

Chapter 7: Highways and Transport

HIGHWAYS AND TRANSPORT	
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SUPPORTING APPENDIX	<p>ES Volume 3, Appendix: Highways and Transport</p> <p>Annex 1: IEMA Guidelines, National Planning Policy Framework 2018, Woking Borough Councils Core Strategy, Surrey Transport Plan: Woking Borough Local Transport Strategy.</p> <p>Annex 2: DfT's 'Manual of Environmental Impact Appraisal'</p> <p>Annex 3: DMRB Volume 11, Section 3, Part 8</p> <p>Annex 4: TRL Pedestrian Delay and Traffic Management</p> <p>Annex 5: Transport Assessment</p>
KEY CONSIDERATIONS	<p>This chapter provides an assessment of the highways and transport effects of the Proposed Development, both during demolition and construction and once the Proposed Development is complete and occupied / operational.</p> <p>The assessment has been undertaken in accordance with numerous discussions with Woking Borough Council (WBC) and Surrey County Council (SCC) in respect of the Transport Assessment. The assessment presented within this chapter should be considered in the context of the Transport Assessment, which provides a comprehensive assessment of the highways and public transport effects.</p> <p>The assessment considers the potential for the Proposed Development to affect: Severance, Delay (Driver, Cycle, Pedestrian and Public Transport), Amenity, Fear and Intimidation, Accidents and Safety and Hazardous Loads (in accordance with the Institute of Environmental Assessment (IEMA) Guidelines.</p>
CONSULTATION	<p>An EIA Scoping Report was formally issued to Woking Borough Council (WBC); following this, a meeting with WBC was undertaken to discuss the EIA and scope of the ES. The EIA Scoping Report and WBC's EIA Scoping Opinion is presented in ES Volume 3, Appendix: EIA Methodology (Annex 1).</p> <p>WBC response with their formal Scoping Opinion and were in broad agreement with the proposed scope and content of the Highways and Transport Chapter. The Highway Authority also responded stating that they required a detailed Transport Assessment (ES Volume 3, Appendix: Highways and Transport (Annex 5)). Comments on access (visibility splays), layout, sustainability (information on public transport, walking and cycling routes should be submitted, some car club bays should be added, cycle parking should be provided for every flat and 20% of parking spaces need to be designed for electric vehicles), modelling (all junctions listed would need to be assessed in detail, which might identify other issues with other junctions), full TRIGS output for the multi-modal trip generation for the proposed development should be provided, a full Construction Management Plan will be required (ES Volume 3, Appendix: Highways and Transport (Annex 5)), a full Travel Plan will be required (with monitoring fee).</p> <p>More specific scoping meetings held between Vectos and SCC on the 8th of January and 9th July. The discussions detailed which junctions and scenarios to assess, along with the level of parking at the site.</p>

ASSESSMENT METHODOLOGY

Defining the Baseline

Current Baseline Conditions

7.1 The existing baseline conditions on the highways and transport networks associated with and surrounding the site have been informed by:

- On-site observations (18th February 2019, 12th July 2019, 13th July 2019);
- Desktop research and review of relevant published information including:
 - National Rail timetables;
 - Local bus timetables;
 - Google Maps;
- Discussions with WBC and SCC – the relevant Highways Authority;
- Traffic surveys; and
- Accident Data (of the most recent five-year period up to 31st November 2018).

Traffic Surveys

7.2 Automatic Traffic Counts (ATCs) were laid by Intelligent Data for a survey period of 10 days (10th - 20th May 2019) in the following locations (Figure 7.1):

- Egley Road (north and south of Hoe Valley School site access);
- High Street;
- Kingfield Road (west and east site access); and
- Guildford Road.

7.3 Manual Classified Counts (MCC) surveys were undertaken by Intelligent Data on two non-matchdays (4th April and 18th May) and one matchday (6th April), between the hours of 06:00 to 10:00 and 15:00 to 22:00 for the weekday survey (4th April), and between the hours of 13:00 to 19:00 for the Saturday surveys (6th April and 18th May). The MCCs were recorded in the following locations (Figure 7.2):

- Guildford Road / York Road;
- A427 / Egley Road / Wych Hill Lane / Guildford Road Roundabout;
- Claremont Avenue / A247;
- A247 / Westfield Avenue;
- Kingfield Road / Site Access;
- Westfield Avenue / David Lloyd Site Access;
- Vicarage Road / A247;
- Egley Road / Hoe Valley School Access; and
- Egley Road / B380 / Guildford Road Roundabout.

Figure 7.1 Location of Automatic Traffic Counts

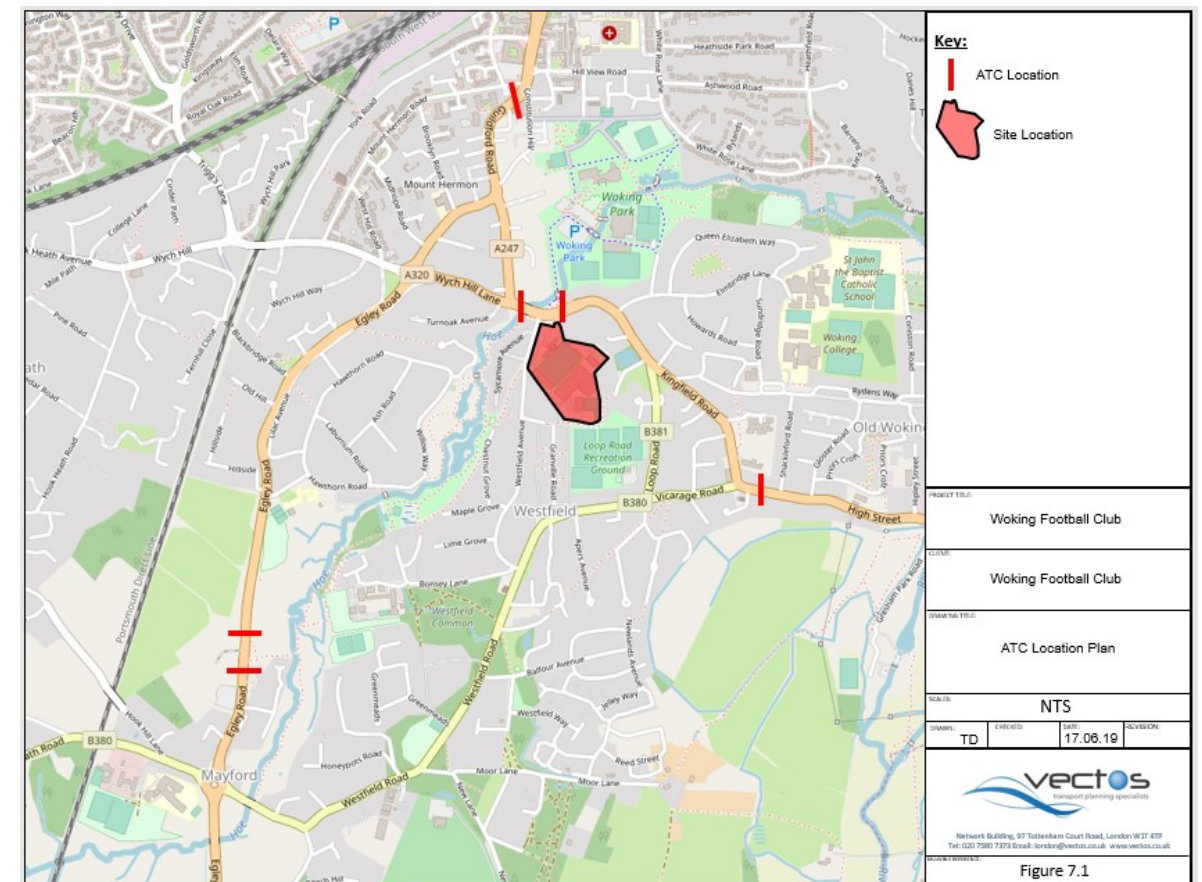


Figure 7.2 Location of Manual Classified Counts

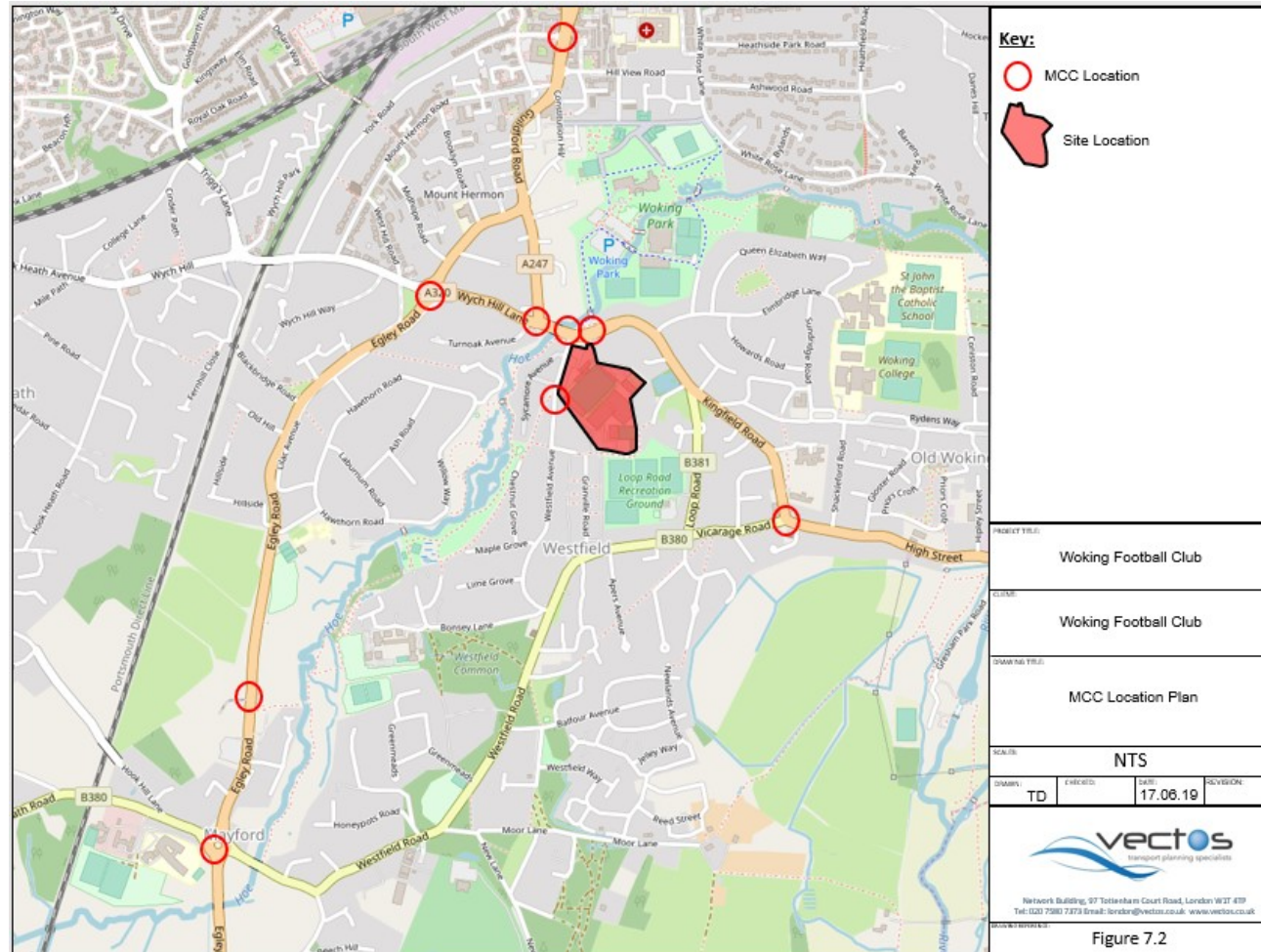
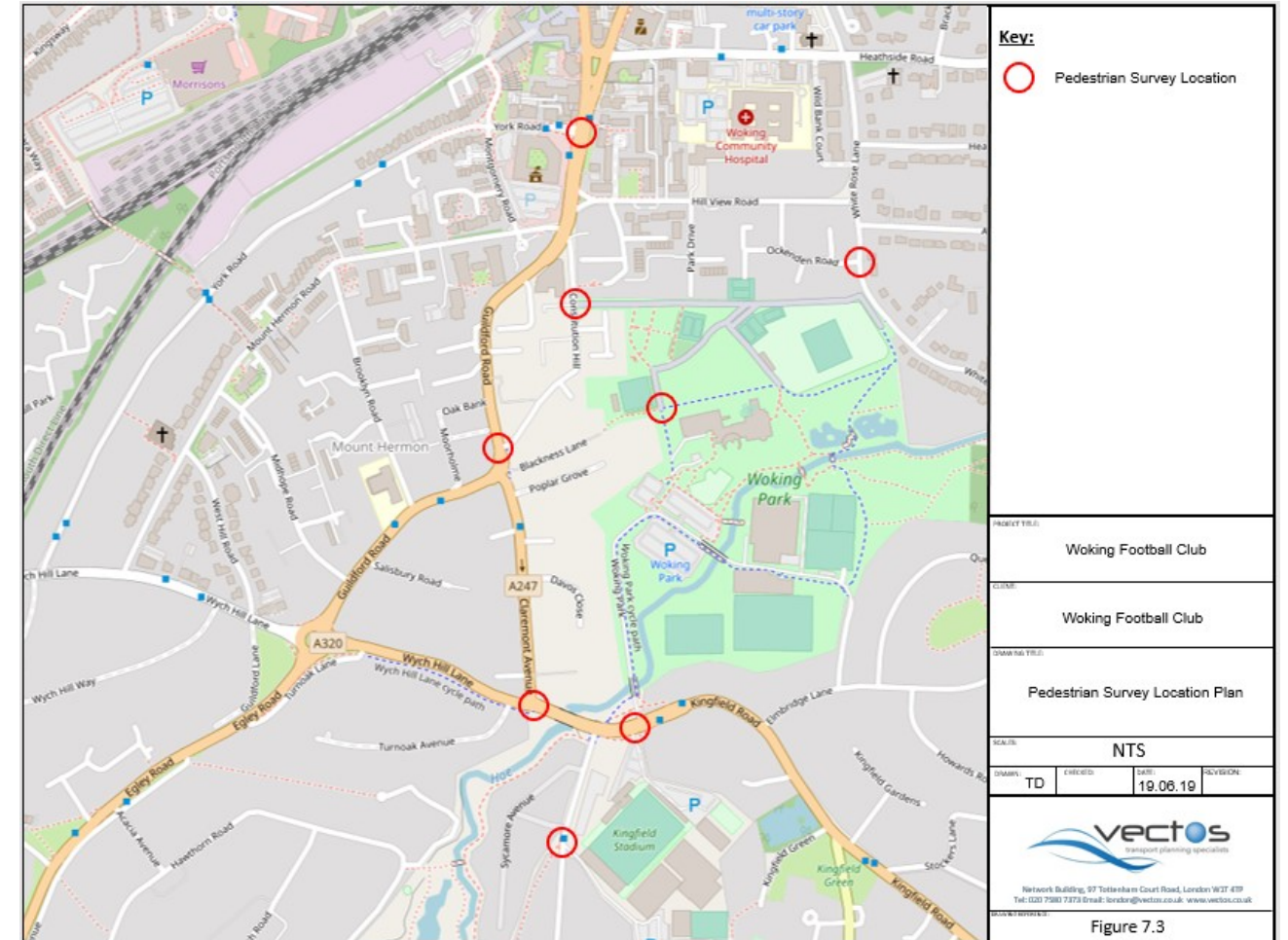


Figure 7.3 Pedestrian Count Locations



7.4 Pedestrian count surveys were undertaken by Intelligent Data on two non-matchdays (4th April and 18th May) and one matchday (6th April), between the hours of 06:00 to 10:00 and 15:00 to 22:00 for the weekday survey (4th April), and between the hours of 13:00 to 19:00 for the Saturday surveys (6th April and 18th May). The pedestrian count surveys were recorded in the following locations (Figure 7.3):

- Guildford Road / York Road;
- Constitution Hill / Woking Park Entrance;
- Ockenden Road / White Rose Lane;
- Woking Park Intersection (West of Bandstand);
- Guildford Road / Blackness Lane;
- Kingfield Road / Claremont Avenue;
- Kingfield Road / Site Access; and
- Westfield Avenue / David Lloyd Access.

Likely Evolution of the Baseline

- 7.5 As explained in **Chapter 2: EIA Methodology**, there are no cumulative schemes encompassing the study area that will impact the future operation of the traffic network. This is also supported by SCC who have stated that there are no cumulative schemes located within 2km of the site.
- 7.6 To ensure that the assessment of the completion year (2025) is robust a TEMPro factor¹ has been applied to the baseline traffic flows when assessing the future year scenarios.

Future Baseline

- 7.7 A future year baseline of 2025 has been assessed. This is a reasonable judgement for the approximate completion of the Proposed Development (see **ES Volume 1, Chapter 5: Demolition and Construction**) and 5 years from the date of application.
- 7.8 Due to no cumulative schemes being located within 1 kilometre (km) of the site, TEMPRO has been used to apply a growth factor to the baseline traffic flows to accommodate the natural traffic growth on the network up to the future baseline year. The factor which was taken from the year 2024 applied to the site for the AM peak was 1.0619 and the factor applied to the site for the PM peak was 1.0636; the factor applied to the site for Saturday was 1.0673. The difference in factors between 2024 and 2025 is not material, circa +1.3% for all time periods, and due to the assessments being based on proportional impact it was deemed the lower factor was more robust for assessment when applying an uplift to the baseline traffic. Moreover, based on the demolition programme (see **ES Volume 1, Chapter 5: Demolition and Construction**) Blocks 1, 2 and 3 will be complete and habited by 2024, and for the purposes of an assessment of traffic impact, 2024 was considered a reasonable and robust assessment period.

¹ TEMPRO takes account of local planning data to provide factors which, when used in conjunction with national or regional traffic growth forecasts can provide local traffic projection factors

Study Areas

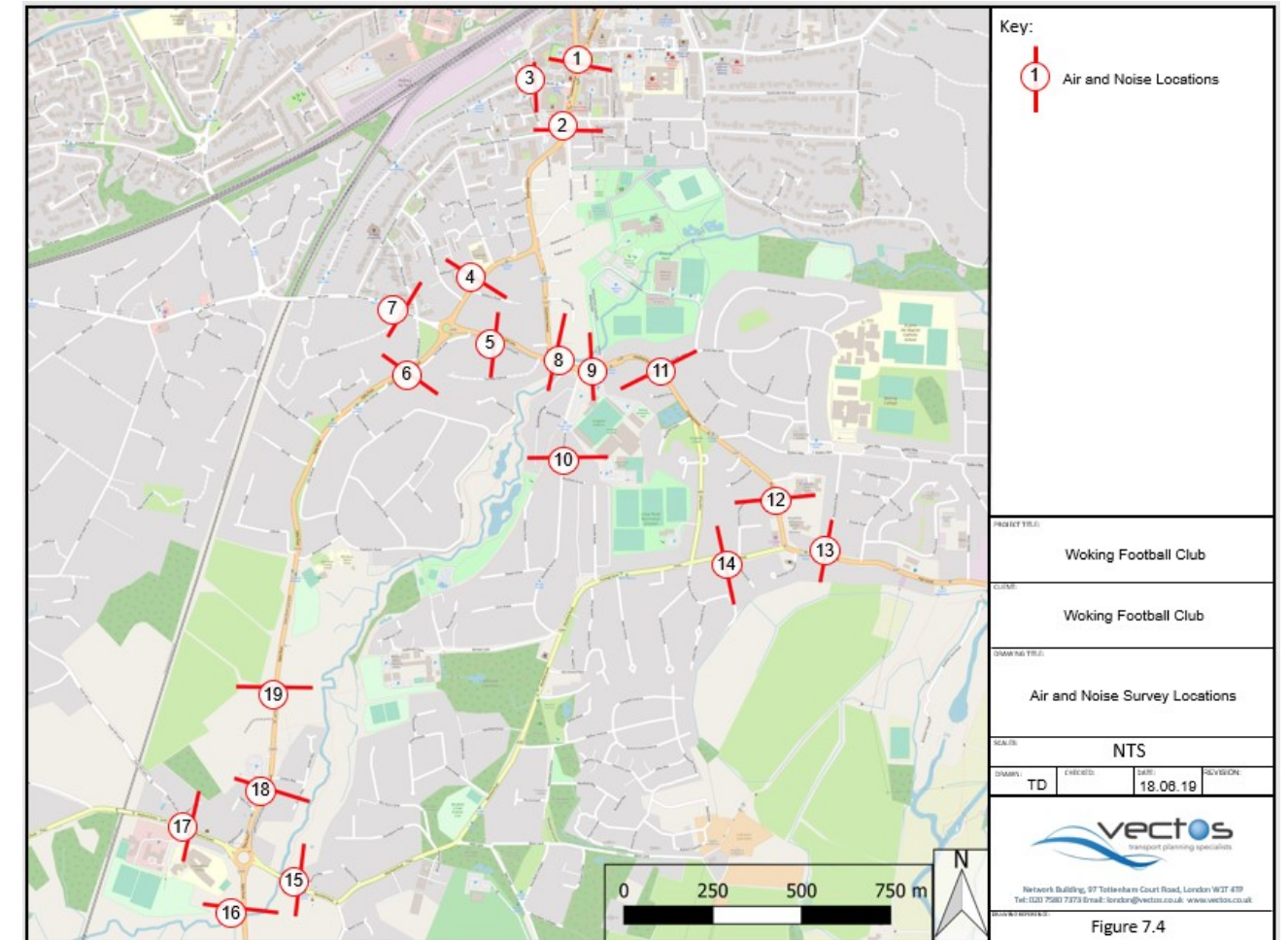
Traffic Flows – Baseline Study Area

7.9 In accordance with the Institute of Environmental Management and Assessment (IEMA) guidelines², the study area associated with the assessment of traffic flows has been defined by identifying any link or location where it is considered that potential highways and transport related effects may occur as a result of the Proposed Development. The geographical extent of this study area is presented in Figure 7.4 and highway links which defined the traffic flows to be assessed are summarised in Table 7.1.

Table 7.1 Road Links which Define the Study Area

Road Link Reference	Description of Link
1	Guildford Road (North of Guildford Road / York Road Junction)
2	Guildford Road (South of Guildford Road / York Road Junction)
3	York Road
4	Guilford Road (North of A427 / Egely Road / Wych Hill Lane Roundabout)
5	A247 Wych Hill Lane West of Claremont Avenue
6	Egley Road (South of A427 / Egely Road / Wych Hill Lane Roundabout)
7	Wych Hill Lane (West of A427 / Egely Road / Wych Hill Lane Roundabout)
8	A247 Kingfield Road (West of Westfield Avenue)
9	A247 Kingfield Road (East of Westfield Avenue)
10	Westfield Avenue
11	A247 Kingfield Road (East of Site Access)
12	A247 Kingfield Road (North of A247 / Vicarage Road Roundabout)
13	A247 High Street
14	Vicarage Road
15	Guildford Road (East of Egley Road / B380 Roundabout)
16	Egley Road (South of Egley Road / B380 Roundabout)
17	B380 Mayford Green
18	Egley Road (South of Egley Road Site Access)
19	Egley Road (North of Egley Road Site Access)

Figure 7.4 Road Link Study Area



Pedestrian Flows – Baseline Study Area

7.10 In accordance with the IEMA guidelines, the study area associated with the assessment of pedestrian flows has been defined by identifying any link or location where it is considered that the potential effects may occur as a result of the Proposed Development. The geographical extent of this study area is illustrated in Figure 7.5 and the pedestrian links which defined the pedestrian flows to be assessed are summarised in Table 7.2.

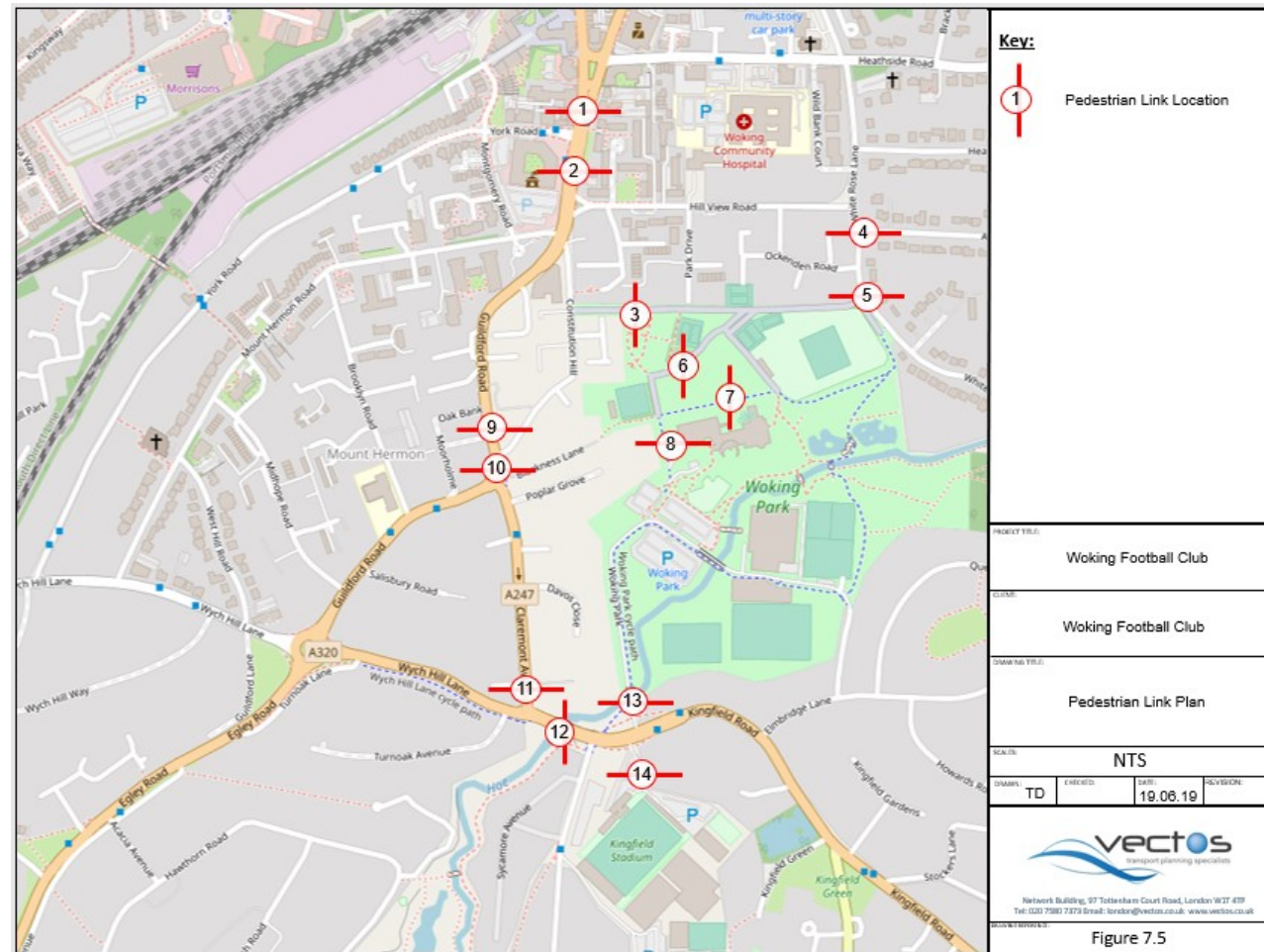
Table 7.2 List of Pedestrian Links Which Define the Study Area

Pedestrian Link Reference	Description of Link
1	Guildford Road (North of Guildford Road / York Road Junction)
2	Guildford Road (South of Guildford Road / York Road Junction)
3	Western Woking Park Entrance
4	White Rose Lane (North of Ockenden Road)
5	White Rose Lane (South of Ockenden Road)
6	Northern Woking Park Path
7	Eastern Woking Park Path
8	Southern Woking Park Path
9	Guildford Road (North of Constitution Hill)
10	Guildford Road (South of Constitution Hill)
11	Claremont Avenue (North of Kingfield Road)

² Guidelines for the Environmental Assessment of Road Traffic (Institute of Environmental Assessment 1993) (the IEMA Guidelines)

Pedestrian Link Reference	Description of Link
12	Kingfield Road (West of Westfield Avenue)
13	Woking Leisure Centre Access Road
14	Site Access

Figure 7.5 Pedestrian Link Study Area



Walking and Cycling – Baseline Study Area

- 7.11 A person's willingness to walk or cycle is dependent on many factors, including access to a car, safety, road congestion, weather, surface gradients, parking, health, direction of route and purpose of journey.
- 7.12 It is reasonable to expect that typical able-bodied people are capable of walking at least 30 minutes for day to day activities. The thrust of sustainability policy is that there will be an increasing tendency for people to use non-single car occupancy modes, of which walking is one. People will choose their mode based on their journey purpose and it is reasonable to conclude that a proportion of journeys undertaken to and from the site will be on foot. A 30-minute walking and cycling catchment area from the site includes most of Woking Town Centre to the north, Maybury to the east, Hook Heath to the west and Mayford to the south.
- 7.13 Planning Policy Guide 13 (PPG 13) (Transport) suggested that a comfortable cycling distance for a relatively fit person is 5km, whilst Sustrans, a UK based walking and cycling charity, suggested that up to 5 miles (equivalent to approximately 8km) is an appropriate distance. Although PPG13 has now been superseded by the National Planning Policy Framework (the NPPF), the research which underpinned PPG13 can still be considered valid. Indeed, Sustrans has suggested that up to 5 miles is an appropriate distance for cycle commuting. As well as encompassing the site, a 5-mile catchment area would also encompass the surrounding areas of Westfield, Hook Heath, Kingfield, Horsell and Woking Town Centre.

Assessment Scenarios

- 7.14 The following scenarios were considered in the assessment:
 - Existing Baseline (2019) – existing / surveyed conditions, to understand prevailing conditions;
 - Future Baseline 2025 – existing / surveyed baseline (as above scenario) plus a growth factor to account for additional traffic flows resulting from the natural traffic growth on the network as no cumulative schemes have been forecast to come forward in the coming years; and
 - Future Baseline 2025 plus Proposed Development – existing / surveyed baseline plus a growth factor to account for additional traffic flows resulting from the natural traffic growth on the network (as no cumulative schemes have been forecast to come forward), the relocation of the David Lloyd Leisure Centre trips plus the additional traffic flows resulting from the Proposed Development.
- 7.15 As set out in *ES Volume 1, Chapter 2: EIA Methodology*, in terms of determining the realistic worst case highways and transport related effects of the Proposed Development, the trips and related assessments have taken into account the relocation of the existing David Lloyd Leisure Centre to the Egley Road site. If the relocation of the David Lloyd Leisure Centre had not been taken into account, the trips associated with the existing David Lloyd Leisure Centre would have been removed from the local highway network, along with the trips associated with the existing football stadium, Woking Snooker Centre and Woking Gymnastics Club. The trips resulting from the Proposed Development would have then been added to the local highway network of the 'future baseline (2025) plus Proposed Development' scenario.
- 7.16 Given that the relocation of the David Lloyd Leisure Centre has been taken into account, as per the above, the trips associated with the existing David Lloyd Leisure Centre, football stadium, Woking Snooker Centre and Woking Gymnastics Club were removed from the local highway network, and the trips resulting from the Proposed Development were then added to the local highway network of the 'future baseline (2025) plus Proposed Development' scenario. However, the trips associated with the new David Lloyd Leisure Centre (relocated to the Egley Road site) were also added to the local highway network of the future baseline plus Proposed Development scenario. As a result, the consideration of the relocation of the David Lloyd Leisure Centre has resulted in a greater number of trips being added to the local highway network, thereby representing the realistic worst-case scenario.

Impact Assessment Methodology

- 7.17 The 'Guidelines for the Environmental Assessment of Road Traffic'³ sets out a number of potential effects relating to highways and transport considerations, which potentially require assessment. Those which relate to this assessment are:
 - Severance;
 - Delay (Driver, Pedestrian, Cycle, Public Transport);
 - Amenity;
 - Fear and Intimidation; and
 - Accidents and Safety.
- 7.18 It is considered unlikely that the demolition and construction, or operation, of the Proposed Development will generate or attract hazardous loads; therefore, on this basis, it is anticipated that there would be no significant effects relating to hazardous loads. An assessment of hazardous loads was scoped out of the assessment during the scoping stage and has not been considered any further in this chapter.
- 7.19 Severance is defined by the guidance in paragraph 4.27 of the IEMA guidelines:

"Severance is the perceived division that can occur within a community when it becomes separated by a major traffic artery. The term is used to describe a complex series of factors that separate people from places and other people. Severance may result from the difficulty of crossing a heavily trafficked road or a physical barrier created by the road itself. It can also relate to quite minor traffic flows if they impede pedestrian access to essential facilities".

³ Guidelines for the Environmental Assessment of Road Traffic (Institute of Environmental Assessment 1993) (the IEMA Guidelines)

7.20 The guidance refers to potential delays to drivers and to pedestrians. Users of other modes can also experience delays, such as cyclists and those travelling by bus and rail. Drawing upon the IEMA Guidelines and professional experience, driver delay and delay to bus users may change where:

- Traffic flows change at junctions;
- New junctions are introduced;
- Existing junctions are changed;
- Speeds on existing links are changed;
- Existing links are closed;
- New links are opened;
- Frequency of use of controlled pedestrian or cycle crossings change; and
- New controlled pedestrian or cycle crossings are introduced.

7.21 The IEMA Guidelines note that the Department for Transport (DfT) has assumed 30%, 60% and 90% changes in traffic levels should be considered as “slight”, “moderate”, and “substantial” impacts respectively. The IEMA Guidelines also note that increases in traffic of as little as 5% may be significant in terms of the capacity criteria of a highway but not its environmental effects, and the criteria set out within the guidance make the higher thresholds more relevant to the assessment of the environmental effects of traffic increases.

7.22 Pedestrian and cyclist delay may change where:

- Pedestrians and cyclists cross existing roads where traffic flows are projected to change;
- Pedestrians and cyclists cross new roads;
- Existing roads which pedestrians and cyclists would have crossed are removed;
- Road speeds change;
- Pedestrian and cycle volumes change;
- New crossing facilities are provided; and
- Existing pedestrian crossing facilities change.

7.23 Delay to bus users may also change where bus routes or bus stops are proposed to be changed or where demand for a bus exceeds capacity.

7.24 Rail delay may change where:

- Passenger areas within stations become congested; and
- Demand for a train exceeds capacity.

7.25 Amenity is defined by the guidance in paragraph 4.39:

“It is broadly defined as the relative pleasantness of a journey, and is considered to be affected by traffic flow, traffic composition, and pavement width/separation from traffic. This definition also includes pedestrian fear and intimidation and, can be considered to be a much broader category including consideration of the exposure to noise and pollution, and the overall relationship between pedestrians and traffic.”

7.26 Fear and intimidation is defined by the guidance in paragraph 4.40:

“The impact of this is dependent on the volume of traffic, its HGV composition, its proximity to people or the lack of protection caused by such factors as narrow pavement widths.”

7.27 Amenity, fear and intimidation may be considered for pedestrians, cyclists, bus passengers and rail passengers. Amenity, fear and intimidation can be considered together as they are strongly interrelated.

7.28 The key issue in assessing accidents and safety is in understanding the potential for change. There can be some small changes in prevailing road safety conditions arising simply due to having a greater number of journeys being made on a network; hence, the more people that are travelling, the more people that are liable to become involved in an accident. By far the more important issue to consider is how travel and the design of the transport networks interrelate to affect prevailing road safety.

7.29 In that context, prevailing road safety may change where:

- Material changes are proposed to the form of nature of a transport network such as changes to the geometry of a junction or changing the form of a junction; and
- Material changes are proposed to prevailing travel patterns on transport networks not designed to cater for them such as introducing a pedestrian demand on a rural road without footways or introducing a pedestrian demand across a heavily trafficked and high-speed road without a suitable crossing provision.

Demolition and Construction

7.30 An outline of the demolition and construction of the Proposed Development is presented in **ES Volume 1, Chapter 5: Demolition and Construction**, which includes an indicative demolition and construction programme, predicted demolition and construction traffic flows, vehicle routing and access gate locations.

7.31 The traffic generation (as set out in **Table 7-17** and anticipated to arise as a result of the demolition and construction of the Proposed Development) has been calculated based upon a number of assumptions such as demolition and construction material quantities, number of demolition and construction workers, and the demolition and construction programme.

7.32 The most intensive period for demolition and construction vehicles to and from the site is expected to be at the middle of the demolition and construction programme, which is considered to be the worst-case scenario, during which the basement construction works would be taking place. The effects of the traffic anticipated to be generated by the demolition and construction of the Proposed Development has been determined by comparing the estimated demolition and construction traffic against the existing baseline (2019). The effect has then been defined as set out from paragraph 7.62 onwards.

Severance

7.33 Severance is defined in the Design Manual for Roads and Bridges (DMRB) (Annex 6) as ‘the separation of residents from facilities and services they use within their community caused by new or improved roads or by changes in traffic flows’.

7.34 Several factors are considered in determining the existing level of severance. These include road width, traffic flow and composition, traffic speeds and the availability of pedestrian crossing facilities.

Delay

7.35 IEMA guidelines note that changes in the volume, composition and/or speed of traffic may affect the ability of people to cross roads. Typically, increases in traffic levels result in increased pedestrian delay, although increased pedestrian activity itself also contributes. The guidelines do not set any thresholds, recommending instead that assessors use their professional judgement to determine the potential impact and likely effect.

7.36 The increased number of HGVs will be considered in comparison to the overall change in traffic once the Proposed Development is complete to understand the estimate level of delay.

Amenity, Fear and Intimidation

7.37 IEMA guidelines define pedestrian amenity as the relative pleasantness of a journey and can include considerations of pedestrian fear and intimidation if they are relevant.

7.38 Thresholds for HGV increases that will heighten peoples fear and intimidation are ‘Extreme’ when a link road has a composition of 3000+ average 18-hour flow, ‘Great’ for a 2,000-3,000 18-hour flow and Moderate for a ‘1,000-2,000’ 18-hour flow. The number of HGVs and HGV increase as a result of the demolition and construction phase will be taken into account within the assessment. If the resultant increase in HGVs causes an increase into the next bracket then further assessment on how to mitigate this will be undertaken.

Accidents and Safety

7.39 The IEMA guidelines do not include a definition in relation to accidents and safety, suggesting that professional judgement is required to assess the implications of local circumstance, or factors which may increase or decrease the risk of accidents.

Assumptions and Limitations

7.40 The main limitation to presenting the baseline traffic data on the network is related to the precision of traffic counts. Such counts were recorded over a weekly period and were subject to an accuracy of $\pm 10\%$. An example of this is when comparing the Automatic Traffic Counts and Manual Classified Counts data for the same

junctions, there was an average 7% difference in traffic flows recorded. However, conditions have been predicted using standard criteria and are therefore, considered to provide a representative estimate.

- 7.41 Additionally, when estimating the traffic expected to be generated by the demolition and construction of the Proposed Development, assumptions were made in relation to material quantities, the number of demolition and construction workers, and anticipated programme of works, and the routing of vehicles.

Completed Development

- 7.42 The assessment of potential highways and transport related effects, which may occur as a result of the Proposed Development, has been based on the number of trips anticipated to be generated by the completed and operational Proposed Development. The traffic expected to be generated by the completed Proposed Development was calculated using the TRICS database, traffic surveys that have been undertaken and National Travel Survey (NTS) data, taking into account the site's location, surrounding public transport provision and parking availability. Trips were assigned to vehicle, train, bus, walking and cycling modes based on the most recent Census Data (2011) data. Matchday surveys have also been undertaken to understand the impact of the football stadium on the local highway network in both a weekend and weekday matchday scenarios. The results of the matchday surveys were uplifted across the network to establish the impact of a 9,500-capacity⁴ match.

- 7.43 The effects of the traffic anticipated to be generated by the completed and operational Proposed Development has been determined by comparing the estimated operational traffic against the existing (2019) baseline. The effect has then been defined as set out from paragraph 7.62 onwards.

Severance

- 7.44 Severance is defined in the DMRB (Annex 6) as 'the separation of residents from facilities and services they use within their community caused by new or improved roads or by changes in traffic flows'.
- 7.45 Several factors are considered in determining the existing level of severance. These include road width, traffic flow and composition, traffic speeds and the availability of pedestrian crossing facilities.
- 7.46 The DMRB provides a set of measures for the identification of community severance and offers guidance as to the level of pedestrian diversion that may follow in terms of the two-way flow present on a link. Table 7.3 outlines the thresholds of community severance as prescribed by the DMRB.

Table 7.3 Threshold of Severance Levels

Severance Level	Traffic Flow (AADT)	Length of Diversion
Slight	<8,000	<250m
Moderate	8-16,000	250-500m
Significant	>16,000	>500m

- 7.47 The DMRB (Annex 6) provides guidance on the level of relief of severance that may be afforded by pedestrian crossings. Table 7.4 outlines the extent to which severance may be reduced by the provision of pedestrian crossings. Where these facilities are placed to accommodate pedestrian desire lines, the DMRB suggests that the effect of severance can be reduced by up to 90%.

Table 7.4 Relief from Severance afforded by Crossing Points

Location	Slight	Moderate	Significant
Built-up-area	<30%	30-60%	>60%

Delay

- 7.48 IEMA guidelines note that changes in the volume, composition and/or speed of traffic may affect the ability of people to cross roads. Typically, increases in traffic levels result in increased pedestrian delay, although increased pedestrian activity itself also contributes. The guidelines do not set any thresholds, recommending instead that assessors use their professional judgement to determine the potential impact and likely effect.
- 7.49 The IEMA guidelines refer to a report published by the Transport Research Laboratory (TRL) (Annex 7) as providing a useful approximation for determining pedestrian delay. The TRL research identified that mean pedestrian delay was found to be 8 seconds at flows of 1,000 vehicles per hour and below 20 seconds at 2,000

vehicles per hour for various types of crossing condition. This research has also been reproduced in DMRB Volume 11, Section 3, Part 8.

- 7.50 A two-way flow of 1,400 vehicles per hour has been adopted as a lower threshold for assessment (equating to a mean 10 second delay for a link with no pedestrian facilities) in the TRL report. Below this flow pedestrian delay is unlikely to be a significant factor. This is deemed a robust starting point for narrowing down the modelled routes within the Study Area and enabling identification of the rates which exceed the assessment threshold. It is assumed that for controlled forms of pedestrian crossing, the pedestrian delays are likely to be less.

Amenity, Fear and Intimidation

- 7.51 IEMA guidelines define pedestrian amenity as the relative pleasantness of a journey and can include considerations of pedestrian fear and intimidation if they are relevant.
- 7.52 As with pedestrian delay, pedestrian amenity is affected by traffic volumes and composition along with pavement width and pedestrian activity. The guidelines suggest tentative thresholds for determining the potential impact, including where the traffic flow is halved or doubled relative to the existing scenario.
- 7.53 Thresholds for vehicle increases that will heighten peoples fear and intimidation are 'Extreme' when a link road has a composition of 1,800+ average 18-hour flow, 'Great' for a 1,200-1,800 18-hour flow and 'Moderate' for a 600-1,200 18-hour flow. The number of vehicles and vehicle increase as a result of the Proposed Development will be taken into account within the assessment. If the resultant increase in vehicles causes an increase into the next bracket then further assessment on how to mitigate this will be undertaken.

Accidents and Safety

- 7.54 The IEMA guidelines do not include a definition in relation to accidents and safety, suggesting that professional judgement is required to assess the implications of local circumstance, or factors which may increase or decrease the risk of accidents.

Type of Assessment: Summary

- 7.55 Table 7.5 summarises the type of assessments that have been undertaken for each potential environmental effect.
- 7.56 Qualitative assessments have been undertaken through the application of professional judgement to consider anticipated changes in the prevailing baseline conditions as defined in this chapter.
- 7.57 Quantitative assessments have been undertaken, with consideration of the sensitivity of the receptor that has been assigned based on that presented in Table 7.6. The magnitude of impact has been defined by reference to the IEMA Guidance as set out in Table 7.7.

Table 7.5 Type of Assessment: Summary

Potential Environmental Effect	Demolition and Construction	Completed Development
Severance	Quantitative	Quantitative
Driver Delay	Quantitative	Qualitative Quantitative
Pedestrian / Cycle Delay	Qualitative & Quantitative	Qualitative & Quantitative
Public Transport Delay	Qualitative	Qualitative
Amenity, Fear and Intimidation	Qualitative & Quantitative	Qualitative & Quantitative
Accidents and Safety	Qualitative	Qualitative

Assumptions and Limitations

- 7.58 The main limitation to presenting the baseline traffic data on the network is related to the precision of traffic counts. Such counts were recorded over a weekly period and were subject to an accuracy of $\pm 10\%$. An example of this is when comparing the Automatic Traffic Counts and Manual Classified Counts data for the same junctions, there was an average 7% difference in traffic flows recorded. However, conditions have been predicted using standard criteria and are, therefore, considered to provide a representative estimate.

⁴ Whilst the Proposed Development will provide a 9,026-capacity stadium, for the purposes of this assessment, a 9-500-capacity stadium has been assessed as a worst case scenario.

- 7.59** The traffic anticipated to be generated by the completed and operational Proposed Development (i.e. future baseline scenario) has been based on assumptions made in relation to trip rates, survey data, National Travel Survey (NTS) data and information from the Trip End Model Presentation Programme (TEMPRO).
- 7.60** The forecast development traffic is informed by TRICS data, Census data, National Travel Survey data, and matchday surveys, and judgements made in relation to total trips, mode split and trip distribution have been informed by this data.
- 7.61** Due to the infrequency of weekday fixtures, no weekday match day traffic data could be collected and weekend match day data was collected and applied to replicate a weekday match. Given that the surveyed weekend match had a considerably higher attendance (4,589) than any weekday match (2,516) of the 2017/18 season, this is considered a robust assessment.

Methodology for Defining Effects

Identification of Receptors and Receptor Sensitivity

- 7.62** The criteria defining the sensitivity of the receptors are presented in Table 7.6.

Table 7.6 Description of the Sensitivity of Receptors

Receptor Sensitivity	Receptor Type
High	The receptor/resource has little ability to absorb change without fundamentally altering its present character. Receptors of greatest sensitivity to traffic flow: schools, colleges, playgrounds, accident clusters, retirement homes, roads without footways that are used by pedestrians.
Moderate	The receptor/resource has moderate capacity to absorb change without significantly altering its present character. Traffic flow sensitive receptors: congested junctions, doctors' surgeries, hospitals, shopping areas with roadside frontage, roads with narrow footways, recreation facilities
Low	The receptor/resource is tolerant of change without detriment to its character. Receptors with low sensitivity to traffic flow: places of worship, public open space, tourist attractions and residential areas with adequate footway provision.

- 7.63** The sensitivity of the receptors falling within the different Study Areas have been identified based on experience and professional judgement.

Magnitude of Impact

- 7.64** Table 7.7 summarises the criteria that has been used to determine magnitude of impacts (based on the effects set out in paragraph 7.16). However, consideration of the absolute level of an impact is also important e.g. the total flow of traffic or HGVs on a link. This is because an increase of, say, 100% in the traffic flow on a road is likely to still lead to negligible or minor effect if the existing flows are low.

Table 7.7 Magnitude of Impact

Effect	Very Low	Low	Medium	High
Severance	Change in total traffic or HGV flows of less than 30%	Change in total traffic or HGV flows of 30-60%	Change in total traffic or HGV flows of 60-90%	Change in total traffic or HGV flows over 90%
Pedestrian and Cyclist Delay	Two way traffic flow < 1,400 vehicles per hour	Professional judgement based on the road links with two way traffic flow exceeding 1,400 vehicles per hour in context of the individual characteristics		
Pedestrian Amenity	Change in total traffic or HGV flows < 100%	Professional judgement based on the routes with >100% change in context of their individual characteristics		
Driver Delay	Professional judgement based on the results of junction capacity assessment at the Kingfield Road Site Access and Westfield Avenue Site Access Junctions			
Fear and Intimidation	-	Moderate-Average glow over 18 hour day 600-1200 for vehicle and 1000-2000 for HGV	Great-Average glow over 18 hour day 1200-1800 for vehicle and 2000-3000 for HGV	Extreme-Average glow over 18 hour day 1800+ for vehicle and 3000+ for HGV
Accidents & Safety	Professional judgement based on qualitative analysis			
Public Transport	Professional judgement based on quantitative analysis (presented in the Transport Assessment (submitted as a standalone document as part of the planning application))			

- 7.65** To assist with the judgement of magnitude of impact, reference has been made to the IEMA guidelines (Annex 1 – Planning Policy). This guidance sets out the effects considered, as well as thresholds, in respect to potential changes in the volume and composition of traffic, in order to facilitate a subjective judgement of the potential highways and transport effect. The thresholds described are guidance only and provide a starting point by which a detailed analysis will inform a qualitative assessment.

Initial Screening Process for the Potential Effect of Traffic Flows on the Local Highway Network

- 7.66** In relation to the potential effect of traffic flows generated by the Proposed Development on the local highway network, prior to determining the sensitive receptors and their associated sensitivity, and the magnitude of impact, an initial screening process is undertaken (as set out below).
- 7.67** The IEMA guidance identifies two broad rules which can be used as a screening process to ascertain the scale and extent of the assessment:
- “Rule 1: include highway links where traffic flows will increase by more than 30% (or the number of heavy goods vehicles will increase by more than 30%); and
 - Rule 2: include any other specifically sensitive areas where traffic flows have increased by 10% or more”.

- 7.68** Where the predicted increase in traffic flows (as a result of the Proposed Development) is lower than the above thresholds, the IEMA guidelines suggest the significance of the effects can be stated to be negligible and further detailed assessments are not warranted. Increases in traffic flows below 10% are generally considered to be insignificant in environmental terms given that daily variations in background traffic flow may vary by this amount.

Scale and Nature of Effect

- 7.69** The scale of the resulting effect is judged on the relationship of the magnitude of impact against the sensitivity and / or importance of the receptor. The predicted scale of effects is summarised in Table 7.8.

Table 7.8 Scale of Effects

Sensitivity of Receptor	Magnitude of Impact			
	High	Medium	Low	Very Low
High	Major	Major	Moderate	Minor
Moderate	Major	Moderate	Negligible	Negligible
Low	Moderate	Negligible	Negligible	Negligible

- 7.70** The nature of effects is described as either:

- **Beneficial** – meaning that there is an overall positive impact;
- **Adverse** – meaning that there is an overall negative impact; or
- **Negligible** – meaning that there is an insignificant impact.

Significance of Effects

- 7.71** In accordance with the methodology set out within **ES Volume 1, Chapter 2: EIA Methodology**, the following criteria is applied in relation to the significance of effects:

- ‘Moderate’ or ‘major’ effects are deemed to be ‘significant’ (see Table 7.8).
- ‘Minor’ effects are considered to be ‘not significant’, although they may be a matter of local concern; and
- ‘Negligible’ effects are considered to be ‘not significant’.

Geographic Extent of Effect

- 7.72** The geographic extent of the effects is identified at a spatial level, ‘site’ or ‘local’ effects are those affecting the site and neighbouring receptors, while effects upon receptors beyond the vicinity of the site and its neighbours are at a ‘district’ level. Effects affecting London are at a ‘regional’ level, whilst those which affect different parts of the country, or England, are considered being at a ‘national’ level.

7.73 The effect of the Proposed Development is anticipated to be local on the highway network with the only regional effects considered to be rail passengers of the site commuting into London.

Effect Duration

7.74 The temporal scope of the effect identified is described as either short, medium, long term or permanent as described below.

7.75 For the operational assessment the likely effects are deemed permanent whereas for construction effects they are likely to be medium term.

- Short term – < 12 months;
- Medium term – 1 to 5 years;
- Long term – + 5 years; and
- Permanent – effects that are considered to be ‘irreversible’ or extremely long-lasting.

Direct and Indirect, Reversible or Irreversible Effects

7.76 The below assessment will also identify whether the effect is ‘direct’ (i.e. resulting without any intervening factors) or ‘indirect’ or ‘secondary’ (i.e. not directly caused or resulting from something else).

7.77 Whether the effect is ‘reversible’ or ‘irreversible’ is also identified and defined.

BASELINE CONDITIONS

Current Baseline Conditions

Pedestrian Accessibility

7.78 The site is located in close proximity to Woking town centre and other small local villages, with the site being an approximate 15 - 20 minute walk from Woking town centre. The site has an abundance of footpaths with a variety of destinations and all roads in the vicinity of the site have pedestrian footpaths on either side; this includes Westfield Avenue (which forms the western boundary of the site) and Kingfield Road (which forms the northern boundary of the site).

Cycle Access and Network

7.79 National Cycle Network (NCN) Route 223 runs directly adjacent to the boundary of the site and can be accessed from the Kingfield Road / Westfield Avenue junction. It offers both on and off-road cycle routes, and provides access to a number of destinations including Guildford and further afield (such as Brighton). NCN Route 223 connects with NCN Route 22 at Guildford and provides further access to Portsmouth and South London.

7.80 NCN Route 223 provides access to Woking railway station and Woking town centre. The cycle route passes through Woking Park and reconnects with the road network on White Rose Lane, before continuing to the station with an on-street cycle path. Woking town centre is an approximate 6 minute cycle from the site.

Bus Services

7.81 There are bus services available in the vicinity of the site or within a short walk of the site. The closest bus stops are the ‘Leisure Centre’ stops located on Kingfield Road, immediately north of the site. The westbound stop is approximately 50m from the site and benefits from a layby, shelter and timetabling information. Table 7.9 lists all of the buses available from the bus stops on Kingfield Road, to the north of the football club, adjacent to the site access.

Table 7.9 Current Bus Services

Service	Route	Average Frequency (mins)		
		Weekday	Saturday	Sunday
MAX 34	Guildford – Woking – Camberley	40	40	-
73	Woking – Horsell – Chobham	60	60	-
134	Guildford – Woking – Camberley	1 per day	-	-

Service	Route	Average Frequency (mins)		
		Weekday	Saturday	Sunday
446	Staines – Chertsey – Woking	60	60	60
462	Guildford – Ripley – Woking	120	120	-
463	Guildford – Merrow – Ripley – Woking	120	120	-
690	Worplesdon – Pirbright – Kingfield Green - Woking	1 per day	-	-
856	Sunbury – Chertsey – Addlestone – Woking – Kingfield Green	2 per day	-	-

Rail Services

7.82 Woking rail station is located approximately 1.5km to the north of the site and can be accessed easily by foot, cycle and bus. It is operated by South Western Railway, and provides connections to London Waterloo to the east, Basingstoke to the west, and Portsmouth to the south. During a weekday, services run, on average, every five minutes to London, every 15 minutes to Portsmouth, and every ten minutes to Basingstoke. Access to London Waterloo can be used as a node for travel further afield. Table 7.10 sets out the peak hour services and frequencies from Woking railway station, which has disabled access.

Table 7.10 Current National Rail Services from Woking Station

Destination	Trains per Peak Hour Weekday	Trains per Peak Hour Saturday	Trains per Peak Hour Sunday	Average Journey Time
	(AM Peak and PM Peak)	(AM Peak and PM Peak)	(AM Peak and PM Peak)	
London Waterloo	17	14	6	30
Basingstoke	6	6	5	20
Portsmouth	5	5	3	75

Vehicular Access and Local Parking

7.83 Vehicles currently access the site via Kingfield Road and egress from the same point. Kingfield Road borders the northern side of the site, linking with Wych Hill Lane to the west via a four-arm roundabout (Turnoak Roundabout). Turnoak Roundabout also links to Egley Road and Guildford Road. To the south-east of the site, Kingfield Road links with High Street via a three-arm roundabout. The roundabout also links to Vicarage Road.

7.84 Kingfield Road is a predominantly residential area with a single carriageway (30 miles per hour (mph)) route. Pedestrians are able to use shared cycle/pedestrian paths on at least one side of the road for the entirety of the Kingfield Road. There are numerous pedestrian crossing islands and signal controlled crossings at all major junctions on Kingfield Road.

7.85 The site is located in an area with existing parking restrictions in place, on the majority of local roads to the north of the site (i.e. towards the town centre). The A427 (Guildford Road) and many of the local residential areas to the north of the site all include parking restrictions. To the east, south and west of the site, there are no Controlled Parking Zones (CPZs) but there are a number of double yellow line restrictions that prevent on-street parking.

Personal Injury Accidents

7.86 Personal Injury Collision (PIC) data in the area surrounding the site has been obtained from SCC for the five-year period up to 31st November 2018. During this period, there have been a total of 49 Slight (i.e. at least one person is slightly injured, but no person is killed or seriously injured), 7 Serious (at least one person is seriously injured but no person is killed) and 0 Fatal (at least one person is killed) accidents on the road network.

7.87 Of the 7 serious accidents that have occurred over the five-year period, none have taken place at the site access junction on Kingfield Road.

Baseline Traffic Flows

7.88 The existing baseline (2019) 24 hour two-way Annual Average Daily Traffic (AADT) flows for vehicles and heavy goods vehicles (HGVs) are provided in Table 7.11; the existing baseline (2019) AM peak hour traffic flows for vehicles and HGVs are provided in Table 7.12; and the existing baseline (2019) PM peak hour traffic flows for vehicles and HGVs are provided in Table 7.13.

7.89 It should be noted that even though a match day is not a common occurrence ((i.e. only during 28 days of the year) and traffic only increasing for approximately six hours (13:00-19:00) on a Saturday matchday, and five hours (17:00-22:00) on a weekday matchday, the football matchday flows have still been incorporated into the Annual Average Daily Traffic flows to provide a robust assessment.

Table 7.11 Baseline Traffic Flows 24 Hour Annual Average Daily Traffic

Reference	Road Link	Vehicles		
		Total Vehicles	HGV*	HGV %
1	Guildford Road (North of Guildford Road / York Road Junction)	24,961	486	2%
2	Guildford Road (South of Guildford Road / York Road Junction)	21,382	410	2%
3	York Road	4,969	76	2%
4	Guilford Road (North of A427 / Egely Road / Wych Hill Lane Roundabout)	19,777	361	2%
5	A247 Wych Hill Lane West of Claremont Avenue	19,777	208	1%
6	Egley Road (South of A427 / Egely Road / Wych Hill Lane Roundabout)	23,467	473	2%
7	Wych Hill Lane (West of A427 / Egely Road / Wych Hill Lane Roundabout)	22,744	292	1%
8	A247 Kingfield Road (West of Westfield Avenue)	24,871	292	1%
9	A247 Kingfield Road (East of Westfield Avenue)	19,874	271	1%
10	Westfield Avenue	7,199	21	0%
11	A247 Kingfield Road (East of Site Access)	17,491	243	1%
12	A247 Kingfield Road (North of A247 / Vicarage Road Roundabout)	13,148	188	1%
13	A247 High Street	20,549	257	1%
14	Vicarage Road	117,44	202	2%
15	Guildford Road (East of Egley Road / B380 Roundabout)	12,703	160	1%
16	Egley Road (South of Egley Road / B380 Roundabout)	21,167	375	2%
17	B380 Mayford Green	15,170	243	2%
18	Egley Road (South of Egley Road Site Access)	21,924	403	2%
19	Egley Road (North of Egley Road Site Access)	21,223	403	2%

*HGV (heavy goods vehicle) relates to three axle articulated vehicle and larger

Table 7.12 Baseline Traffic Flows AM Peak Hour

Reference	Road Link	Vehicles		
		Total Vehicles	HGV*	HGV %
1	Guildford Road (North of Guildford Road / York Road Junction)	1,779	44	2%
2	Guildford Road (South of Guildford Road / York Road Junction)	1,490	40	3%
3	York Road	397	4	1%
4	Guilford Road (North of A427 / Egely Road / Wych Hill Lane Roundabout)	1,449	35	2%
5	A247 Wych Hill Lane West of Claremont Avenue	1,523	22	1%
6	Egley Road (South of A427 / Egely Road / Wych Hill Lane Roundabout)	1,632	46	3%
7	Wych Hill Lane (West of A427 / Egely Road / Wych Hill Lane Roundabout)	1,626	29	2%
8	A247 Kingfield Road (West of Westfield Avenue)	1,882	31	2%
9	A247 Kingfield Road (East of Westfield Avenue)	1,452	28	2%
10	Westfield Avenue	554	2	0%

Reference	Road Link	Vehicles		
		Total Vehicles	HGV*	HGV %
11	A247 Kingfield Road (East of Site Access)	1,360	25	2%
12	A247 Kingfield Road (North of A247 / Vicarage Road Roundabout)	690	18	3%
13	A247 High Street	1,360	27	2%
14	Vicarage Road	798	19	2%
15	Guildford Road (East of Egley Road / B380 Roundabout)	1,002	17	2%
16	Egley Road (South of Egley Road / B380 Roundabout)	1,434	41	3%
17	B380 Mayford Green	1,247	28	2%
18	Egley Road (South of Egley Road Site Access)	1,571	40	3%
19	Egley Road (North of Egley Road Site Access)	1,477	41	3%

*HGV relates to a three-axle articulated vehicle and larger.

Table 7.13 Baseline Traffic Flows PM Peak Hour

Reference	Road Link	Vehicles		
		Total Vehicles	HGV*	HGV %
1	Guildford Road (North of Guildford Road / York Road Junction)	1,813	26	1%
2	Guildford Road (South of Guildford Road / York Road Junction)	1,587	19	1%
3	York Road	318	0	2%
4	Guilford Road (North of A427 / Egely Road / Wych Hill Lane Roundabout)	1,397	17	1%
5	A247 Wych Hill Lane West of Claremont Avenue	1,323	8	1%
6	Egley Road (South of A427 / Egely Road / Wych Hill Lane Roundabout)	1,745	22	1%
7	Wych Hill Lane (West of A427 / Egely Road / Wych Hill Lane Roundabout)	1,647	13	1%
8	A247 Kingfield Road (West of Westfield Avenue)	1,697	11	1%
9	A247 Kingfield Road (East of Westfield Avenue)	1,408	11	1%
10	Westfield Avenue	482	1	0%
11	A247 Kingfield Road (East of Site Access)	1,157	10	1%
12	A247 Kingfield Road (North of A247 / Vicarage Road Roundabout)	1,202	9	1%
13	A247 High Street	1,597	10	1%
14	Vicarage Road	892	10	1%
15	Guildford Road (East of Egley Road / B380 Roundabout)	826	6	1%
16	Egley Road (South of Egley Road / B380 Roundabout)	1,612	13	1%
17	B380 Mayford Green	936	7	1%
18	Egley Road (South of Egley Road Site Access)	1,584	18	1%
19	Egley Road (North of Egley Road Site Access)	1,577	17	1%

*HGV relates to a three axle articulated vehicle and larger.

Baseline Pedestrian Flows

7.90 The existing baseline's (2019) pre and post-match day pedestrian flows are provided in Table 7.14.

7.91 It should be noted that even though a matchday is not a common occurrence (i.e. only during 28 days of the year including league and cup games) and pedestrian flows only increasing for approximately six hours (13:00-

19:00) on a Saturday matchday, and five hours (17:00-22:00) for a weekday matchday, the flows have still been incorporated into the baseline pedestrian flows to provide a robust assessment.

Table 7.14 Baseline Pedestrian Flows

Reference	Road Link	Pre-Match (13:45-14:45)	Post-Match (16:45-17:45)
1	Guildford Road (North of Guildford Road / York Road Junction)	1,135	894
2	Guildford Road (South of Guildford Road / York Road Junction)	1,058	831
3	Western Woking Park Entrance	823	508
4	White Rose Lane (North of Ockenden Road)	584	618
5	White Rose Lane (South of Ockenden Road)	574	581
6	Northern Woking Park Path	781	778
7	Eastern Woking Park Path	535	593
8	Southern Woking Park Path	1,282	1,172
9	Guildford Road (North of Constitution Hill)	64	127
10	Guildford Road (South of Constitution Hill)	187	198
11	Claremont Avenue (North of Kingfield Road)	232	320
12	Kingfield Road (West of Westfield Avenue)	544	710
13	Woking Leisure Centre Access Road	1,305	1,214
14	Site Access	2,569	1,621

SENSITIVITY

Existing

7.92 Tables 7.15 and 7.16 presents the receptors likely to be affected by the Proposed Development, and their sensitivity. This takes into account the location of the receptor in question and its relationship with the site.

Road Links

7.93 The sensitivity of a road being considered can be defined by the vulnerability of the user groups who may use it, such as elderly people or children, e.g. a road where pedestrian activity is high in the vicinity of a school, or where there is already an existing accident issue may be highly sensitive. It also takes account of the existing nature of the road e.g. an existing “A” road is likely to have a lower sensitivity than a minor residential road.

Table 7.15 Sensitivity of Road Links in Study Area

Reference	Road Link	Sensitivity
1	Guildford Road (North of Guildford Road / York Road Junction)	Moderate
2	Guildford Road (South of Guildford Road / York Road Junction)	Moderate
3	York Road	Moderate
4	Guildford Road (North of A427 / Egley Road / Wych Hill Lane Roundabout)	Moderate
5	A247 Wych Hill Lane West of Claremont Avenue	Moderate
6	Egley Road (South of A427 / Egley Road / Wych Hill Lane Roundabout)	High
7	Wych Hill Lane (West of A427 / Egley Road / Wych Hill Lane Roundabout)	Moderate
8	A247 Kingfield Road (West of Westfield Avenue)	Moderate
9	A247 Kingfield Road (East of Westfield Avenue)	Moderate

Reference	Road Link	Sensitivity
10	Westfield Avenue	Moderate
11	A247 Kingfield Road (East of Site Access)	High
12	A247 Kingfield Road (North of A247 / Vicarage Road Roundabout)	High
13	A247 High Street	Moderate
14	Vicarage Road	Moderate
15	Guildford Road (East of Egley Road / B380 Roundabout)	Low
16	Egley Road (South of Egley Road / B380 Roundabout)	Low
17	B380 Mayford Green	Moderate
18	Egley Road (South of Egley Road Site Access)	High
19	Egley Road (North of Egley Road Site Access)	High

Other Sensitive Receptors

7.94 Based on a review of the baseline conditions, the following additional receptors and their sensitivity have been identified.

Table 7.16 Additional Receptors in the Study Area

Resource / Receptor	Sensitivity
Pedestrian Network	Low
Cycle Network	Low
National Rail	Low
Bus Services	Low

7.95 The IEMA guidelines highlight that sensitive receptors can include congested junctions, hospitals, community centres, conservation areas, schools, colleges, churches and accident black hot spots. The Proposed Development will not result in the implementation of any sensitive receptors.

ENVIRONMENTAL DESIGN AND MANAGEMENT

7.96 If applicable, the way that potential environmental impacts have been or will be avoided, prevented, reduced or off-set through design and / or management of the site are outlined below and will be taken into account as part of the assessment of the potential effects. Proposed environmental enhancements are also described where relevant.

7.97 The measures accounted for in the dismantling and construction phase and once the Proposed Development is complete and occupied are outlined below.

Demolition and Construction

Construction Traffic Management Plan (CTMP)

7.98 A CTMP will be prepared by the contractor prior to the commencement on-site to control the potential impacts of the construction process. A draft CTMP is included as part of the planning application supporting documents (refer **ES Volume 3, Appendix Highways and Transport, Annex 5 – Transport Assessment**).

7.99 The provision of a CTMP would ensure that a strategy for planning the dismantling and construction access routes will be implemented, to take into account current legislation, and the feedback from consultation with relevant stakeholders.

7.100 The strategy for planning the dismantling and construction access routes will be regularly reviewed and would typically include details of the following:

- Temporary traffic control measures (if required);
- Timing controls (e.g. limiting peak period vehicle movements);

- Temporary and permanent access to the works for personnel/vehicles;
- Traffic management procedures for waste disposal vehicles;
- Personnel and vehicle segregation;
- Traffic Management Equipment, e.g. road cones, temporary fencing and signage etc.;
- Provision would be made to ensure that vehicles can be loaded and unloaded off the public highway where possible;
- The site labour force would be encouraged to use public transport to travel to and from the site where possible. There would only be limited vehicle parking permitted on-site for visitors;
- HGV wheels will be washed prior to vehicles leaving the site;
- Road sweepers will be used on adjacent roads at an appropriate frequency depending on the stage of construction to keep the roads clean and free from mud etc. (if necessary);
- Traffic management plans would be implemented to minimise the potential effect of the works. This would include ensuring that any lane closures (following approval) are undertaken outside of peak hours where considered necessary and appropriate; and
- Pedestrian and cycleways would be temporarily diverted during the public highway works where necessary (following approval).

7.101 These measures would be included within a CTMP, to be secured by means of an appropriately worded planning condition.

Completed and Occupied Proposed Development

Travel Plan

7.102 Residential and Stadium Matchday Travel Plans will be produced to encourage the use of non-car modes of travel and ensure the sustainability of the Proposed Development. Draft Travel Plans are appended to the Transport Assessment (Annex 5). The Travel Plans have been developed in accordance with guidance issued by SCC.

7.103 A Travel Plan sets out the tools and measures deemed necessary to enable residents of the site to make informed decisions about their travel, with the ultimate objective of reducing single occupancy vehicle trips. The travel plan includes targets to reduce travel by single occupancy vehicles, and a commitment to monitor travel against these targets through a series of travel surveys.

Delivery and Servicing Management Plan (DSMP)

7.104 A DSMP will be provided as part of the Proposed Development. The DSMP aims to:

- Rationalise / minimise the number of servicing trips generated by the Proposed Development;
- Avoid peaks in demand for servicing activity;
- Minimise deliveries during peak hours and maximise deliveries during off peak hours;
- Ensure a fast turnaround for delivery vehicles;
- Increase building security; and
- Provide feedback / monitoring to ensure that the servicing area operates effectively.

7.105 The final DSMP is proposed to include the following information:

- Delivery pre-booking: Deliveries will be scheduled to be spread across the peak activity. All commercial and refuse deliveries will be scheduled and allocated a time slot to arrive;
- Goods in authorisation procedure: To ensure the rapid turnaround of delivery vehicles it is expected that service area personnel will be authorised to receive goods for all tenants;
- Key staff to manage the service area; and

- Monitoring: Servicing area activity will be regularly monitored to ensure that it is operating in an efficient way.

Event Management Plan (EMP)

7.106 An EMP is provided in the Transport Assessment (refer Annex 5). The EMP aims to set out an overarching strategy to ensure that travel made by spectators to the site is carried out in the most sustainable and efficient means possible and minimise any disruption in the local area on match days.

7.107 The EMP provides information on the existing accessibility of the stadium and the way in which sustainable transport can be promoted. The main aim of the EMP is to minimise disruption in the local area and allow visitors to make informed decisions about their travel.

Mobility Strategy

7.108 The Proposed Development is supported by a Mobility Strategy which includes:

- Active travel corridors internally within the site, providing safe and convenient movement for pedestrians and cyclists;
- Potential participation in a bike sharing scheme, and the provision of a fold up bike to each new household upon first occupation;
- Provision of car club membership to each resident and car club priority parking spaces provided within the Proposed Development;
- The development of a carpooling platform (Faxi) to promote car sharing;
- Improvements to matchday public transport to deliver a higher capacity bus service which will operate pre and post-match, and the potential to contribute to the on-going provision on existing bus services serving the site;
- The provision of electric vehicle charging points, with a 100% passive electric vehicle charging points provided for the residential parking provision to support the aim of making the Proposed Development electric vehicle only in the future; and
- A Community Hub and Community Concierge Team, acting as a focal point for all Mobility services, and a Transport Information Centre and Micro Consolidation Centre.

POTENTIAL EFFECTS

Demolition and Construction

Predicted Traffic Flows

7.109 The additional vehicle movements within the study area as a result of the construction of the Proposed Development are summarised in Table 7.17 below.

Table 7.17 Baseline 2019 + Construction Flows – 24 Hour Annual Average Daily Traffic

Reference	Road Link	Baseline 2019		Baseline 2019 + Construction		Change (%)	
		Vehicles	HGV %	Vehicles	HGV %	Vehicles	HGV %
1	Guildford Road (North of Guildford Road / York Road Junction)	24,961	2%	24,961	2%	0%	0%
2	Guildford Road (South of Guildford Road / York Road Junction)	21,382	2%	21,382	2%	0%	0%
3	York Road	4,696	2%	4,696	2%	0%	0%
4	Guildford Road (North of A427 / Egely Road / Wych Hill Lane Roundabout)	19,777	2%	19,777	2%	0%	0%
5	A247 Wych Hill Lane West of Claremont Avenue	19,777	1%	19,777	1%	0%	0%

Reference	Road Link	Baseline 2019		Baseline 2019 + Construction		Change (%)	
		Vehicles	HGV %	Vehicles	HGV %	Vehicles	HGV %
6	Egley Road (South of A427 / Egely Road / Wych Hill Lane Roundabout)	23,467	2%	23,467	2%	0%	0%
7	Wych Hill Lane (West of A427 / Egely Road / Wych Hill Lane Roundabout)	22,744	1%	22,744	1%	0%	0%
8	A247 Kingfield Road (West of Westfield Avenue)	24,871	1%	24,871	1%	0%	0%
9	A247 Kingfield Road (East of Westfield Avenue)	19,874	1%	19,953	2%	+0.4%	+1%
10	Westfield Avenue	7,199	0%	7,199	0%	0%	0%
11	A247 Kingfield Road (East of Site Access)	17,491	1%	17,569	2%	+0.5%	+1%
12	A247 Kingfield Road (North of A247 / Vicarage Road Roundabout)	13,148	1%	13,226	2%	+0.6%	+1%
13	A247 High Street	20,549	1%	20,627	2%	+0.4%	+1%
14	Vicarage Road	11,744	2%	11,744	2%	0%	0%
15	Guildford Road (East of Egley Road / B380 Roundabout)	12,703	1%	12,703	1%	0%	0%
16	Egley Road (South of Egley Road / B380 Roundabout)	21,167	2%	21,167	2%	0%	0%
17	B380 Mayford Green	15,170	2%	15,170	2%	0%	0%
18	Egley Road (South of Egley Road Site Access)	21,924	2%	21,924	2%	0%	0%
19	Egley Road (North of Egley Road Site Access)	21,223	2%	21,223	2%	0%	0%

7.110 The impact on all of the links is either zero (due to the anticipated routing of HGVs) or negligible.

7.111 The potential impacts and likely effects arising from the results of the predicted traffic flows as a result of the construction of the Proposed Development fall well below the threshold requiring further assessment, but for completeness the potential effects have been examined in more detail.

Pedestrian Severance

7.112 The daily flow and percentage change as a result of dismantling and construction activities (Table 7.17) and taking into account Rule 1 of the IEMA guidance illustrates that no links classed as low/moderate sensitivity are predicted to experience increases in traffic or HGVs by more than 30%.

7.113 On the links which are classified as high sensitivity none of the links experience an increase of greater than 10% (Rule 2).

7.114 The change in traffic flow will be temporary and as such is predicted to be **negligible**.

Pedestrian Delay

7.115 The IEMA guidelines suggest that the impact on pedestrian delay is a judgement based on the road links with two-way traffic flow exceeding 1,400 vehicles per hour in context of the individual characteristics.

7.116 The Proposed Development will result in only a minimal increase in vehicle traffic, relative to the baseline of 1,400 vehicles per hour resulting in a very low magnitude of impact. There are a number of pedestrian refuge island crossings to the west, and signalised crossings located to the north on Kingfield Road. These facilities allow pedestrians to cross with ease so the likely effect will be **negligible**.

Pedestrian Amenity

7.117 Based on advice in the IEMA Guidelines, the only links that need to be assessed in relation to pedestrian amenity are those which experience a doubling or halving in the flow of all traffic or HDVs.

7.118 Table 7.17 shows that on a daily basis no link experiences a doubling of traffic flows therefore the magnitude of impact would be very low. Taking into consideration the study area as a whole, the likely effect on pedestrian amenity is considered **negligible**.

Driver Delay

7.119 In the baseline scenario the junctions operate within capacity and as such with the addition of a small number of HGVs this will not have a material change on the operation of the junctions. As a result, the effect is considered **negligible**.

Accidents and Safety

7.120 A review of the accident data has been undertaken and is included in detail within the Transport Assessment.

7.121 Based on this review of accident data and the quantum of construction traffic which results in a maximum of 76 two-way movements per day it has been determined that this will have a very low magnitude of impact on a high sensitivity of receptor which results in a **negligible** effect.

Fear and Intimidation

7.122 All of the links in the base scenario without development have an 18-hour average flow of under 1,000-2,000 HGVs and therefore is considered in the category of moderate for fear and intimidation. The projected increase in traffic as result of the Proposed Development does not alter this number significantly and into another bracket and therefore the effects can be considered **negligible**.

Public Transport

7.123 At this point it has been assumed that the majority of the construction workers would use public transport or walking and cycling to access the site. In general, the majority of workers will arrive in the morning before 08:00 and depart in the evening after 18:00 therefore avoiding peak periods.

7.124 Given the excellent local public transport facilities within close proximity to the site and the expected time of day the majority of workers would be travelling to and from the site, it is considered it will have a very low impact on the public transport services (i.e. bus, national rail – all with low sensitivity), resulting in a **negligible** effect.

Completed Development

Predicted Traffic Flows Proposed Development

7.125 The additional vehicle movements within the study area as a result of the Proposed Development are summarised in Table 7.18 below. Information is presented for total vehicles and %HGVs for the Annual Average Daily Traffic 24-hour periods.

Table 7.18 Baseline 2025 + Operational Traffic Flows – 24 Hour Annual Average Daily Traffic

Reference	Road Link	Baseline 2025		Baseline 2025 + Proposed Development		Change (%)	
		Vehicles	HGV %	Vehicles	HGV %	Vehicles	HGV %
1	Guildford Road (North of Guildford Road / York Road Junction)	26,528	2%	26,312	2%	-0.9%	0%
2	Guildford Road (South of Guildford Road / York Road Junction)	22,725	2%	22,492	2%	-1.1%	0%
3	York Road	5,280	2%	5,297	2%	+0.3%	0%
4	Guildford Road (North of A427 / Egely Road / Wych Hill Lane Roundabout)	21,108	2%	12,572	2%	+0.3%	0%
5	A247 Wych Hill Lane West of Claremont Avenue	21,077	1%	21,319	1%	+1.4%	0%
6	Egley Road (South of A427 / Egely Road / Wych Hill Lane Roundabout)	24,940	2%	25,044	2%	+0.4%	0%
7	Wych Hill Lane (West of A427 / Egely Road / Wych Hill Lane Roundabout)	24,172	1%	24,339	1%	+0.7%	0%
8	A247 Kingfield Road (West of Westfield Avenue)	26,430	1%	26,719	2%	+1.1%	+1%

Reference	Road Link	Baseline 2025		Baseline 2025 + Proposed Development		Change (%)	
		Vehicles	HGV %	Vehicles	HGV %	Vehicles	HGV %
9	A247 Kingfield Road (East of Westfield Avenue)	21,121	1%	22,367	1%	+5.9%	0%
10	Westfield Avenue	7,651	0%	7,902	0%	+3.3%	0%
11	A247 Kingfield Road (East of Site Access)	18,587	1%	19,813	1%	+6.6%	0%
12	A247 Kingfield Road (North of A247 / Vicarage Road Roundabout)	13,976	1%	14,805	1%	+5.9%	0%
13	A247 High Street	21,839	1%	22,592	1%	+3.4%	0%
14	Vicarage Road	12,481	2%	12,572	2%	-1.6%	0%
15	Guildford Road (East of Egley Road / B380 Roundabout)	13,499	1%	13,232	1%	-2.0%	0%
16	Egley Road (South of Egley Road / B380 Roundabout)	22,496	2%	22,404	2%	-0.4%	0%
17	B380 Mayford Green	16,120	2%	15,936	2%	-1.1%	0%
18	Egley Road (South of Egley Road Site Access)	23,300	2%	23,314	2%	+0.1%	0%
19	Egley Road (North of Egley Road Site Access)	22,555	2%	22,654	2%	+0.4%	0%

7.126 The additional AM Peak Hour vehicle movements within the study area as a result of the Proposed Development are summarised in Table 7.19 below. Information is presented for total vehicles and %HGVs for the AM Peak period.

Table 7.19 Baseline 2025 + Operational Traffic Flows – AM Peak Hour

Reference	Road Link	Baseline 2025		Baseline 2025 + Proposed Development		Change (%)	
		Vehicles	HGV %	Vehicles	HGV %	Vehicles	HGV %
1	Guildford Road (North of Guildford Road / York Road Junction)	1,889	2%	1,860	3%	-1.6%	+1.0%
2	Guildford Road (South of Guildford Road / York Road Junction)	1,582	3%	1,553	3%	-1.9%	0%
3	York Road	422	1%	422	1%	0%	0%
4	Guildford Road (North of A427 / Egley Road / Wych Hill Lane Roundabout)	1,539	2%	1,559	2%	+1.3%	0%
5	A247 Wych Hill Lane West of Claremont Avenue	1,617	1%	1,650	1%	+2.0%	0%
6	Egley Road (South of A427 / Egley Road / Wych Hill Lane Roundabout)	1,733	3%	1,745	3%	+0.7%	0%
7	Wych Hill Lane (West of A427 / Egley Road / Wych Hill Lane Roundabout)	1,727	2%	1,726	2%	0.0%	0%
8	A247 Kingfield Road (West of Westfield Avenue)	1,998	2%	2,021	2%	+1.1%	0%
9	A247 Kingfield Road (East of Westfield Avenue)	1,542	2%	1,624	2%	+5.3%	0%
10	Westfield Avenue	588	0%	589	0%	+0.1%	0%
11	A247 Kingfield Road (East of Site Access)	1,444	2%	1,526	2%	+5.7%	0%

Reference	Road Link	Baseline 2025		Baseline 2025 + Proposed Development		Change (%)	
		Vehicles	HGV %	Vehicles	HGV %	Vehicles	HGV %
12	A247 Kingfield Road (North of A247 / Vicarage Road Roundabout)	733	3%	767	2%	+4.7%	-1%
13	A247 High Street	1,444	2%	1,479	2%	+2.4%	0%
14	Vicarage Road	847	2%	843	2%	-1.6%	0%
15	Guildford Road (East of Egley Road / B380 Roundabout)	1,064	2%	1,046	2%	-1.7%	0%
16	Egley Road (South of Egley Road / B380 Roundabout)	1,523	3%	1,516	3%	-0.4%	0%
17	B380 Mayford Green	1,324	2%	1,312	2%	-0.9%	0%
18	Egley Road (South of Egley Road Site Access)	1,668	3%	1,668	3%	0.0%	0%
19	Egley Road (North of Egley Road Site Access)	1,568	3%	1,581	3%	+0.8%	0%

7.127 The additional PM Peak Hour vehicle movements within the study area as a result of the Proposed Development are summarised in Table 7.20 below. Information is presented for total vehicles and %HGVs for the PM Peak period.

Table 7.20 Baseline 2025 + Operational Traffic Flows – PM Peak Hour

Reference	Road Link	Baseline 2025		Baseline 2025 + Proposed Development		Change (%)	
		Vehicles	HGV %	Vehicles	HGV %	Vehicles	HGV %
1	Guildford Road (North of Guildford Road / York Road Junction)	1,928	1%	1,918	1%	-0.6%	0%
2	Guildford Road (South of Guildford Road / York Road Junction)	1,688	1%	1,677	1%	-0.7%	0%
3	York Road	338	2%	338	2%	0.0%	0%
4	Guildford Road (North of A427 / Egley Road / Wych Hill Lane Roundabout)	1,486	1%	1,464	1%	-1.5%	0%
5	A247 Wych Hill Lane West of Claremont Avenue	1,407	1%	1,409	1%	+0.1%	0%
6	Egley Road (South of A427 / Egley Road / Wych Hill Lane Roundabout)	1,856	1%	1,857	1%	+0.1%	0%
7	Wych Hill Lane (West of A427 / Egley Road / Wych Hill Lane Roundabout)	1,752	1%	1,775	1%	+1.3%	0%
8	A247 Kingfield Road (West of Westfield Avenue)	1,805	1%	1,817	1%	+0.7%	0%
9	A247 Kingfield Road (East of Westfield Avenue)	1,498	1%	1,589	1%	+6.1%	0%
10	Westfield Avenue	513	0%	542	0%	+5.7%	0%
11	A247 Kingfield Road (East of Site Access)	1,231	1%	1,322	1%	+7.4%	0%
12	A247 Kingfield Road (North of A247 / Vicarage Road Roundabout)	1,278	1%	1,357	1%	+6.2%	0%
13	A247 High Street	1,699	1%	1,767	1%	+4.0%	0%
14	Vicarage Road	949	1%	929	1%	-2.1%	0%
15	Guildford Road (East of Egley Road / B380 Roundabout)	879	1%	852	1%	-3.1%	0%

Reference	Road Link	Baseline 2025		Baseline 2025 + Proposed Development		Change (%)	
		Vehicles	HGV %	Vehicles	HGV %	Vehicles	HGV %
16	Egley Road (South of Egley Road / B380 Roundabout)	1,715	1%	1,705	1%	-0.5%	0%
17	B380 Mayford Green	996	1%	978	1%	-1.8%	0%
18	Egley Road (South of Egley Road Site Access)	1,685	1%	1,685	1%	0.0%	0%
19	Egley Road (North of Egley Road Site Access)	1,677	1%	1,678	1%	+0.1%	0%

7.128 Across a 24-hour period, the results of the predicted traffic flows arising from the Proposed Development indicate that the potential impact on all of the links, range from 0% to 7% increase. This level of change falls below the threshold requiring further assessment (30%, or 10% for sensitive links), but for completeness the potential effects have been examined in more detail.

Predicted Pedestrian Flows

7.129 The additional pedestrian movements within the study area as a result of the Proposed Development are summarised in Table 7.21 below. Information is presented for total pedestrians including the existing base.

Table 7.21 Future Pedestrian Flows

Reference	Road Link	Pre-Match (13:45-14:45)	Post-Match (16:45-17:45)
1	Guildford Road (North of Guildford Road / York Road Junction)	2,013	1,634
2	Guildford Road (South of Guildford Road / York Road Junction)	1,938	1,581
3	Western Woking Park Entrance	1,626	991
4	White Rose Lane (North of Ockenden Road)	1,159	1,248
5	White Rose Lane (South of Ockenden Road)	1,141	1,168
6	Northern Woking Park Path	1,511	1,524
7	Eastern Woking Park Path	1,034	1,155
8	Southern Woking Park Path	2,561	2,425
9	Guilford Road (North of Constitution Hill)	108	240
10	Guilford Road (South of Constitution Hill)	330	370
11	Claremont Avenue (North of Kingfield Road)	480	681
12	Kingfield Road (West of Westfield Avenue)	1,149	1526
13	Woking Leisure Centre Access Road	2,844	2,645
14	Site Access	5,577	3,429

Pedestrian Severance

7.130 Based on the predicted daily traffic flows on the links with low or moderate sensitivity none of them experience increases of greater than 30% (Rule 1).

7.131 Based on the predicted daily traffic flows on the links with a high sensitivity none of them experience increases of greater than 10% (Rule 2).

7.132 In relation to HGV traffic, no links experience an increase of greater than 10%.

7.133 In addition, the pedestrian environment within the site will have the provision of an attractive open space, well maintained and legible pathways and lighting, thus providing natural surveillance and will be beneficial to the local area.

7.134 Taking into consideration the traffic study area as a whole and the assessment of key road links being considered, the likely effect on pedestrian severance is broadly assessed to be **negligible**.

Pedestrian Delay

7.135 The Proposed Development is predicted to result in an increase of vehicle traffic of less than 10% on roads with over 1,400 vehicles per hour.

7.136 It is therefore considered that magnitude of change for the traffic study area as a whole is very low and therefore the likely effect in terms of pedestrian delay is **negligible**.

Pedestrian Amenity

7.137 The results presented in Table 7.19 and Table 7.20 show that no road link experiences a doubling of traffic flows, resulting in a very low magnitude of impact.

7.138 Taking into consideration the networks as a whole, the likely effect on pedestrian amenity is considered to be **negligible**.

Driver Delay

7.139 From the results presented in the Transport Assessment (refer **Annex 5**), it can be seen that there is not a material change on the performance of any of the junctions within the traffic study area as a result of the Proposed Development. As a result, the likely effect on driver delay is considered to be **negligible**.

Accidents and Safety

7.140 An assessment of accident data has been undertaken to evaluate the likely fluctuations in accidents at the key junctions and links within the traffic study area. The Transport Assessment has identified (refer **Annex 5**) that there are no existing accident issues in the immediate vicinity of the site which need to be addressed as a result of the Proposed Development.

7.141 Moreover, the predicted increase in traffic flows on the remainder of the traffic study area as a result of the Proposed Development is generally low and therefore, the likely effect in relation to accidents and safety overall is considered to be **negligible**.

Fear and Intimidation

7.142 All of the links in the base scenario without development have an 18-hour average flow of over 1800 vehicles and therefore is considered in the category of extreme for fear and intimidation. The projected increase in traffic as result of the development does not alter this number significantly and into another bracket and therefore the effects can be considered **negligible**.

MITIGATION AND MONITORING MEASURES

Demolition and Construction

7.143 No additional mitigation and monitoring beyond the measures already described in the 'Environmental Design and Management' section is required during the demolition and construction of the Proposed Development.

Completed Development

7.144 No additional mitigation and monitoring beyond the measures already described in the 'Environmental Design and Management' section is required once the Proposed Development is complete and occupied.

RESIDUAL EFFECTS

7.145 On all of the links assessed the percentage impact of the development is below 10% and therefore the residual effects are considered **negligible**.

LIKELY SIGNIFICANT EFFECTS

7.146 None of the residual effects are considered to have a significant effect as a result of the Proposed Development.

CLIMATE CHANGE

7.147 It is not considered that the sensitivity of receptors due to their vulnerability to climate change will alter from what they are defined within the assessment under the current climate condition. It is considered that the magnitude of impact of the Proposed Development may support measures to address climate change due to the implementation of the Travel Plan Measures and Community Concierge allowing future residents to transition to sustainable forms of travel.

ASSESSMENT OF FUTURE ENVIRONMENT

Evolution of the Baseline Scenario

7.148 As previously stated, following review and correspondence with both WBC and SCC it has been agreed that there a no cumulative schemes encompassing the study area that will impact the future operation of the traffic network.

7.149 To ensure that the assessment of the completion year (2025) is robust a TEMPro factor has been applied to the baseline traffic flows when assessing the future year scenarios.

Cumulative Effects Assessment

7.150 As set out in *ES Volume 1, Chapter 2: EIA Methodology*, no cumulative schemes were identified within the surrounding area of the site; therefore, a cumulative effects assessment (i.e. an assessment of the effects of the Proposed Development in combination with the effects of other cumulative schemes within the surrounding area) has not been undertaken.

7.151 However, for completeness, a cumulative effect assessment which includes the effect of the Proposed Development at Egley Road has been completed.

Predicted Traffic Flows Proposed Development and Egley Road

7.152 The additional vehicle movements within the study area as a result of the Proposed Development plus the Egley Road development are summarised in Table 7.21 below. Information is presented for total vehicles and %HGVs for the Annual Average Daily Traffic 24-hour period.

Table 7.22 Baseline 2025 + Operational Traffic Flows + Egley Road Flows – 24 Hour Annual Average Daily Traffic

Reference	Road Link	Baseline 2025		Baseline 2025 + Proposed Development		Change (%)	
		Vehicles	HGV %	Vehicles	HGV %	Vehicles	HGV %
1	Guildford Road (North of Guildford Road / York Road Junction)	26,528	2%	26,918	2%	+1.4%	0%
2	Guildford Road (South of Guildford Road / York Road Junction)	22,725	2%	23,098	2%	+1.6%	0%
3	York Road	5,280	2%	5,297	2%	+0.3%	0%
4	Guilford Road (North of A427 / Egely Road / Wych Hill Lane Roundabout)	21,108	2%	12,572	2%	+4.8%	0%
5	A247 Wych Hill Lane West of Claremont Avenue	21,077	1%	21,324	1%	+1.5%	0%
6	Egley Road (South of A427 / Egely Road / Wych Hill Lane Roundabout)	24,940	2%	26,651	2%	+6.9%	0%
7	Wych Hill Lane (West of A427 / Egely Road / Wych Hill Lane Roundabout)	24,172	1%	24,979	1%	+3.3%	0%
8	A247 Kingfield Road (West of Westfield Avenue)	26,430	1%	26,724	2%	+1.1%	+1%
9	A247 Kingfield Road (East of Westfield Avenue)	21,121	1%	22,372	1%	+5.9%	0%
10	Westfield Avenue	7,651	0%	7,902	0%	+3.3%	0%

Reference	Road Link	Baseline 2025		Baseline 2025 + Proposed Development		Change (%)	
		Vehicles	HGV %	Vehicles	HGV %	Vehicles	HGV %
11	A247 Kingfield Road (East of Site Access)	18,587	1%	19,818	1%	+6.6%	0%
12	A247 Kingfield Road (North of A247 / Vicarage Road Roundabout)	13,976	1%	14,813	1%	+6.0%	0%
13	A247 High Street	21,839	1%	23,019	1%	+5.4%	0%
14	Vicarage Road	12,481	2%	12,572	2%	+1.9%	0%
15	Guildford Road (East of Egley Road / B380 Roundabout)	13,499	1%	13,674	1%	+1.3%	0%
16	Egley Road (South of Egley Road / B380 Roundabout)	22,496	2%	22,691	2%	+0.9%	0%
17	B380 Mayford Green	16,120	2%	16,345	2%	+1.4%	0%
18	Egley Road (South of Egley Road Site Access)	23,300	2%	24,453	2%	+4.9%	0%
19	Egley Road (North of Egley Road Site Access)	22,555	2%	24,629	2%	+7.6%	0%

7.153 The additional AM Peak Hour vehicle movements within the study area as a result of the Proposed Development + Egley Road are summarised in Table 7.22 below. Information is presented for total vehicles and %HGVs for the AM Peak period.

Table 7.23 Baseline 2025 + Operational Traffic Flows + Egley Road Flows – AM Peak Hour

Reference	Road Link	Baseline 2025		Baseline 2025 + Proposed Development		Change (%)	
		Vehicles	HGV %	Vehicles	HGV %	Vehicles	HGV %
1	Guildford Road (North of Guildford Road / York Road Junction)	1,889	2%	1,894	2%	0%	0%
2	Guildford Road (South of Guildford Road / York Road Junction)	1,582	3%	1,587	3%	0%	0%
3	York Road	422	1%	422	1%	0.0%	0%
4	Guilford Road (North of A427 / Egely Road / Wych Hill Lane Roundabout)	1,539	2%	1,613	2%	+4.8%	0%
5	A247 Wych Hill Lane West of Claremont Avenue	1,617	1%	1,651	1%	+2.1%	0%
6	Egley Road (South of A427 / Egely Road / Wych Hill Lane Roundabout)	1,733	3%	1,836	3%	+6.0%	0%
7	Wych Hill Lane (West of A427 / Egely Road / Wych Hill Lane Roundabout)	1,727	2%	1,762	2%	+2.1%	0%
8	A247 Kingfield Road (West of Westfield Avenue)	1,998	2%	2,022	2%	+1.2%	0%
9	A247 Kingfield Road (East of Westfield Avenue)	1,542	2%	1,625	2%	+5.4%	0%
10	Westfield Avenue	588	0%	589	0%	+0.1%	0%
11	A247 Kingfield Road (East of Site Access)	1,444	2%	1,527	2%	+5.7%	0%
12	A247 Kingfield Road (North of A247 / Vicarage Road Roundabout)	733	3%	769	2%	+4.9%	-1%
13	A247 High Street	1,444	2%	1,503	2%	+4.1%	0%
14	Vicarage Road	847	2%	859	2%	+1.4%	0%

Reference	Road Link	Baseline 2025		Baseline 2025 + Proposed Development		Change (%)	
		Vehicles	HGV %	Vehicles	HGV %	Vehicles	HGV %
15	Guildford Road (East of Egley Road / B380 Roundabout)	1,064	2%	1,072	2%	+0.7%	0%
16	Egley Road (South of Egley Road / B380 Roundabout)	1,523	3%	1,532	3%	+0.6%	0%
17	B380 Mayford Green	1,324	2%	1,335	2%	+0.8%	0%
18	Egley Road (South of Egley Road Site Access)	1,668	3%	1,733	2%	+3.9%	0%
19	Egley Road (North of Egley Road Site Access)	1,568	3%	1,673	3%	+6.6%	0%

7.154 The additional PM Peak Hour vehicle movements within the study area as a result of the Proposed Development + Egley Road are summarised in Table 7.23 below. Information is presented for total vehicles and %HGVs for the PM Peak period.

Table 7.24 Baseline 2025 + Operational Traffic Flows + Egley Road – PM Peak Hour

Reference	Road Link	Baseline 2025		Baseline 2025 + Proposed Development		Change (%)	
		Vehicles	HGV %	Vehicles	HGV %	Vehicles	HGV %
1	Guildford Road (North of Guildford Road / York Road Junction)	1,928	1%	1,971	1%	+2.2%	0%
2	Guildford Road (South of Guildford Road / York Road Junction)	1,688	1%	1,731	1%	+2.5%	0%
3	York Road	338	2%	338	2%	0.0%	0%
4	Guildford Road (North of A427 / Egley Road / Wych Hill Lane Roundabout)	1,486	1%	1,548	1%	+4.2%	0%
5	A247 Wych Hill Lane West of Claremont Avenue	1,407	1%	1,409	1%	+0.1%	0%
6	Egley Road (South of A427 / Egley Road / Wych Hill Lane Roundabout)	1,856	1%	1,998	1%	+7.6%	0%
7	Wych Hill Lane (West of A427 / Egley Road / Wych Hill Lane Roundabout)	1,752	1%	1,830	1%	+4.5%	0%
8	A247 Kingfield Road (West of Westfield Avenue)	1,805	1%	1,817	1%	+0.7%	0%
9	A247 Kingfield Road (East of Westfield Avenue)	1,498	1%	1,589	1%	+6.1%	0%
10	Westfield Avenue	513	0%	542	0%	+5.7%	0%
11	A247 Kingfield Road (East of Site Access)	1,231	1%	1,322	1%	+7.4%	0%
12	A247 Kingfield Road (North of A247 / Vicarage Road Roundabout)	1,278	1%	1,357	1%	+6.2%	0%
13	A247 High Street	1,699	1%	1,805	1%	+6.2%	0%
14	Vicarage Road	949	1%	966	1%	+1.9%	0%
15	Guildford Road (East of Egley Road / B380 Roundabout)	879	1%	889	1%	+1.2%	0%
16	Egley Road (South of Egley Road / B380 Roundabout)	1,715	1%	1,731	1%	+1.0%	0%
17	B380 Mayford Green	996	1%	1,014	1%	+1.9%	0%

Reference	Road Link	Baseline 2025		Baseline 2025 + Proposed Development		Change (%)	
		Vehicles	HGV %	Vehicles	HGV %	Vehicles	HGV %
18	Egley Road (South of Egley Road Site Access)	1,685	1%	1,784	1%	+5.9%	0%
19	Egley Road (North of Egley Road Site Access)	1,677	1%	1,819	1%	+8.5%	0%

7.155 Across a 24-hour period, the results of the predicted traffic flows arising from the Proposed Development + Egley Road development indicate that the potential impact on all of the links range from 0% to 7% increase. This level of change falls below the threshold requiring further assessment (30%, or 10% for sensitive links), but for completeness the potential effects have been examined in more detail.

7.156 On the basis that the cumulative impact is less than 10% on all links, no further assessment has been undertaken, and the impact of the cumulative position is **negligible**.

7.157 The potential impacts and likely effects arising from the results of the predicted traffic flows as a result of the construction of the Proposed Development are all considered to be **negligible**.

7.158 In addition, the Proposed Development will be accompanied by a Construction Traffic Management Plan (CTMP).

Completed Development

7.159 The impact on all of the links are all minor increases, which is less than 10% of the future baseline.

7.160 The potential impacts and likely effects arising from the results of the predicted traffic flows as a result of the construction of the Proposed Development are all considered to be **negligible**.

7.161 In addition, the Proposed Development will be accompanied by Travel Plans, a Delivery and Servicing Management Plan (DSMP), an Event Management Plan (EMP), and a Mobility Strategy.

Likely Significant Effects

7.162 None of the residual effects are considered to have a significant effect as a result of the Proposed Development.