pedestrian crossing equipped with tactile paving and island provided adjacent to De Stafford School on Burntwood Lane.

### **Route 3**

- 3.24 Salmons Lane West is provided with footways along both sides of the road to the west of the junction with Victor Beamish Avenue. Buxton Lane is provided with footways along both sides of the carriageway, the majority of junctions along Buxton Lane are provided with dropped kerbs, enabling pedestrians to easily cross and continue south along Buxton Road. Pedestrian crossing points provided with pedestrian islands and tactile paving are provided at the junctions between Buxton Lane & Burntwood Lane and Townend & Banstead Road. Similar pedestrian crossing points are also provided across Buxton Lane and Townend in the vicinity of these junctions. Further pedestrian crossing points are provided within the town centre.

### **Route 4**

- 3.25 Salmons Lane West is provided with footways along both sides of the road to the west of the junction with Victor Beamish Avenue. No pedestrian crossing points are provided at the junction between Salmons Lane West, Buxton Lane and Ninehams Road. Wide, lit footways are provided along both sides of Ninehams Road (at points these footways are set back from the carriageway), Milton Road and Banstead Road. At the junction between Banstead Road and Coulsdon Road, signalised pedestrian crossing points are provided. Wide, lit footways are provided along Coulsdon Road, with pedestrian crossing points provided adjacent to the Tesco Superstore.

### **Summary**

- 3.26 The above serves to show how a variety of amenities can be safely accessed on-foot or via cycle.

### **Highway Network**

- 3.27 Vehicular access to the site will be achieved via Victor Beamish Avenue, which provides access to One School Global, Kenley as well as access to the gliding club located on the airfield. Access is also provided on-foot to footpaths around the airfield.
- 3.28 The road is provided with a lit footway along the western edge of the carriage way. Victor Beamish Avenue forms a junction with Salmons Lane West to the south, to the west of the junction Salmons Lane West is a two way road, operating a 30mph speed limit, to the east of the junction Salmons Lane West splits into two roads, Salmons Lane West and Salmons Lane. Salmons Lane West enables only westbound movements from Whyteleafe Road, while Salmons Lane enables only north-eastbound movement towards Whyteleafe Hill.
- 3.29 To the west, Salmons Lane West forms a roundabout junction with Buxton Lane and Ninehams Road. Buxton Lane enables access south towards Caterham-on-the-Hill town centre. To the east both Salmons Lane West and Salmons Lane form Junctions with Whyteleafe Hill/ Whyteleafe Road, which provides access south towards Caterham-on-the-Hill town centre and north towards Whyteleafe.

### **Road Safety Review**

- 3.30 Consideration has been given to crashmap.com to identify any incidents that have occurred on the road network surrounding the site over the last 5 years (up to 2021). Four accidents have occurred within the vicinity of the site, one near the junction between Victor Beamish Avenue and Salmons Lane West, and three near the roundabout junction between Salmons Lane West and Buxton Lane.
- 3.31 The accident near the junction between Salmons Lane West and Victor Beamish Avenue occurred in dry conditions during the daylight. The incident involved a car colliding with a pedestrian stood in the road. The pedestrian sustained slight injuries.

- 3.32 Of the three incidents near the junction between Salmons Lane West and Buxton Lane, two were classified as 'slight' and one as 'serious'. The first 'slight' accident involved a car colliding with a parked car. This occurred in dry conditions in the daylight. The second 'slight' incident involved a car moving off and colliding with the front of a car moving along the carriageway, this incident occurred in wet, dark conditions.
- 3.33 The serious incident involved two cars impacting at the front while proceeding along the carriageway. The incident occurred in the dark in wet conditions. The driver of one of the vehicles sustained serious injuries, while the driver and two passengers in the second vehicle sustained slight injuries.
- 3.34 The above accident record is not considered excessive over a five year period. While one accident involved a pedestrian and another resulted in 'serious' injury, it is not considered that these occurred due to fault in the highway network, and are more likely due to driver error. As a result, the increase in traffic associated with the development is unlikely to cause any road safety issues.
- 3.35 Irrespective of the above, consideration is given to pedestrian improvements as part of this Transport Assessment, including a pedestrian crossing located adjacent to the junction of Victor Beamish Avenue with Salmons Lane West. This also reflects comments raised by SCC as part of pre-application discussions.

#### **Summary of Existing Conditions**

- 3.36 Based upon the above, it can be concluded that the site is located in a sustainable location and can be accessed on foot, by cycle and by a variety of modes of public transport. Furthermore, there are a variety of amenities within walking distance, reducing reliance on the private car for residents carrying out daily tasks.
- 3.37 The PIC data suggests there is no perceived accident problem in the last 5 years. No accidents have occurred within the immediate vicinity of the proposed site access. The data also demonstrates there are no specific reason the local highway network where there is considered to be a problem in terms of highway safety. The site is therefore in compliance with relevant policy guidance.



## 4.0 Development Proposals

4.1 Development proposals for the site include the construction of 87 dwellings, comprising a mixture of affordable and open market housing on Land off Victor Beamish Avenue, Caterham. The architects site layout is attached at **Appendix A**.

4.2 Table 4.1 below contains the schedule of accommodation for the site.

Housing Type	Quantum
2x bedrooms	13
3x bedrooms	61
4x bedrooms	9
5x bedrooms	4
<b>Total</b>	<b>87</b>

Table 4.1 – Accommodation Schedule

### Access Arrangements

4.3 Access to the site will be achieved via Victor Beamish Avenue. Victor Beamish Avenue will enable access to the proposed northern section of the site, with further cul-de-sacs towards the southern section of the site. There will also be a limited number of properties with direct access onto Victor Beamish Avenue.

4.4 Due to the 30mph speed limit along Salmons Lane West, SCC have requested that visibility splays of 2.4m x 43m are shown from the junction between Victor Beamish Avenue and Salmons Lane West. These visibility splays are shown in the drawing attached at **Appendix B**.

4.5 Pedestrian access will also be achieved via Victor Beamish Avenue. The existing footway along the western side of the road will be retained, with sections of footway being provided on the western edge of the carriageway where it serves access to properties. Informal pedestrian crossing points, provided with tactile paving will enable pedestrians to safely cross between the footways.

4.6 Two pedestrian accesses into the site will be constructed from the north, enabling pedestrian and cycle access to the outskirts of Kenley Aerodrome, a popular dog walking location for local residents. These accesses will be located where historic accesses to the site are located.

### Internal Layout

4.7 The internal layout adheres to the following design principles, as set out in Surrey's Design Guide:

- ▶ 5.5m internal road width, reducing in width where provision is made for a cul-de-sac. The Surrey Design Guide requires 5.5m wide carriageways for schemes of 51-300 units;
- ▶ 2 metre internal footways;
- ▶ Car parking spaces will be a minimum of 2.4m by 4.8m; and,
- ▶ Maximum 25 metres from refuse collection vehicle to bin store.

### Parking Provision

#### Car Parking

4.8 Car parking will be provided on site in line with the standards provided in the 'Tandridge Parking Standards' Supplementary Planning Document (SPD) as set out in Section 2 of this report. The aforementioned site layout plan seeks to provide appropriate car parking inline with the following:

- ▶ All 2 and 3 bed houses will benefit from two parking spaces per unit;
- ▶ Many 3-bed units will benefit from a garage, which could be used to either store a car or for general storage purposes;
- ▶ All 4-bed dwellings will benefit from three spaces per unit, in addition to a garage; and
- ▶ Visitor car parking is provided on site in excess of 1 space per dwelling to assist in avoiding any overspill parking on surrounding roads.

### Cycle Parking

4.9 Cycle parking will be provided in accordance with the standards set out in SCC's 'Vehicular, Cycle and Electric Vehicle Parking Guidance for New Development' guidance document. This guidance requires the following:

House Size	Minimum Number of Spaces
Flats or 1/2 bedroom houses	1 space
3+ bedroom houses	2+ spaces

Table 4.2 – SCC Cycle Parking Standards

4.10 Cycle parking for the development will adhere to these standards. All cycle parking will be provided in storage in the rear gardens of each individual dwelling.

### Servicing and Refuse Collection

- 4.11 Servicing and refuse collection will occur within the site, with the layout designed to allow for a large refuse vehicle to manoeuvre without impacting on passing vehicle movements. Guidance has been sought from MfS in this respect, where it is recommended that a carriageway width of 5.5 metres is provided for roads that require an HGV to pass a car.
- 4.12 The drawing attached at **Appendix C** indicates the path that a refuse vehicle would take through the site and demonstrates that the vehicle will be able to both enter and exit the site in a forward gear.

### Implications of School Operation

- 4.13 A survey of school related vehicular activity has been carried out to ascertain the extent to which drop-off and pick-up activity associated with the existing school could impact on the use of Victor Beamish Avenue.
- 4.14 The survey data, attached as **Appendix D**, establishes all parking taking place outside the school, irrespective of duration. The results serve to show how only seven cars drop off during the morning peak on Victor Beamish Avenue, with most vehicles parked for no more than one or two minutes. Not all vehicles were parked at the same time, and therefore at most there were 3-4 vehicles parked at the same time. This is not considered material, and will not affect the free flow of traffic along Victor Beamish Avenue.
- 4.15 The survey data also recorded 11 vehicles picking up children in the afternoon. Again, not all vehicles were parked at the same time. Whilst busier than the morning peak, this is not considered a significant number of vehicles.
- 4.16 The school attracts children from a large catchment area, due to the particular religious beliefs. Many travel to and from school via coach, which would stop on site to drop off. This will have no effect on Victor Beamish Avenue. The use of coaches to transport many children to the school helps avoid a large number of parents dropping off on Victor Beamish Avenue, hence why the survey did not record much activity.

- 4.17 The school will work with parents to encourage them to use the on-site school facilities for drop-off and pick-up, in order to minimise impact on-street.

#### **Mitigation Measures**

- 4.18 The development proposals include appropriate mitigation measures to address the increase in trips generated by the site. This is set out in more detail in the following paragraphs.

#### **Footway and Crossing Improvements**

- 4.19 Footway and pedestrian crossing improvements would include a new informal crossing point provided with dropped kerbs and tactile paving across Salmons Lane West, enabling pedestrian access to the bus stop on the southern edge of Salmons Lane West.
- 4.20 It is also proposed to introduce a new informal crossing point provided with dropped kerbs and tactile paving on Whyteleafe Hill, connecting with Salmons Lane. This will aid pedestrians routeing north towards Whyteleafe Station.
- 4.21 Two new pedestrian accesses into the site from Kenley Aerodrome to the north of the site will be constructed, providing additional permeability for active travel to the site.

#### **Public Transport Improvements**

- 4.22 The six bus stops in the vicinity of the site (as shown in Figure 3.2) will be provided with the following improvements:
- ▶ Bus stop pole, with Surrey County Council standard specification flag and timetable case
  - ▶ Raised boarding kerb -140mm high for length of at least 9m
  - ▶ Bus Shelter to Surrey County Council standard specification
  - ▶ Electrical supply for shelter lighting and RTPI
  - ▶ Bus stop cage / clearway markings, with clearway plate to be provided on bus stop pole

#### **Travel Plan**

- 4.23 A Travel Plan has been developed for the site to encourage sustainable travel. The Travel Plan incentives that are likely to be made available to the first residents of each dwelling are:
- ▶ Resident travel packs; and
  - ▶ Cycle parking provision.
- 4.24 The Travel Plan is provided as a separate report as part of the planning submission.

#### **Local Plan Contributions**

- 4.25 The aforementioned draft Local Plan allocation also requires contributions towards various highway related measures. Relevant measures include:
- ▶ Pedestrian crossing at Burntwood Lane/Milner Close;
  - ▶ Pedestrian access improvements across Buxton Lane;
  - ▶ Pedestrian crossing at Salmons Lane/Whyteleafe Road (as noted above); and
  - ▶ Cycle route from Salmon Road to Whyteleafe Station.
- 4.26 It is envisaged that an appropriate contribution will be agreed towards the above measures through on-going discussions with SCC.

## 5.0 Trip Generation

### Overview

5.1 This section sets out the trip generation potential of the proposed development. For the purpose of this assessment, the weekday morning peak hour associated with residential developments is 08:00-09:00, while the evening peak hour is 17:00-18:00. The assessment also identifies trip rates across a daily profile.

### Existing Trip Generation

5.2 As the site is currently vacant, the existing site will be assumed to generate zero trips for the purpose of the net impact assessment.

### Proposed Trip Generation

5.3 The trip generation of the 87 residential dwellings has been based on trip rates derived from the TRICS database using the category '03 – Residential: A – Houses Privately Owned', under the following criteria:

- ▶ Areas within England, excluding Greater London;
- ▶ Sites with between 6-150 units;
- ▶ Surveys that occurred between 01/01/15 and 09/11/22;
- ▶ Locations classed as 'Suburban'.

5.4 While affordable dwellings may be included as part of the scheme, this TRICS category will give a robust assessment of potential trip generation.

5.5 The predicted trip generation of the site, based on the current proposals for 87 dwellings is contained in Table 5.1. The full TRICS output is included at [Appendix E](#).

Mode of Travel	Weekday AM Peak (08:00-09:00)		Weekday PM Peak (17:00-18:00)		Weekday Daily Movements	
	Arr	Dep	Arr	Dep	Arr	Dep
Total Person Trip Rates	0.206	0.930	0.643	0.325	4.343	4.595
Total Person Trips	18	81	56	28	378	400
Vehicular Trip Rates	0.131	0.414	0.376	0.186	2.404	2.510
Vehicular Trips	11	36	33	16	209	218

Table 5.1 – Residential Trip Rates and Associated Trips – 87 Units

5.6 Table 5.1 indicates that the proposed development could generate 99 total person trips in the morning peak hour, of which 47 would be vehicular. In the evening peak hour, the site could generate 86 total person trips, of which 49 would be vehicular.

5.7 To support the above trip attraction, typical models of existing resident population have been established with reference to census data for 'Method of Travel to Work' for the resident population (2011 output) for the Mid-Layer Super Output Area 'E02006430: Tandridge 003'.

5.8 The census modal split of travel is summarised in Table 5.2 below. The total person trips identified in Table 5.1 for both weekday morning and evening peak hours have been assigned based on the census modal split percentages and are also summarised in table 5.2 below.

Mode of Travel	Census Modal Split	Weekday AM Peak		Weekday PM Peak		Weekday Daily Movements	
		Arr	Dep	Arr	Dep	Arr	Dep
Car Driver	64%	12	52	36	18	242	256
Train	15%	3	12	8	4	57	60
On foot	7%	1	6	4	2	26	28
Bus, minibus, coach	6%	1	5	3	2	23	24
Passenger in car/van	4%	1	3	2	1	15	16
Bicycle	1%	0	1	1	0	4	4
Motorcycle	1%	0	1	1	0	4	4
Taxi	1%	0	1	1	0	4	4
Other	1%	0	1	1	0	4	4
Total	100%	18	81	56	28	378	400

Table 5.2 – Census Modal Split (Tandridge 003)

- 5.9 The Output Area experiences a higher proportion of car driver trips than the average trip rate taken from the TRICS survey sites, with 64 two-way car trips in the morning peak hour and 54 two-way movements in the evening peak hour.
- 5.10 However, the above does also highlight how a large percentage of residents in the surrounding area commute via rail services. As shown in section 3 of this report, there are three railway stations close to the site offering frequent access to both London and East Grinstead. This mode of travel will be prioritised within the accompanying Travel Plan to further encourage sustainable travel to and from the site.

## 6.0 Junction Impact Assessment

### Trip Distribution

- 6.1 The distribution of vehicle movements across the immediate highway network has been reviewed. All vehicle movements exit the proposed development from the south joining Salmon Lane West. The 2011 Census (Location of usual residence and place of work by method of travel to work MSOA level) has been used to determine the expected distribution of movements, based on the census data, it expected that 37% of trips generated from the development will use Salmon lane whilst 63% of trips will use Salmon Lane West. The output can be viewed at **Appendix F**. These percentages have been applied to the trip generation for the development and can be viewed below in table 6.1 below.

	Salmon Lane			Salmon Lane West		
	Arrival	Departure	Total	Arrival	Departure	Total
AM Peak (08:00-09:00)	4	13	17	7	21	28
PM Peak (17:00-18:00)	12	6	18	20	10	30
Total	74	77	150	125	130	255

Table 6.1 – Trip Distribution

- 6.2 Table 6.1 above demonstrates that the proposed development will not lead to any junction other than Victor Beamish Avenue operating with greater than 30 vehicle movements in the AM or PM peak periods, which is equivalent to one vehicle every 2 minutes.
- 6.3 Irrespective of the above, the following junctions have been assessed in capacity terms as requested by SCC during pre-application discussions:
- ▶ Victor Beamish Avenue/Salmons Lane West;
  - ▶ Salmons Lane/Whyteleafe Road;
  - ▶ Salmons Lane West/Whyteleafe Road; and
  - ▶ Salmons Lane West/Buxton Lane/Ninehams Road roundabout junction.

### Traffic Surveys

- 6.4 Manual classified turning count and queue surveys were undertaken on Thursday 27<sup>th</sup> April 2023 at the above junctions between the hours of 07:00 – 10:00 and 16:00-19:00. The raw traffic survey data is attached as **Appendix D**. The established weekday peak hours are as follows:
- ▶ Morning peak hour – 08:00-09:00; and
  - ▶ Evening peak hour – 17:00-18:00.

- 6.5 Traffic flow for the morning and evening peak hours is illustrated on Figures **TF1** and **TF2**.

### Assessment Years

- 6.6 The impact of the proposed development is to be tested five years following the traffic surveys being carried out, which is 2028.

- 6.7 Traffic growth figures have been obtained from TEMPro version 7.2c for the Tandridge 003 middle layer super output area (MSOA) and adjusted with reference to the National Transport Model (NTM) RTF 2018 Scenario 1 – Reference dataset. The TEMPro growth factors for the 2023 to 2028 weekday morning and evening peak periods are provided within Table 6.2 below.

Time Period	Weekday Morning Growth Factor	Weekday Evening Growth Factor
2023 – 2028	1.039	1.038

Table 6.2: TEMPro Growth Factors

- 6.8 Figures **TF3** and **TF4** illustrate 2028 baseline traffic flow on the surrounding road network. Relevant development traffic is shown on Figures **TF5** and **TF6**, whilst the 2028 with development scenarios are shown on Figures **TF7** and **TF8**.

### Committed Developments

- 6.9 A review of the Tandridge planning portal did not highlight and nearby planning consents which should be assessed as part of this assessment. Therefore no committed development traffic flow has been assessed.

### Junction Modelling Assessment

#### Victor Beamish Avenue/Salmons Lane West

- 6.10 Table 6.3 below summarises the junction operation during the 2023 weekday AM and PM peak periods without development. The detailed model outputs are included for reference at **Appendix G**.

Arm	2023 AM Peak Baseline		2023 PM Peak Baseline	
	RFC	Queue (veh)	RFC	Queue
Right turn in	0.07	0	0.00	0
Out of Victor Beamish Avenue	0.04	0	0.01	0

Table 6.3: 2023 Weekday AM Development Results Summary

- 6.11 The above highlights how the junction operates comfortably within capacity at present during the established peak hours.
- 6.12 Tables 6.4 and 6.5 below summarises the future year (2028) scenarios, both with and without development.

Arm	2028 AM Peak Baseline		2028 AM Peak with Development	
	RFC	Queue (veh)	RFC	Queue
Right turn in	0.07	0	0.08	0
Out of Victor Beamish Avenue	0.04	0	0.10	0

Table 6.4: 2028 Weekday AM Development Results Summary

Arm	2028 PM Peak Baseline		2028 PM Peak with Development	
	RFC	Queue (veh)	RFC	Queue
Right turn in	0.00	0	0.04	0
Out of Victor Beamish Avenue	0.01	0	0.04	0

Table 6.5: 2028 Weekday PM Development Results Summary

- 6.13 The above highlights how the junction operates comfortably within capacity in the future year scenario inclusive of development traffic.

**Salmons Lane/Whyteleafe Road**

- 6.14 Table 6.6 below summarises the junction operation during the 2023 weekday AM and PM peak periods without development. The detailed model outputs are included for reference at [Appendix G](#).

Arm	2023 AM Peak Baseline		2023 PM Peak Baseline	
	RFC	Queue (veh)	RFC	Queue
Right turn in	-	-	-	-
Out of Salmons Lane	0.53	1	0.44	1

Table 6.6: 2023 Weekday AM Development Results Summary

- 6.15 The above highlights how the junction operates comfortably within capacity at present during the established peak hours.

- 6.16 Tables 6.4 and 6.5 below summarises the future year (2028) scenarios, both with and without development.

Arm	2028 AM Peak Baseline		2028 AM Peak with Development	
	RFC	Queue (veh)	RFC	Queue
Right turn in	-	-	-	-
Out of Salmons Lane	0.55	1	0.46	1

Table 6.7: 2028 Weekday AM Development Results Summary

Arm	2028 PM Peak Baseline		2028 PM Peak with Development	
	RFC	Queue (veh)	RFC	Queue
Right turn in	-	-	-	-
Out of Salmons Lane	0.57	1	0.47	1

Table 6.8: 2028 Weekday PM Development Results Summary

- 6.17 The above highlights how the junction operates comfortably within capacity in the future year scenario inclusive of development traffic.

**Salmons Lane West/Whyteleafe Road**

- 6.18 Table 6.9 below summarises the junction operation during the 2023 weekday AM and PM peak periods without development. The detailed model outputs are included for reference at [Appendix G](#).



Arm	2023 AM Peak Baseline		2023 PM Peak Baseline	
	RFC	Queue (veh)	RFC	Queue
Right turn in	0.52	1	0.45	1
Out of Salmons Lane West	-	-	-	-

Table 6.9: 2023 Weekday Development Results Summary

6.19 The above highlights how the junction operates comfortably within capacity at present during the established peak hours.

6.20 Tables 6.10 and 6.11 below summarises the future year (2028) scenarios, both with and without development.

Arm	2028 AM Peak Baseline		2028 AM Peak with Development	
	RFC	Queue (veh)	RFC	Queue
Right turn in	0.54	1	0.47	1
Out of Salmons Lane West	-	-	-	-

Table 6.11: 2028 Weekday AM Development Results Summary

Arm	2028 PM Peak Baseline		2028 PM Peak with Development	
	RFC	Queue (veh)	RFC	Queue
Right turn in	0.54	1	-0.47	1
Out of Salmons Lane West	-	-	-	-

Table 6.12: 2028 Weekday PM Development Results Summary

6.21 The above highlights how the junction operates comfortably within capacity in the future year scenario inclusive of development traffic.

**Roundabout Junction of Salmons Lane West/Buxton Lane/Ninehams Road**

6.22 Table 6.13 below summarises the junction operation during the 2023 weekday AM and PM peak periods without development. The detailed model outputs are included for reference at [Appendix G](#).

Arm	2023 AM Peak Baseline			2023 PM Peak Baseline		
	RFC	Queue (veh)	Delay (s)	RFC	Queue	Delay (s)
Salmons Lane West	0.53	1	11	0.51	1	10
Buxton Lane (S)	0.45	1	8	0.42	1	8
Nineham Road	0.89	6	60	0.70	2	25
Buxton Lane (N)	0.72	3	25	0.55	1	14

Table 6.13: 2023 Weekday Development Results Summary

6.23 The above highlights how the junction operates within capacity at present during the established peak hours. The morning peak hour does experience some delay on Nineham Road, with a maximum queue of six vehicles.

6.24 Tables 6.14 and 6.15 summarises the junction operation during the 2028 weekday AM and PM peaks, both with and without development.

Arm	2028 AM Peak Baseline			2028 AM Peak with Development		
	RFC	Queue (veh)	Delay (s)	RFC	Queue	Delay (s)
Salmons Lane West	0.56	1	12	0.59	1	13
Buxton Lane (S)	0.48	1	8	0.49	1	9
Nineham Road	0.94	9	82	0.95	10	88
Buxton Lane (N)	0.76	3	29	0.77	3	30

Table 6.14: 2028 Weekday AM Development Results Summary

Arm	2028 PM Peak Baseline			2028 PM Peak with Development		
	RFC	Queue (veh)	Delay (s)	RFC	Queue	Delay (s)
Salmons Lane West	0.54	1	10	0.55	1	11
Buxton Lane (S)	0.44	1	8	0.47	1	9
Nineham Road	0.73	3	29	0.76	3	32
Buxton Lane (N)	0.58	1	15	0.59	1	16

Table 6.15: 2028 Weekday PM Development Results Summary

6.25 Tables 6.14 and 6.15 also demonstrate that the roundabout junction will operate within capacity in the AM and PM scenarios following the inclusion of development traffic, in both the 2023 and 2028 scenarios. Nineham Road continues to experience some delay, although the inclusion of development related traffic flow only increases queuing by one vehicle. Furthermore, the RFC remains below 1, suggesting the arm will not reach capacity in 2028 with development traffic.

### Impact on Junction 6 of the M25

6.26 This following paragraphs quantify the likely impact the development proposals will have specifically at the Godstone Interchange at Junction 6 of the M25.

6.27 Development related traffic can be distributed onto the wider network with reference to relevant Census data (2011 output) for 'Location of Usual Residence and Place of Work by Method of Travel to Work'. This is as per the assessment set out in paragraphs 6.1-6.2. The above census output enables an understanding of all output areas that residents within the output area travel to for their place of work.

6.28 The census data suggests that circa 40% of residents within the surrounding output area travel to work to output areas located within Tandridge district. Other key workplace destinations include Croydon, Coulsdon, Purley, Beddington, Redhill, Crawley, Reigate, Banstead, Leatherhead and Bromley.

6.29 Approximately of residents 15% would travel south along the A22 via the Godstone Interchange. A further circa 10% would travel south along the A22 and then west along the M25. This amounts to circa 25% of development related traffic travelling along

6.30 Based on the trip generation data set out in this report, approximately 9-10 vehicles (arrivals and departures) will pass through the A22/M25 junction, continuing south on the A22 in each peak hour. A further 6-7 vehicles would access the M25 via the Godstone Interchange of the M25.

- 6.31 In total, approximately 15-17 vehicles (both arrivals and departures) could travel through Junction 6 of the M25 within each peak hour. This equates to one vehicle every four minutes travelling through the Godstone Interchange within each peak hour.
- 6.32 The above serves to show how a relatively small percentage of future residents who travel by car will access the M25 via junction 6. Any development site located to the south of the M25, namely in Godstone, Nutfield, or Oxted, would generate a materially higher percentage of vehicular trips via the M25.
- 6.33 On the basis of the above, the impact of the development at Junction 6 of the M25 is considered negligible.

### Summary

- 6.34 The above assessment serves to demonstrate how the development will not result in a material increase in queuing on any junction assessed. Even during the future year scenarios, all junctions remain in capacity inclusive of development traffic.

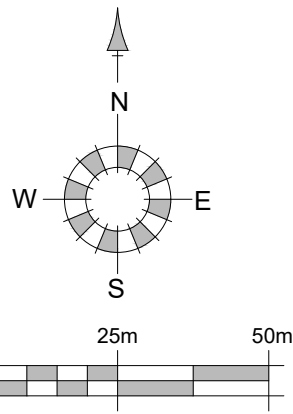
## 7.0 Summary and Conclusion

- 7.1 Motion has been instructed by Croydon and District Education Trust to prepare this Transport Assessment to accompany a planning application relating to a proposed residential development Victor Beamish Avenue, in Caterham Surrey. The proposal seeks planning permission for the construction of 87 dwellings on the site.
- 7.2 In summary, this Transport Assessment has identified the following:
- ▶ Bus services are accessible within close proximity of the site;
  - ▶ Regular train services to Caterham and London Bridge are available from Whyteleafe South station;
  - ▶ The site benefits from on-foot access to a number of amenities within the residential area of Caterham;
  - ▶ Vehicular access to the site will be achieved via Victor Beamish Avenue;
  - ▶ Appropriate levels of car and cycle parking will be provided on site;
  - ▶ Census data demonstrates that 15% of residents in the local area travel to work by train, indicating that residents will not be reliant on the private car;
  - ▶ The proposals will not lead to a material increase in traffic on the local highway network;
  - ▶ Drop off activity associated with the adjacent school is minimal on-street, which is helped by most students arriving via coach or mini-bus and alighting on-site. It is therefore considered that the proposals will not exacerbate school related activity; and
  - ▶ Junction modelling of the surrounding road network demonstrates that development related traffic flow can be accommodated on the surrounding road network without materially impacting on driver delay and queuing.

### Conclusion

- 7.3 In view of the above, the proposed development is considered to be acceptable in transport terms and meets with local and national policy criteria. The assessment work undertaken has shown that there would not be any demonstrable harm arising from the proposed scheme and it will not cause any severe impacts. Therefore, there are no traffic or transport related reasons why the development should not be granted planning consent.

**Appendix A**  
Site Layout Plan



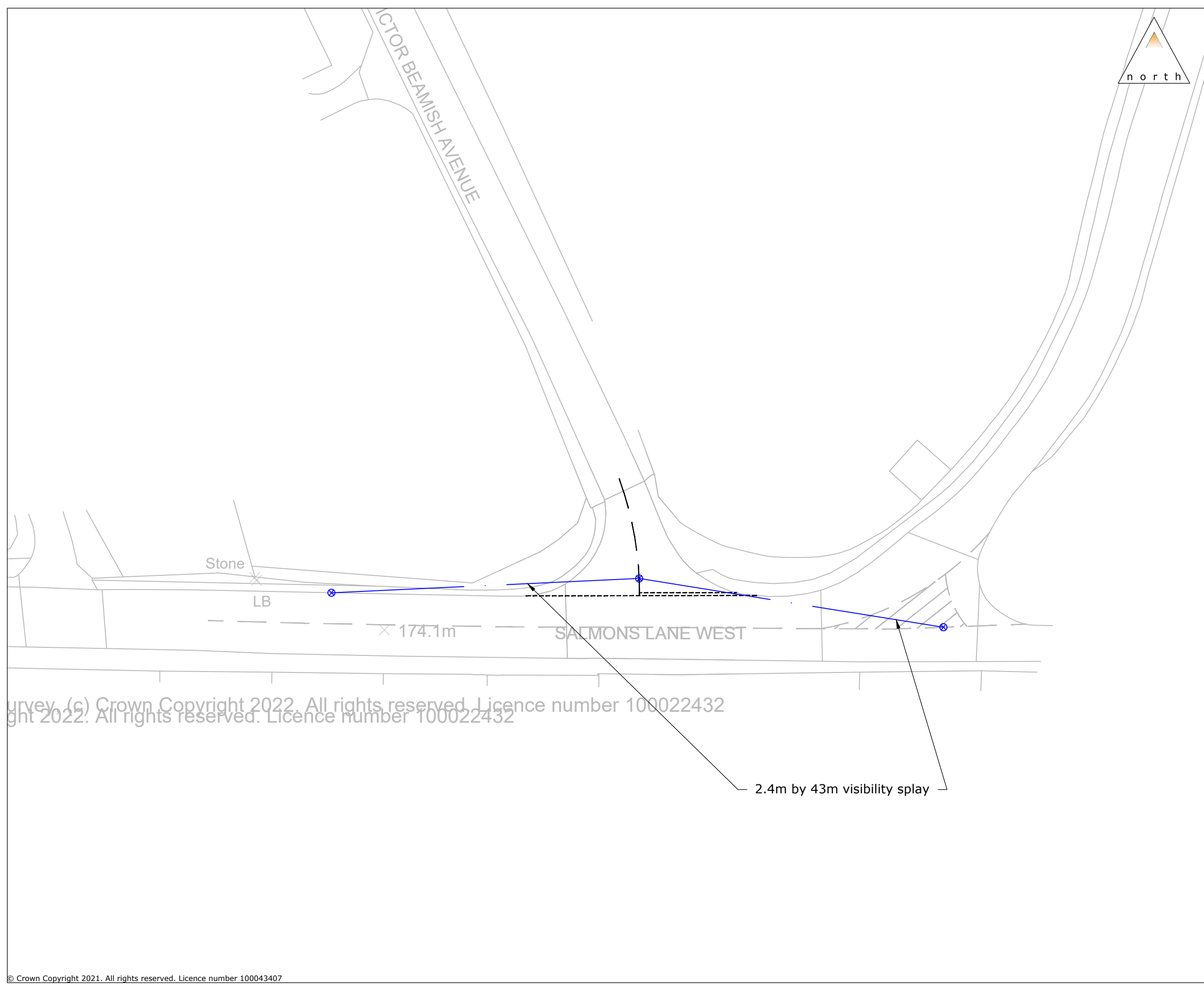
REV.	DATE	REVISIONS:	BY	STATUS:
				Preliminary

PROJECT:	Croydon & District Education Trust	Kenley Campus, Caterham-on-the-Hill
SCALE:	1:1250 (A3 ORIGINAL)	DRAWING: Proposed Site Layout
DRAWN:	JF/DA	21125
DATE:	12/10/2021	SK08

architecture planning masterplanning  
 Broadmeade House, Farnham Business Park,  
 Weydon Lane, Farnham, Surrey GU14 8QT.  
 info@osparchitecture.com www.osparchitecture.com  
 Tel: 01252 267878

## **Appendix B**

Visibility Splays



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9 Greyfriars, Reading, Berkshire, RG1 1NU  
 T: 0118 206 2930  
 Guildford - London - Reading  
 www.motion.co.uk

Project:  
**Victor Beamish Avenue, Caterham**

Title:  
**Swept Path Analysis  
 Car**

Client:

Drawing Status:

Scale: 1:500 (@ A3) Date: 25/04/2022

Drawn: Checked: Approved:

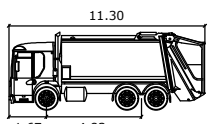
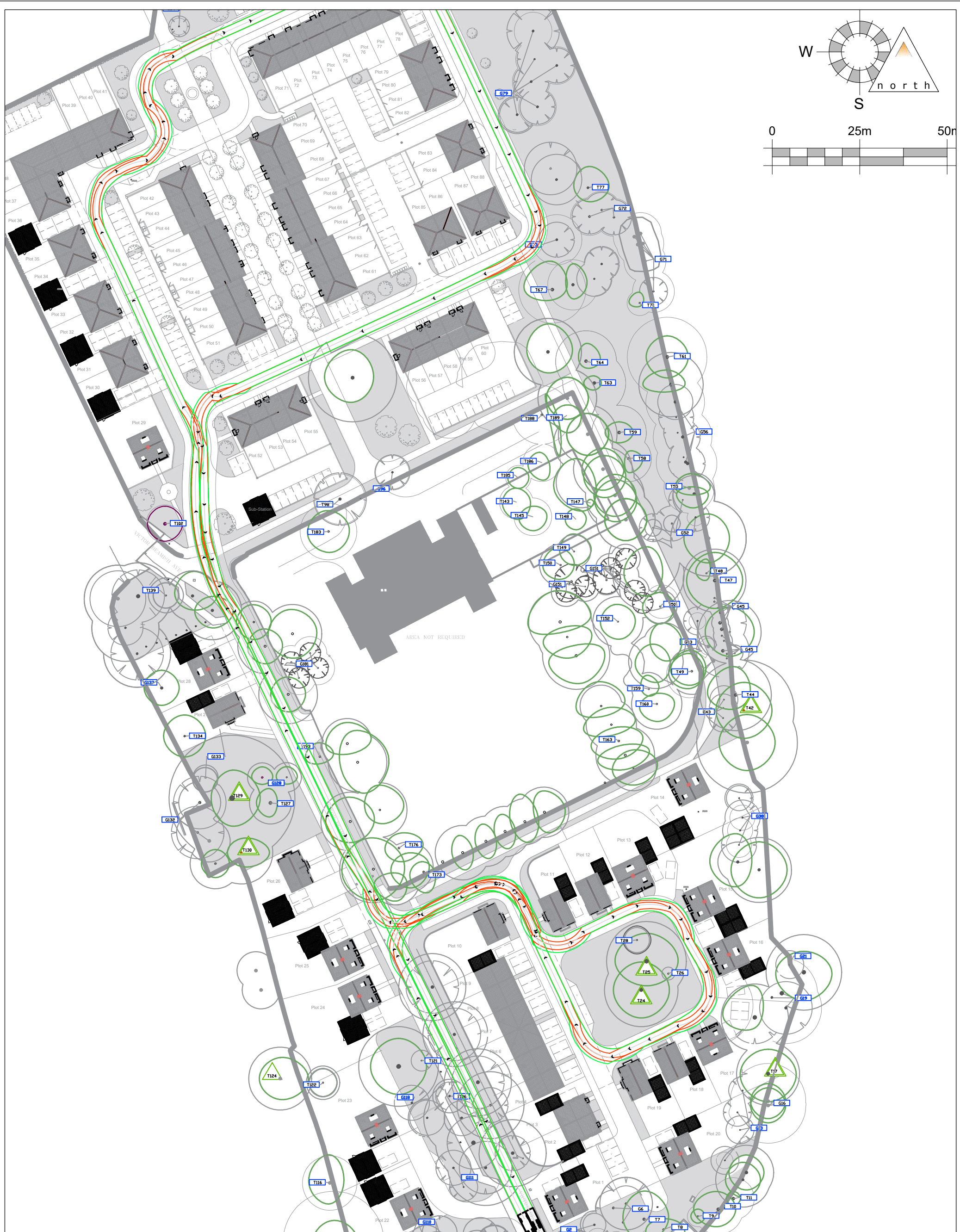
Drawing: **2106055-01** Revision: **A**

C:\Users\pawel\OneDrive\Documents\2106055-01A.dwg



**Appendix C**

Swept Path Analysis



Dennis Eagle 6X4 RHS 2013  
 meters  
 Width : 2.50  
 Track : 2.50  
 Lock to Lock Time : 6.0  
 Steering Angle : 32.1



84 North Street Golden Cross House  
 Guildford 8 Duncannon Street  
 Surrey London  
 GU1 4AU WC2N 4JF  
 T: 01483 531 300 T: 020 8065 5208

Project:  
 OneSchool Global Kenley Campus, Caterham

Title:  
 Swept Path Analysis  
 Refuse Vehicle

Scale: 1:1000 (@ A3)

Notes:

Drawing:  
 2106055-TK03.1

Revision:  
 B