

13. TRANSPORT

The following Technical Appendices referred to in this chapter can be found at Appendix 7 to this document.

Appendices

Appendix 7.1 - Transport Assessment (report reference: ITB13040-004A)

Appendix 7.2 - Personal Injury Accident Data

13.1 Introduction

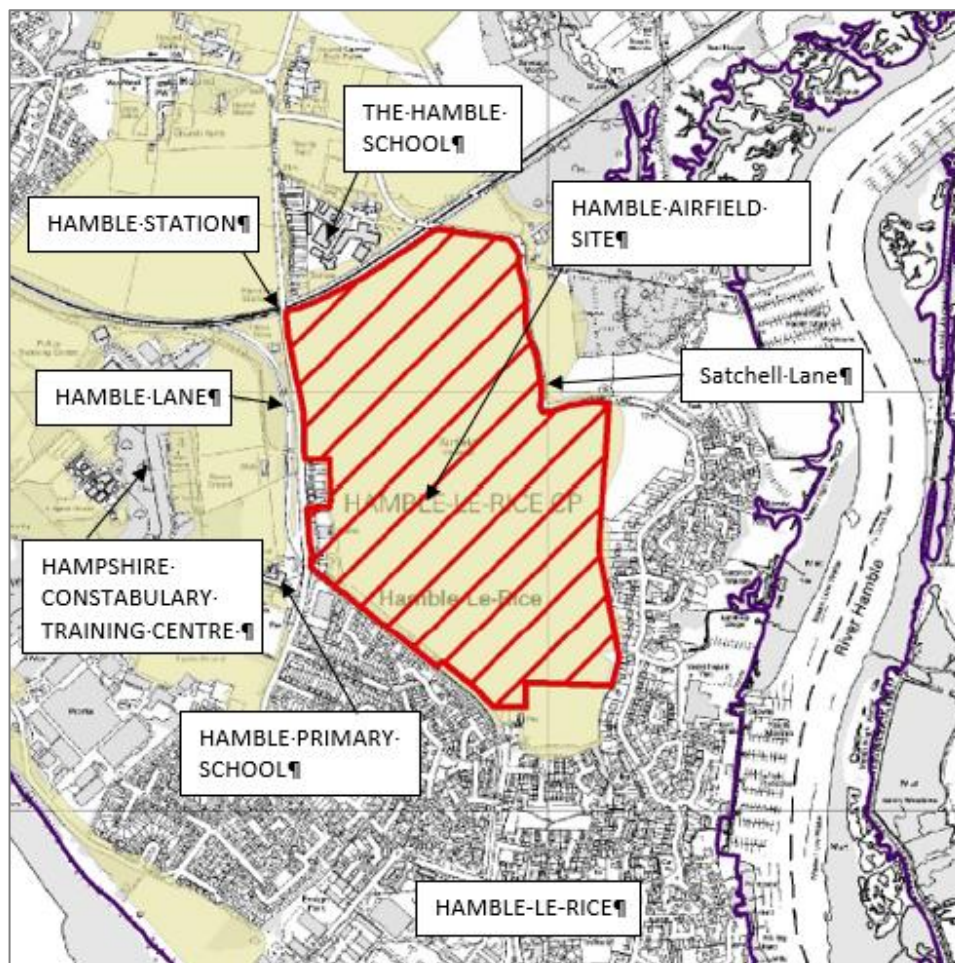
- 13.1.1 This chapter of the Environmental Statement (ES) has been prepared by i-Transport and considers the transport issues associated with the development proposals at Hamble Airfield, Hamble Lane. This ES chapter assesses the potential transport issues associated with the development proposals on the transport network and people associated with the proposed extraction and processing of aggregates, importation of inert restoration materials and restoration.
- 13.1.2 The chapter describes the assessment methodology; the baseline conditions at the Application Site and surroundings; the likely significant environmental effects; and considers whether there are any mitigation measures required to prevent, reduce or offset any significant adverse effects; and the likely residual effects after any measures have been employed.
- 13.1.3 A Transport Assessment has also been prepared to support the planning application and is included as Appendix 7.1.
- 13.1.4 Hamble Airfield is identified in the Hampshire Minerals and Waste Local Plan for the extraction of sharp sand and gravel. Hamble Airfield has approximately 1.7 million tonnes of aggregate and it is anticipated that the extraction of the site will take up to seven years to complete. Both extraction and restoration activities on the site will therefore occur between years three and seven of operation. Following the extraction, it is anticipated that the site will take a further four to five years to complete the restoration.

13.2 Study Area

13.2.1 Hamble Airfield is located circa 1km to the north of Hamble-Le-Rice, circa 2km to the east of Netley, circa 2.5km south of Bursledon and 3.5km south of Junction 8 of the M27.

13.2.2 The site location in relation to the local highway network is shown on Image 13.1 below. The existing residential area of Hamble-le-Rice lies to the south and east of the site and the B3397 Hamble Lane forms the western boundary. To the north of the site is Hamble Railway Station, which lies on the Portsmouth to Southampton Railway Line and Hamble Community College is located further to the north.

Image 13.1 Site Location



Source: Map from Hampshire Minerals and Waste Plan (2013) with Consultants Annotations

13.3 Methodology

Previous Assessment Stages

- 13.3.1 As part of the technical assessments undertaken to support the planning application a Transport Assessment has also been produced (included as Appendix 7.1), which was informed by pre-application discussions with Hampshire County Council as the Local Highway Authority.

Legislation and Planning Policy

National Planning Policy and Practice Guidance

National Planning Policy Framework (NPPF)

- 13.3.2 The NPPF sets out the Government's planning policies and how these are expected to be applied. Paragraph 11 of the NPPF sets out that there is a presumption in favour of sustainable development:

"At the heart of the National Planning Policy Framework is a presumption in favour of sustainable development".

- 13.3.3 The Framework states that all developments that generate significant amounts of movement should be supported by a Transport Statement or a Transport Assessment and a Travel Plan so that the likely impacts of the proposal can be assessed (ref. paragraph 113).

- 13.3.4 In terms of specific transport policies within the NPPF, paragraph 110 states that in assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:

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

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

the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code 46; and

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”.

Planning Practice Guidance

- 13.3.5 The Planning Practice Guidance (PPG) provides advice on when transport assessments, transport statements and travel plans are required and, what they should contain. Details regarding the overarching principles and information relating to each document are provided within the PPG.

Local Planning Policy

Hampshire Minerals and Waste Plan (October 2013)

- 13.3.6 Hampshire County Council, Portsmouth City Council, Southampton City Council, New Forest National Park Authority and the South Downs National Park Authority (the 'Hampshire Authorities') have produced the Hampshire, Portsmouth, Southampton, New Forest National Park and South Downs National Park Minerals and Waste Plan (the 'Hampshire Minerals and Waste Plan') in partnership.

- 13.3.7 Hamble Airfield is considered to be the best option for providing a local supply of sharp sand and gravel. Section 3 of Policy 20 *Local Land-Won Aggregates* states:

“An adequate and steady supply of locally extracted sand and gravel will be provided by maintaining a landbank of permitted sand and gravel reserves sufficient for at least seven years from...”

3. new sand and gravel extraction sites, provided the proposals address the development considerations outlined in 'Appendix A - Site allocations': ...

iii. Hamble Airfield, Hamble'le'Rice (sharp sand and gravel) (Inset Map 9) – 1.50 million tonnes”

13.3.8 The transport related site-specific development considerations listed in Appendix A of the Plan state:

“Safe and satisfactory access to ensure provision is made for vulnerable highway users and the impact on peak flows is managed.

Traffic issues including consideration of school traffic and pedestrians, particularly at Hamble Community Sports College and Hamble Primary, and management of traffic and congestion on Hamble Lane”.

Hampshire Local Transport Plan 2011-2031

13.3.9 HCC’s transport strategy for the next 20 years is set out in this document which also outlines how the LTP will contribute to the Council’s corporate priorities and includes a three-year implementation plan. A vision of: ‘...safe, efficient and reliable ways to get around a prospering and sustainable Hampshire’, is proposed.

13.3.10 Three main priorities are set out in the LTP for the next 20 years. These are:

“Support economic growth by ensuring the safety, soundness, and efficiency of the transport network in Hampshire”;

“Provide a safe, well-maintained, and more resilient road network in Hampshire, as the basic transport infrastructure of the County, on which all forms of transport directly or indirectly depend, and the key to continued casualty reduction”; and

“Manage traffic to maximise the efficiency of the existing network capacity, improving journey time reliability and reducing emissions, and thereby supporting the efficient and sustainable movement of people and goods”.

13.3.11 These main priorities are supported by 14 policy objectives which are set out under five broad themes, as follows:

- *“ Supporting the economy through resilient highways;*
- *Management of traffic;*
- *The role of public transport;*
- *Quality of life and place; and*
- *Transport and growth areas.”*

13.3.12 Specifically with regards to HGVs one of the core challenges identified in the policy document is:

“Managing and mitigating the impacts of increasing traffic, including HGV movements on core routes and in more rural areas”.

Eastleigh Borough Local Plan (Saved Policies) 2001-2011

13.3.13 Local policy is set out in the saved policies of the Eastleigh Borough Local Plan which was adopted in May 2006. Whilst the Local Plan is now out of date, in May 2009 the Secretary of State ‘saved’ a selection of policies which remain in full force and effect.

13.3.14 In terms of transport and accessibility, the Local Plan seeks to reduce the need to travel; promote measures increase the use of public transport and improve walking and cycling; improve highway safety; and ensure that development is located so that it is accessible by non-car modes.

Eastleigh Borough Local Plan review (2016-2036)

13.3.15 Eastleigh Borough Council is in the process of preparing a new Local Plan, which sets the vision and framework for future development of the borough to 2036 and address local housing, community as well as strategic infrastructure need.

13.3.16 Draft Policy DM13 General Development Criteria – Transport states that:

“All new development must have safe and convenient access to the highway network and make provision for access to, and by, other transport modes including public transport and cycle and pedestrian routes as appropriate.

...

Development proposals (above a specific size to be determined by the Council) that will generate vehicle movements likely to have an adverse impact on traffic conditions beyond the immediate vicinity of the development site must be subject to Transport Assessment and will be required to incorporate and implement mitigation measures such as:

- *provision of / contribution towards on and off-site highway improvements such as junction improvements and potentially new road links where appropriate*
- *on-site pedestrian, cycle and public transport infrastructure where appropriate*
- *contributions towards relevant off-site sustainable transport infrastructure and service improvements*
- *on-site measures aimed at increasing uptake of non-car travel options (e.g., Travel Plans⁵³) to reduce car use*

New development intended to serve or accommodate large numbers of people will only be permitted in locations that as well as having adequate road access, or will have as a result of the development, are or can be served by means of transport other than the private car, including bus, train, cycle and pedestrian access”

- 13.3.17 The draft Local Plan identifies that Hamble Lane is the only link that provides access to Hamble. It is identified as having peak hour congestion and thus notes that improvements are likely to be required.

Eastleigh Strategic Transport Study (2015)

- 13.3.18 The Eastleigh Strategic Transport Study identifies the need for the potential strategic transport infrastructure improvements required to be delivered over the Local Plan period to 2036.
- 13.3.19 The study identifies the A3025 Hamble Lane as a corridor of interest requiring capacity improvements. The study sets outlines ‘Do Minimum’ (signalisation schemes) and ‘Do Maximum’ (signalisation and lane widening schemes) options for improvement at the Tesco junction, Jurd Way junction and Portsmouth Road junction and evaluates them against a set criterion in relation to design compliance, traffic impacts, environmental impacts, land requirements and scheme costs.

Assessment Methodology

- 13.3.20 This section sets out the methodology used for identifying the baseline conditions and assessing the likely traffic impacts of the proposed development. The Institute of Environmental Management and Assessment (IEMA) has prepared ‘Guidelines for the Environmental Assessment of Road Traffic (Guidance Note No. 1)’. This Chapter fully assesses the environmental impact of the road traffic generated by the proposal in accordance with the

criteria set out in this document. The method for each impact assessed is set out below.

Severance

13.3.21 Severance is the perceived division that can occur within a community when it becomes separated by a major traffic route. The assessment of severance pays full regard to specific local conditions, in particular the location of pedestrian routes to key local facilities and whether crossing facilities are provided or not.

13.3.22 The IEMA Guidelines suggest that a 30%, 60% and 90% increase in traffic flow will respectively have a 'slight', 'moderate' and 'substantial' change in severance. However, allowance needs to be made for the presence of existing crossing facilities.

Driver Delay

13.3.23 Traffic delays to non-development traffic can occur:

- At the site entrance where there will be additional turning movements;
- On the highways passing the site where there may be additional flow; and
- At key junctions on the nearby highway network.

Pedestrian Delay

13.3.24 The development proposals will have a small impact on the volume and composition of traffic. The IEMA Guidelines recommend that rather than rely on thresholds of pedestrian delay; the assessor should use judgement to determine whether there will be a significant impact on pedestrian delay.

Pedestrian Amenity

13.3.25 The IEMA Guidelines broadly define pedestrian amenity as the relative pleasantness of a journey. It is affected by traffic flow, traffic composition, pavement width and separation from traffic. A tentative threshold for changes in pedestrian amenity is when traffic flows are halved or doubled.

Fear and Intimidation

13.3.26 A further impact that traffic may have on pedestrians is fear and intimidation. This impact is dependent on the volume of traffic, its HGV composition and its proximity to people and/or the lack of protection caused by factors such as narrow pavement widths.

13.3.27 The IEMA Guidelines suggest thresholds based on 18-hour daily flow, 18-hour HGV flow and vehicle speeds, as shown on Table 13.1:

Table 13.1: Fear and Intimidation Thresholds

Degree of Hazard	Average traffic flow over 18-hour day (vehicle / hour)	Total 18-hour HGV flow	Average speed over 18-hour day (mph)
Extreme	1,800+	3,000+	20+
Great	1,200-1,800	2,000-3,000	15-20
Moderate	600-1,200	1,000-2,000	10-15

Accidents and Safety

13.3.28 Personal injury accident data for the most recently available five-year period (January 2016 to 31 December 2020) has been obtained from Hampshire County Council and reviewed.

13.3.29 The impact from the extension of time for the operation of the site is discussed in terms of magnitude of increase, and the existing accident record.

Hazardous Loads

13.3.30 The IEMA Guidelines acknowledge that most proposals will not result in

increases in the number of movements of hazardous / dangerous loads. The publication 'The Carriage of Dangerous Goods in the UK' lists materials which can represent a hazard when in transit and provides guidance in relation to the safe carriage of these goods. The proposal is evaluated against this list.

Dust and Dirt

13.3.31 Dust and dirt created by traffic can be a problem arising from the operations of certain types of development, notably quarrying and the transport of quarried materials. The guidelines suggest that problems with dust and dirt are unlikely to occur at distances greater than 50m from the road. The impact of dust and dirt will depend on the management practices undertaken on site. The assessment has been undertaken on the basis of the number of HGV movements and the proximity of nearby properties.

Air Quality and Noise

13.3.32 The air quality and noise impacts of the development proposal are dealt with in Chapters 7 and 12 of the ES.

Extent of Study Area

13.3.33 The study area scope of this assessment has been defined by reference to the IEMA guidelines. The guidelines set out two rules as follows:

- Rule 1: Include highway links where traffic flows are predicted to increase by more than 30% (or where the number of HGVs is predicted to increase by more than 30%); and
- Rule 2: include any other specifically sensitive areas where the traffic flow (or HGV component) is predicted to increase by more than 10%.

13.3.34 The road links that are predicted to satisfy one of the two rules above and therefore have been considered within the ES are listed below:

- Hamble Lane in the vicinity of the proposed access;
- Hamble Lane north of Hound Road
- Hamble Lane North of Portsmouth Road; and
- Hamble Lane north of the Tesco Access.

Assessment of Sensitivity

13.3.35 The sensitivity of a road or the immediate area through which it passes can be defined by the type of user groups who may use them. Vulnerable users will include elderly residents and children. It is also necessary to consider footpath and cycle route networks that use or cross the roads within the study area.

13.3.36 A desktop exercise has been undertaken to classify the sensitivity of the routes within the study area. Table 13.2 below identifies the links, the assigned sensitivity rating and the justification:

Table 13.2 Sensitivity of Receptors

Link	Link Sensitivity	Rationale
Hamble Lane in the Vicinity of the Site Access	Medium	Hamble Lane is a single carriageway road subject to a 30mph speed limit. There is a shared footway / cycleway adjacent to the carriageway, which provides good facilities for pedestrian and cyclists and both controlled and uncontrolled crossing facilities are provided. The footway / cycleway is likely to be used by pupils of The Hamble School and Hamble Primary School as such active travel around school times is likely to occur. The proposed access will form a new access across the shared footway / cycleway, however, suitable pedestrian and cycle crossing facilities have been incorporated in the design.
Hamble Lane north of Hound Road	Low	Hamble Lane along this section is a single carriageway road subject to a 30mph speed limit. There is a shared footway / cycleway adjacent to the carriageway which is used by The Hamble School. Whilst the proposed development will increase the number of HGV movements along this section of road, it will have minimal impact on the capacity, delay or pedestrian amenity.
Hamble Lane north of Portsmouth Road	Low	Hamble Lane along this section is a single carriageway road subject to a 30mph speed limit. There is a shared footway / cycleway adjacent to the carriageway which is likely to be used by residents of Bursledon to access local facilities and services.
Hamble Lane north of Tesco Access	Low	Whilst the proposed development will increase the number of HGV movements along this section of road, it will have minimal impact on the capacity, delay or pedestrian amenity.

Determining Impact Magnitude

13.3.37 The criteria for assessing magnitude of impact are outline below in Table 13.3.

13.3.38 The magnitude of traffic impacts is a function of the existing traffic volumes, the percentage increase due to the Proposed Development and the changes in type of traffic. The IEMA guidelines identify thresholds for impact magnitude on severance and mitigation based on percentage changes in traffic levels. The magnitude of impacts arising from the percentage increase in traffic volumes (taken as being either the traffic flow including all vehicles or the heavy goods vehicles traffic flow, whichever is higher) is categorised as follows:

Table 13.3 Magnitude Assessment – Transport Impacts

Magnitude	Definition
Negligible	Above 90% increase in existing traffic/HGV levels
Moderate	Between 60% and 90% increase in existing traffic/HGV levels
Minor	Between 30% and 60% increase in existing traffic/HGV levels
Negligible	Fewer than 30% increase in existing traffic/HGV levels

Determining Significance and Nature of Effects

13.3.39 The significance of effect is determined by combining the magnitude of impact with the sensitivity of the receptor.

13.3.40 If an impact magnitude is negative, then the resulting effect is described as being adverse; if an impact magnitude is positive the resulting effect is classed as being beneficial. In this chapter any significance of effect that is defined as being above moderate adverse/beneficial or greater is defined as being significant.

Table 13.4 Significance of Effects Matrix

		Magnitude of Impact			
		Substantial	Moderate	Slight	Negligible
	Very High	Major	Major	Major/Moderate	Neutral
Sensitivity	High	Major	Major/Moderate	Moderate/Minor	Neutral
	Medium	Major/Moderate	Moderate	Minor	Neutral
	Low	Moderate/Minor	Minor	Minor/Neutral	Neutral

13.4 Baseline Environment

Site Location

- 13.4.1 A site location plan is provided as Image 13.1. The site is located to the north of Hamble and has an area of approximately 62 hectares. The existing residential area of Hamble-le-Rice lies to the south and east of the site and the B3397 Hamble Lane forms the western boundary. To the north of the site is Hamble Railway Station which lies on the Portsmouth to Southampton Railway Line and Hamble Community College is further to the north.

Local Highway Network

- 13.4.2 Hamble Lane forms the western boundary of the site. Hamble Lane is a single carriageway road, measuring approximately 9.5m in width, with a 30mph speed limit and has street lighting. It generally runs in a north south alignment and connects to the train station and roundabout providing access to Netley via Hound Road and onwards towards the A3024 and A27 via Windhover Roundabout to the north. To the south, Hamble Lane leads into Hamble-le-Rice.
- 13.4.3 The Site also fronts onto Satchell Lane, which is a single carriageway road with a 30mph speed limit. Satchell Lane is rural in nature and there are a number of bends along the frontage.
- 13.4.4 Automatic Traffic Count (ATC) surveys were undertaken on Hamble Lane in May 2017. Given the COVID-19 pandemic and associated travel restrictions, it has not been possible to obtain new traffic data during the preparation of the application. As such, unadjusted growth rates have been obtained using TEMPRO and applied to the traffic flows to represent 'neutral 2021 conditions'. Analysis of the survey data identified that the peak hours on the local highway network are 08:00 to 09:00 and from 18:00 to 19:00. The survey

was undertaken approximately 65m to the north of the access to Hampshire Constabulary’s Training Centre.

13.4.5 A Summary of the observed and 2021 two-way vehicle movements on Hamble Lane in the vicinity of the proposed access is summarised in Table 13.5.

Table 13.5 Peak Traffic Flows – Hamble Lane

Location	Morning Peak (08:00-09:00)			Evening Peak (18:00-19:00)		
	North	South	Two-Way	North	South	Two-Way
2017 Observed Flows	447	820	1,267	612	693	1,304
2021 Flows	480	862	1,342	645	731	1,375

Source: May 2017 ATC Traffic Survey (5-day Average) factored to represent 2021 conditions

13.4.6 As shown in Table 13.5, the existing traffic flow on Hamble Lane is circa 1,342 – 1,375 two-way movements during the morning and evening peak periods. This equates to 22-23 vehicle movements every minute.

13.4.7 The recorded mean and 85th percentile speeds obtained from the ATC surveys on Hamble Lane are summarised in Table 13.6.

Table 13.6 Summary of Recorded Speed Data

Location	Speed	Northbound (mph)	Southbound (mph)
Hamble Lane	Mean	34.0	34.2
	85th Percentile	40.3	39.4

Source: Traffic Surveys

Pedestrian / Cycle Use of Hamble Lane

13.4.8 A survey of pedestrian movements on the existing shared use footway / cycleway adjacent to Hamble Lane was undertaken to consider the adequacy of the pedestrian facilities at the proposed access. The results are

summarised in **Table 13.7**. The survey was undertaken on Thursday 13 July 2017, during school term time.

13.4.9 The survey identified the peak pedestrian and cycle periods are between:

- Morning Peak – 08:00 - 09:00; and
- Evening Peak - 15:00 – 16:00.

Table 13.7: Summary of Pedestrian Survey Data

	Morning Peak Hour (08:00 – 09:00)		Evening Peak Hour (15:00 – 16:00)	
	Pedestrians	Cycles	Pedestrians	Cycles
Southbound	4	12	61	14
Northbound	53	13	7	12
Two-Way	57	25	68	26

Source: 2017 Pedestrian / cycle traffic surveys

13.4.10 As summarised in Table 13.7, in the morning peak period, the majority (approx. 80%) of pedestrian and cycle movements are northbound on Hamble Lane. In the evening peak, the majority (approx. 82%) of pedestrian and cycle movements are southbound on Hamble Lane. The direction and timing of pedestrian and cycle movements appears to coincide with the start and finish times of The Hamble School, located to the north of the proposed minerals site. The school day starts at 08:30 and finishes at 14:55.

Highway Safety

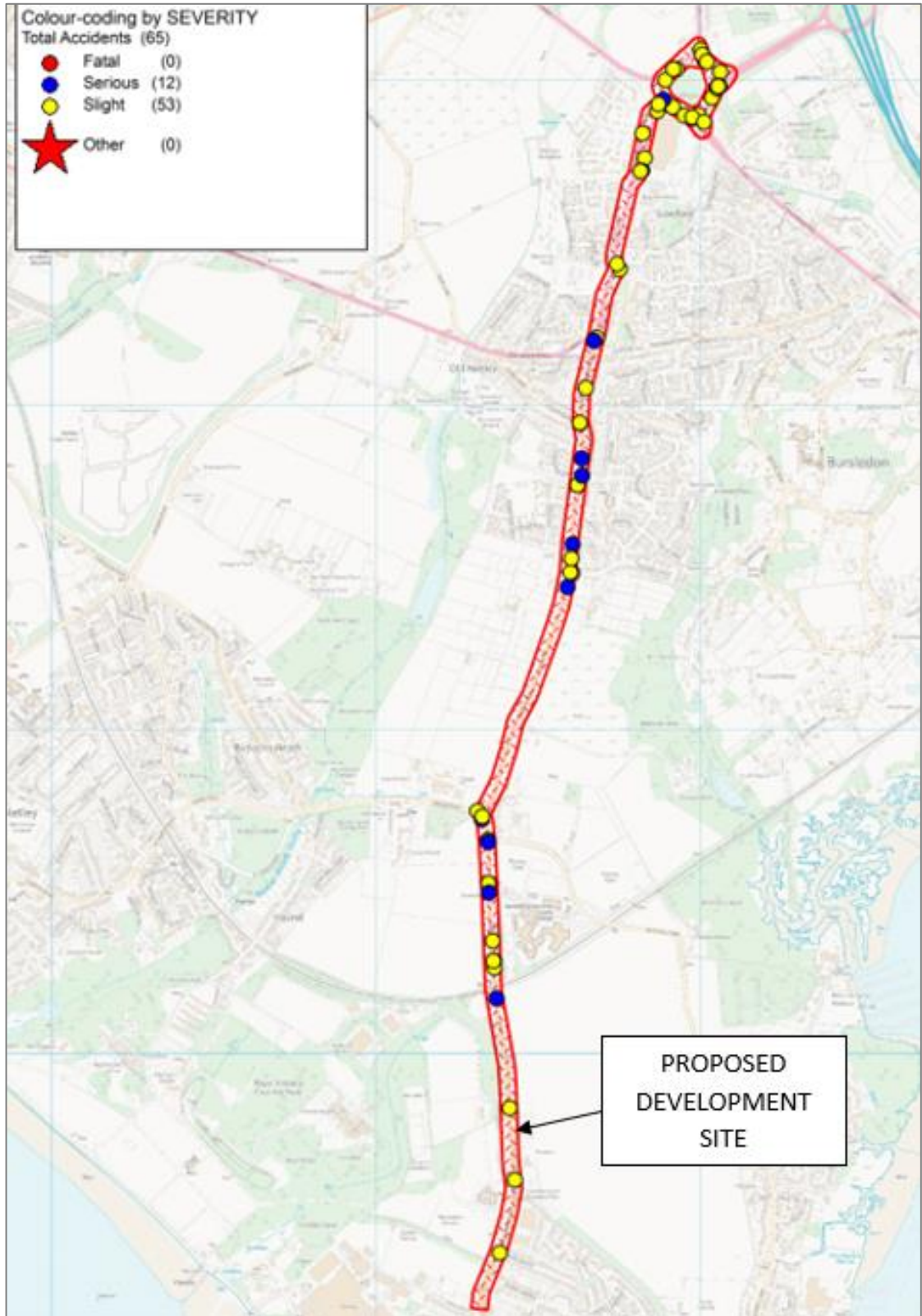
13.4.11 Personal Injury Accident data has been obtained from the Hampshire Constabulary for the five-year period between 1 January 2016 to 31 December 2020.

13.4.12 The data covers a study area consisting of the extent of Hamble Lane, from and including Windhover Roundabout to the north to the priority junction with

Kings Avenue to the south. The study area and the location of accidents is illustrated in Image 13.2.

- 13.4.13 A total of 65 accidents were recorded in the study area during the recent five-year period, consisting of 12 serious accidents and 53 accidents of a slight nature.

Image 13.2 PIA Extent



Source: Hampshire Constabulary

13.4.14 A total of 65 collisions have been recorded in the latest-five-year period within the study area, comprising of 53 slight and 12 serious severities.

13.4.15 A copy of the full PIA data is included as Appendix 7.2, whilst a summary of the personal injury accident data analysis in the vicinity of the proposed development is provided below.

13.4.16 The following text provides a description of the 16 accidents which occurred in close proximity to the site access (between the Hamble Lane / Hound Lane Roundabout and the priority junction with Sydney Avenue):

- Three collisions, all slight in nature occurred at the junction between Hamble Lane and Satchell Lane. One was a shunt type collision and resulted in a slight injury, another collision recorded as slight in nature occurred when a car entered the roundabout into the path of a bicycle travelling on the roundabout. The third collision, which was serious in nature occurred when a cyclist tried to mount the pavement and lost control causing them to fall off.
- Two collisions occurred at the Satchell Lane / Hamble Lane priority junction. One was a shunt type collision resulting in a slight injury, whilst the other occurred when a car turning right out of Satchell Lane onto Hamble Lane and failed to see a motorcycle travelling along Hamble Lane and collided resulting in a serious injury.
- Two collisions occurred at the signalized pedestrian crossing on Hamble Lane in the vicinity of Hamble School. One was recorded as slight in nature when a car travelling north failed to stop for a pedestrian using the crossing, whilst the second which was recorded as serious in nature occurred when a pedestrian crossed into the path of an oncoming vehicle when the pedestrian light was on red.

- Circa 50m to the north of the entrance to Broad Way, a collision recorded as serious in nature occurred when a motorcycle clipped a kerb and caused the rider to fall from the bike.
- One collision which was recorded as slight in nature occurred adjacent to Broadway when a pedestrian stepped out into the road in front of an oncoming car.
- Three collisions occurred in proximity to the egress from Broad Way, all of which were slight in nature. One occurred when a car exiting Broad Way onto Hamble Lane failed to give way to a cyclist travelling south along Hamble Road, whilst another other occurred when a pedestrian walking on the footway suddenly stepped out into the carriageway into the path of an oncoming vehicle. The third occurred when a car leaving Broad Way collided with a cyclist travelling north on cycleway along Hamble Lane.
- A serious collision occurred approximately 50m to the south of the railway bridge when a car towing a trailer and travelling south along the B3397 Hamble Lane overtook a cyclist. As the car pulled back in the trailer hit the cyclist.
- One collision occurred approximately 100m to the south of the access (to the south of the access to the police training centre) when a car travelling south misjudged the edge of the carriageway, lost control and collided with a tree on the verge.
- One collision which was slight in nature occurred when a car pulling out of Hamble Self Storage failed to give way to a cyclist travelling along the cycleway on Hamble Lane; and

- The final collision occurred at the junction between Verdon Avenue and Hamble Lane occurred when a vehicle exiting Verdon Avenue pulled out onto Hamble Lane into the path of an oncoming motorcycle.

13.4.17 It is noted that there have been no accidents involving large vehicles (3.5T and over).

13.4.18 As such, the latest available accident record does not highlight any existing highway defects or safety issues that would be exacerbated by the proposed development.

Walking and Cycling

13.4.19 A continuous shared use footway/cycleway (the Dani King cycleway) is provided on the eastern side of Hamble Lane along the site frontage. To the south of Hamble Railway Station there is also a shared use footway/cycleway along the western side of Hamble Lane, providing an additional facility for pedestrians and cyclists between the Rail Station and Hampshire Constabulary's training facilities. There is an uncontrolled pedestrian crossing with dropped kerbs, tactile paving and a pedestrian refuge island approximately 35m to the north of the access to Hampshire Constabulary's Training Centre.

13.4.20 Hamble Lane also provides direct cycle access to National Cycle Route 2, as shown in Image 13.3 below, which is a long distance route between Dover and St Austell, however, in the vicinity of the site, it provides access to centre of Hamble-Le-Rice to the south east and Netley to the west. Continuing west the route provides access to Weston, Woolston and Southampton via a network to traffic free and on-road routes.

Image 13.3 Extract of National Cycle Route 2



Source: Sustrans National Cycle Network Map

Public Transport Accessibility

Bus

- 13.4.21 The nearest bus stop to the site is located on the B3397 Hamble Lane, approximately 200m south from the site access.
- 13.4.22 The bus stops in both directions consist of a flag and pole and provide timetable information. The northbound bus stop also provides seating. The bus stops are served by route 6 between Southampton City Centre and Hamble-le-Rice village centre.
- 13.4.23 A summary of the bus routes and service frequency is outlined in Table 13.6 below.

Table 13.6 Summary of Local Bus Services

Route	Destination	Service Frequency		
		Weekday	Saturday	Sunday
6	Southampton City Centre – Hamble	Every 30 minutes	Every hour	-

Source: Traveline [accessed September 2021]

13.4.24 The first service arrives at the bus stops near the site at 06:18 from Hamble and 05:57 from Southampton. The last service departing leaves the stops nearest the site at 21:37 to Hamble and 21:45 to Southampton. Consequently, it can be seen that the site can be accessed by a frequent service which operates from early in the morning to late in the evening and could be used by staff and/or visitors to access the site.

Rail

13.4.25 Hamble Railway Station is located approximately 300m north of the site access. The station is managed by South Western Railway who operate the majority of services and provides for journeys towards a range of destinations which include London Victoria, London Waterloo, Bournemouth, Manchester, Salisbury, Portsmouth, Cardiff and Brighton. A summary of the service frequency is outlined in Table 13.7 below.

Table 13.7 Summary of Train Service Frequency

Destination	Service Frequency (Weekdays)	
	Peak	Off-Peak
Southampton Central	1 per hour	1 per hour
Portsmouth & Southsea	1 per hour	1 per hour

Source: National Rail

13.4.26 Hamble station has step-free access and 4 bike storage spaces. As such it can be seen that staff and visitors travelling to the site would have good opportunities to travel by rail services to/from the site.

Summary

13.4.27 Pedestrian and cycle facilities within the vicinity of the site are typical of a suburban area and provide good and continuous access to the surrounding areas of Hamble. The site is within walking and cycling distance of a large area of Hamble as well as the adjacent areas of Netley and thus there are good opportunities for staff and visitors to access the site on foot or by bike.

13.4.28 There are also good public transport opportunities to access the site with frequent bus services and regular trains, both of which can be accessed by foot or bicycle.

13.4.29 Hamble Lane along the site frontage accommodates two-way traffic flows of circa 1,300 – 1,400 vehicles in the peak hours with recorded 85th percentile speeds of circa 40mph in both directions. The latest available accident record does not highlight any existing highway defects or safety issues that would be exacerbated by the proposed development.

13.5 Traffic Impact Assessment

13.5.1 This section of the report provides an assessment of the effects of the proposed development on the local highway network.

Existing Conditions

13.5.2 To determine the existing baseline traffic conditions, a series of Automatic Traffic Count (ATC) surveys were undertaken on the Hamble Lane corridor between 2016 and 2017. Surveys were undertaken at the following locations:

- Hamble Lane in vicinity of proposed access;
- Hamble Lane north of Hound Road;
- Hamble Lane north of A3025 Portsmouth Road; and
- Hamble Lane north of the Tesco roundabout.

13.5.3 The surveys on Hamble Lane in the vicinity of the site access were undertaken in May 2017, whilst the surveys at the remainder of the locations were undertaken in April 2016. Whilst it is acknowledged that these traffic surveys are older than those typically considered acceptable by HCC, given the ongoing COVID-19 pandemic during the preparation of this application and the associated travel restrictions, it has not been possible to collect new traffic data. A robust methodology has however been used to account for traffic growth. This is explained further below.

13.5.4 Turning counts were also undertaken at the Hamble Lane / Hound Road roundabout in April 2018.

13.5.5 The peak hours identified by the surveys were:

- Morning Peak Hour – 08:00-09:00; and
- Evening Peak Hour – 18:00-19:00.

13.5.6 The 2021 baseline traffic conditions have been calculated using TEMPRO growth rates and the addition of committed developments, the results are summarised in Table 13.8 for all vehicles and Table 13.9 for HGV movements.

Table 13.8: Summary of Two-Way Total Traffic Flows on Hamble Lane - 2021

Link	Morning Peak (08:00 – 09:00)	Evening Peak (18:00 – 19:00)	Daily Traffic (AADT) (00:00 – 00:00)
Hamble Lane in vicinity of proposed access	1,342	1,375	16,129
Hamble Lane north of Hound Road	1,734	1,660	21,555
Hamble Lane north of A3025 Portsmouth Road	2,523	2,404	32,987
Hamble Lane north of Tesco Access	2,264	2,101	32,641

Source: 2016/2017 ATC Traffic Surveys (5-day average)

Table 13.9: Summary of Two-Way HGV Movements of Hamble Lane - 2021

Link	Morning Peak (08:00 – 09:00)	Evening Peak (18:00 – 19:00)	Daily Traffic (AADT) (00:00 – 00:00)
Hamble Lane in vicinity of proposed access	53	21	672
Hamble Lane north of Hound Road	36	30	358
Hamble Lane north of A3025 Portsmouth Road	76	77	820
Hamble Lane north of Tesco Access	68	57	445

Source: 2016/2017 ATC Traffic Surveys (5-day average)

13.5.7 The above data provides a robust assessment as the COVID-19 pandemic has seen an increasing shift towards home working for businesses throughout the country and early indications are suggesting that home working is likely to play a larger role in the economy moving onward into the future, i.e., in a 'post covid-19' world. This would mean that traffic flows on Hamble Lane will not have grown from the pre-pandemic recorded levels (which has been assumed in the above traffic forecasts).

Future Baseline and Cumulative Impact

13.5.8 The traffic impact has been assessed for the morning and evening peak hours for the future years of 2023, 2030 and 2034 which coincided with the proposed 'year of opening' and end of traffic phases 2 and 3 respectively.

13.5.9 Given the traffic data for the local highway network dates between 2016 and 2018, the following committed developments have been manually added onto the base traffic flows to account for the development traffic likely to be generated by these consented developments. Traffic flows for the consented developments have been obtained from the Transport Assessments submitted alongside the planning applications:

- Land at Berry Farm, Hamble Lane, Bursledon (Planning Ref: F/17/79863) - Construction of 166 dwellings with associated access off Cunningham Gardens, parking, landscaping and open space following demolition of existing dwellings and former agricultural buildings/workshop
- Land at Satchell Lane (Planning Ref: O/17/80319) - development of up to 70 dwellings with associated access, public open space, landscaping and amenity areas;
- Land to the south of Mallards Road (Planning Ref: O/15/76491) - Construction of up to 80 dwellings including public open space with

access as only detailed matter for consideration following demolition of nos. 1 and 3 Mallards Road;

- Land to the North of Cranbury Gardens (Planning Ref: O/15/76883) - Outline application for up to 45no. dwellings including public open space, landscaping and vehicular access from land to the north & Hamble Lane, pedestrian link to Hamble Lane. All detailed matters except for access reserved; and
- Land South of Bursledon Road (Planning Ref: O/15/77121) - Outline application for up to 182 no. dwellings and associated landscaping, open space and infrastructure, and diversion of public right of way, with access from Bursledon Road. (All matters reserved except for access).

13.5.10 Therefore, in total, traffic associated with 543 dwellings has been included within the committed developments. This list of committed developments has been agreed as part of pre-application discussions with HCC, albeit it is noted that the development at Mallards Road has been dismissed at appeal. For a robust assessment, it has however been retained in the assessment.

13.5.11 The direct inclusion of committed development and the addition of an unadjusted TEMPRO based growth rate will lead to a double counting of traffic, with TEMPRO already including allowances for traffic growth arising from local developments. To remove the potential for double counting of traffic growth, the Alternative Assumptions function within TEMPRO has been used to manually adjust the level of growth, removing development assumptions from TEMPRO.

13.5.12 Using this methodology, Table 13.10 summarises the growth factors which have been applied to the observed traffic flows to derive the 2023, 2030 and 2034 peak hour traffic flows.

Table 13.10: Traffic Growth Factors

Growth Period	Morning Peak Growth Rate	Evening Peak Growth Rate
2016-2021	1.0412	1.0389
2016-2023	1.0535	1.0515
2016-2030	1.0865	1.0859
2016-2034	1.1018	1.1022
2017-2021	1.0319	1.0301
2017-2023	1.0441	1.0426
2017-2030	1.0767	1.0766
2017-2034	1.0917	1.0927
2018-2021	1.0230	1.0217
2018-2023	1.035	1.0339
2018-2030	1.0671	1.0675
2018-2034	1.0819	1.0834

Source: TEMPRO 7.2c

Proposed Development Trip Generation

13.5.13 CEMEX have provided information on the number of daily HGV trips likely to be generated by the site over the life of the proposed development.

13.5.14 It is anticipated that the proposed development would commence in 2023, and would take 11-12 years to complete, thus cease generating HGV movements up to 2034. The phases of the development in terms of the HGV generation are set out below:

- Traffic Phase 1: Year 1 – 2 – Export only;
- Traffic Phase 2: Years 3 – 7 – Export and infill; and
- Traffic Phase 3: Years 8 – 12 – Infill only.

13.5.15 The indicative number of daily HGV movements associated with the aforementioned phases is summarised in Table 13.11.

Table 13.11: Indicative Operational HGV Movements for Hamble Airfield for Standalone CEMEX operation

Activity	Daily Vehicle Movements (HGV)					
	Traffic Phase 1		Traffic Phase 2		Traffic Phase 3	
	In	Out	In	Out	In	Out
Export of Aggregates	45	45	45	45	0	0
Delivery of Infill	0	0	27	27	45	45
Total HGV Movements	45	45	72	72	45	45
Total HGV Movements	90		144		90	

Source: Hamble Airfield Development Brief

13.5.16 Table 13.11 shows that the proposed development is anticipated to generate circa 90 two-way vehicle movements per day in years 1 and 2, and years 8-12 and 144 two-way movements in years 3-7 across the day.

13.5.17 The estimated number of movements set out above are based on 20 tonne capacity aggregate tippers. It is possible that some of the exports and deliveries would use larger vehicles, with greater capacity. Furthermore, some vehicles will be backloaded (i.e., vehicles arriving with deliveries of infill will also leave the site with exports of aggregates) and as such will reduce the number of movements to and from the site. Therefore, the figures presented represent a worst-case traffic scenario in terms of the number of movements.

13.5.18 CEMEX has collected traffic data from similar aggregate extraction sites, this data has been analysed to calculate an indicative HGV flow profile across the day. The indicative flow profile has been applied to the anticipated number of daily vehicle movements as summarised in Table 13.12.

Table 13.12: Indicative HGV Movements Throughout the Day

Time	Trip Profile	Number of HGV trips per hour		
		Traffic Phase 1	Traffic Phase 2	Traffic Phase 3
06:00-07:00	0%	0	0	0
07:00-08:00	18%	17	26	17
08:00-09:00	12%	11	17	11
09:00-10:00	13%	12	19	12
10:00-11:00	11%	10	16	10
11:00-12:00	9%	8	12	8
12:00-13:00	7%	6	10	6
13:00-14:00	9%	8	12	8
14:00-15:00	10%	9	15	9
15:00-16:00	8%	7	11	7
16:00-17:00	3%	3	5	3
17:00-18:00	0%	0	0	0
18:00-19:00	0%	0	0	0
Daily Total	100%	90	144	90

Source: CEMEX Quarry data and Consultant's Calculations (Errors may occur due to rounding)

13.5.19 Table 13.12 indicates that the peak hour for the proposed development traffic is likely to be between 07:00 – 08:00. This is prior to the network peak of 08:00-09:00.

13.5.20 Based on the indicative flow profile, the development proposal is anticipated to generate circa 17 HGV movements in years 1 and 2 (traffic phase 1) and years 8-12 (traffic phase 3) and 26 movements in years 3-7 (traffic phase 2) in the morning development peak hour. This equates to circa one HGV movement every three minutes and circa one HGV movement every two minutes respectively. During the morning network peak hour, the development proposal is anticipated to generate circa 11 vehicle movements in traffic phases 1 and 3 and 17 two-way movements in traffic phase 2. This

equates to on average circa one HGV movement every five minutes and one HGV movement every three minutes respectively.

13.5.21 HGV movements associated with aggregate quarries are typically lower in the afternoon and evening. It is not anticipated that there will be any two-way vehicle movements generated by the proposed development after 17:00, therefore, there will be no HGV movements associated with the site in the network evening peak hour of 18:00-19:00.

13.5.22 There are also likely to be a small number of staff and visitors travelling to / from the site each day. The site will provide 20 parking spaces, whilst it is not anticipated that all of these spaces would be used each day, in order to provide a robust assessment, it has been assumed that 20 staff / visitors will arrive during the morning network peak and leave during the evening network peak. In reality, this is unlikely to be the case as the site will be operational prior to the morning network peak.

Distribution and Assignment

13.5.23 As outlined above, all HGV traffic arriving at the site will travel to / from the north of the site along Hamble Lane, arriving and departing from the site via the M27 Junction 8.

13.5.24 Whilst it is not yet known where the proposed staff working at the site will travel from, for the purpose of the assessment it has been assumed that given the arrangement of the junction, all staff would enter the site from the north via Hamble Lane.

Traffic Impact

13.5.25 Table 13.13 summarises the likely traffic impact of the development on the local highway network compared to 2023, 2030 and 2034 future total baseline traffic flows during network peak periods, whilst Table 13.14 summaries the

percentage impact on HGV flows. Annual Average Daily Traffic Flows have also been provided.

Table 13.13: Local Traffic Impact – Total Traffic Flows

Link	Morning Peak (08:00 – 09:00)			Evening Peak (17:00 – 18:00)			Annual Average Daily Traffic (00:00-00:00)		
	Base Flow	Dev	Impact (%)	Base Flow	Dev Traffic	Impact (%)	Base Flow	Dev Traffic	Impact (%)
2023									
Hamble Lane in vicinity of proposed access	1358	31	2.3%	1392	20	1.44%	16333	130	0.8%
Hamble Lane north of Hound Road	1753	31	1.8%	1691	20	1.18%	21809	130	0.6%
Hamble Lane north of A3025 Portsmouth Road	2551	31	1.2%	2451	20	0.82%	33391	130	0.4%
Hamble Lane north of Tesco Access	2289	31	1.4%	2142	20	0.93%	33040	130	0.4%
2030									
Hamble Lane in vicinity of proposed access	1399	37	2.6%	1436	20	1.39%	16908	184	1.1%
Hamble Lane north of Hound Road	1803	37	2.1%	1740	20	1.15%	22529	184	0.8%
Hamble Lane north of A3025 Portsmouth Road	2627	37	1.4%	2527	20	0.79%	34536	184	0.5%
Hamble Lane north of Tesco Access	2357	37	1.6%	2208	20	0.91%	34171	184	0.5%
2036									
Hamble Lane in vicinity of proposed access	1418	31	2.2%	1457	20	1.37%	17192	130	0.8%
Hamble Lane north of Hound Road	1827	31	1.7%	1764	20	1.13%	22883	130	0.6%
Hamble Lane north of A3025 Portsmouth Road	2662	31	1.2%	2563	20	0.78%	35100	130	0.4%
Hamble Lane north of Tesco Access	2389	31	1.3%	2239	20	0.89%	34727	130	0.4%

Table 13.14: Local Traffic Impact – HGV Flows

Link	Morning Peak (08:00 – 09:00)			Evening Peak (17:00 – 18:00)			Annual Average Daily Traffic (00:00-00:00)		
	Base Flow	Dev Traffic	Impact (%)	Base Flow	Dev Traffic	Impact (%)	Base Flow	Dev Traffic	Impact (%)
	2023								
Hamble Lane in vicinity of proposed access	53	11	20.7%	21	0	0.0%	681	90	13.2%
Hamble Lane north of Hound Road	37	11	29.8%	30	0	0.0%	363	90	24.8%
Hamble Lane north of A3025 Portsmouth Road	77	11	14.3%	78	0	0.0%	831	90	10.8%
Hamble Lane north of Tesco Access	68	11	16.1%	58	0	0.0%	450	90	20.0%
	2030								
Hamble Lane in vicinity of proposed access	55	17	31.0%	22	0	0.0%	705	144	20.4%
Hamble Lane north of Hound Road	38	17	44.7%	31	0	0.0%	376	144	38.3%
Hamble Lane north of A3025 Portsmouth Road	79	17	21.4%	80	0	0.0%	861	144	16.7%
Hamble Lane north of Tesco Access	71	17	24.1%	60	0	0.0%	467	144	30.9%
	2036								
Hamble Lane in vicinity of proposed access	56	11	19.8%	22	0	0.0%	717	90	12.5%
Hamble Lane north of Hound Road	39	11	28.5%	32	0	0.0%	382	90	23.5%
Hamble Lane north of A3025 Portsmouth Road	80	11	13.7%	82	0	0.0%	876	90	10.3%
Hamble Lane north of Tesco Access	72	11	15.4%	61	0	0.0%	475	90	19.0%

13.5.26 It can be seen from Table 13.13 that the traffic associated with the proposed development would have a maximum impact on two-way total traffic flows on the local highway network of 2.6% in the morning peak and typically less than 1% throughout the day on Hamble Lane in the vicinity of the site access in the future year of 2030. There would be limited impact in the evening peak as the development traffic is only associated with staff. This falls within the negligible impact (less than 30% increase in traffic).

13.5.27 Table 13.14 indicates that the proposed development would have a maximum impact on two-way HGV flows on the local highway network of 44.7% in the morning peak and 38.3% throughout the day on Hamble Lane north of the Hound Road roundabout in the future year of 2030. Consequently, it can be seen that the proposed development would approximately double the number of HGV movements occurring on Hamble Lane north of Hound Road between years 3-7 of operation, however, the fairly large percentage increases are in part a result of the relatively low existing numbers of HGVs using Hamble Lane. On the remainder of the Hamble Lane corridor, the development impact in terms of the increase in HGVs would vary between circa 10-30% in the future years. Consequently, traffic phases 1 and 3 would have a negligible impact (less than 25% increase in traffic), whilst traffic phase 2 would have a minor impact on Hamble Road to the north or Hound Road and to the north of the Tesco access based on AADT flows.

Junction Capacity Assessments

13.5.28 Junction capacity assessments of the proposed site access and the Hamble Lane / Hound Road Roundabout have been undertaken as part of the Transport Assessment (included as Appendix 7.1). This demonstrates that the junctions are anticipated to operate within capacity during the peak periods, with the development having a negligible impact on queueing and

delays. As such, it is not proposed to provide any off-site junction mitigation at these locations.

Severance

- 13.5.29 Severance is the perceived division that can occur within a community when it becomes separated by a major traffic route. The assessment of severance pays full regard to specific local conditions, in particular the location of pedestrian routes to key local facilities and whether crossing facilities are provided or not.
- 13.5.30 The IEMA Guidelines suggest that a 30%, 60% and 90% increase in total traffic flow will respectively have a 'slight', 'moderate' and 'substantial' change in severance. However, allowance needs to be made for the presence of existing crossing facilities.
- 13.5.31 As demonstrated in Table 13.13 the development will not result in traffic increases throughout the day of more than 1.1% (on Hamble Lane in the vicinity of the proposed access). This is significantly under the 30% threshold identified by the IEMA guidelines as having even a 'slight' change in severance.
- 13.5.32 It is also noted that there are formal crossing facilities on Hamble Lane to the south of the proposed access which will help enable pedestrians to cross safely and reduce the perception of severance.

Driver Delay

- 13.5.33 Traffic delays to non-development traffic can occur:
- At the site entrance where there will be additional turning movements;
 - On the highways passing the site where there may be additional flow; and
 - At key junctions on the nearby highway network.

13.5.34 As summarised in paragraph 13.5.28, the proposed site access junction and the Hamble Lane / Hound Road junction are anticipated to continue operating within their theoretical capacity in the future year scenarios with the proposed development traffic having a negligible impact on their performance (which includes delay) during the peak periods.

Pedestrian Delay

13.5.35 The IEMA Guidelines recommend that rather than rely on thresholds of pedestrian delay; the assessor should use judgement to determine whether there will be a significant impact on pedestrian delay.

13.5.36 There is an uncontrolled pedestrian crossing with dropped kerbs, tactile paving and a pedestrian refuge island located circa 50m to the south of the proposed site access on Hamble Lane. There is also a signalised crossing located circa 500m to the south of the proposed access. It is not anticipated that there will be any material increase in traffic to the south of the proposed development, therefore, these pedestrians crossing at these facilities will be unaffected by the development.

13.5.37 To the north of the site there is a toucan crossing located on Hamble Lane in the vicinity of Hamble School. The overall increase in vehicle movements to the north of the site when spread across the day is unlikely to have a material impact on the level of pedestrian delay. That is, there is anticipated to be a maximum of one additional vehicle movement every two minutes on Hamble Lane (During Phase 2 of the development between 07:00-08:00 i.e., the greatest traffic generating time period), with much reduced levels of traffic during other phases and periods of the day. As such, this will not materially impact on the time it takes pedestrians to crossroads surrounding the development.

Pedestrian Amenity

- 13.5.38 The IEMA Guidelines broadly define pedestrian amenity as the relative pleasantness of a journey. It is affected by traffic flow, traffic composition, pavement width and separation from traffic. A tentative threshold for changes in pedestrian amenity is when traffic flows are halved or doubled.
- 13.5.39 As set out in Table 13.13, the development will not result in traffic increases throughout the day of more than 1.1%. This is significantly under the 50% threshold identified by the IEMA guidelines as a tentative threshold for changes in pedestrian amenity.
- 13.5.40 Notwithstanding this, as pedestrian amenity is affected by traffic composition, and the proposal will generate HGV movements, pedestrian amenity has been considered further below.
- 13.5.41 There is a footway on the western side of Hamble Lane and a shared footway / cycleway on the eastern side of Hamble Lane. To the north of the site up to the railway bridge, there is a grass verge which separates the footway and shared footway / cycleway facilities from the road. Signal controlled crossing facilities are provided in the vicinity of The Hamble School.
- 13.5.42 In the hour when the development generates the most traffic (07:00-08:00), Hamble Lane is anticipated to be used by between 17-26 HGVs from the proposed development (circa one every two to three minutes). In the evening network peak period, the development is anticipated to generate no additional HGV movements on Hamble Lane.
- 13.5.43 Therefore, it can be seen that the number of HGV movements will be relatively modest on Hamble Lane.

Fear and Intimidation

13.5.44 A further impact that traffic may have on pedestrians is fear and intimidation. This impact is dependent on the volume of traffic, its HGV composition and its proximity to people and/or the lack of protection caused by factors such as narrow pavement widths. The IEMA Guidelines suggest thresholds based on 18-hour daily flow, 18-hour HGV flow and vehicle speeds, as shown on Table 13.15.

Table 13.15: Fear and Intimidation Thresholds

Degree of Hazard	Average traffic flow over 18-hour day (vehicle / hour)	Total 18-hour HGV flow	Average speed over 18-hour day (mph)
Extreme	1,800+	3,000+	20+
Great	1,200-1,800	2,000-3,000	15-20
Moderate	600-1,200	1,000-2,000	10-15

Source: IEMA

13.5.45 The average traffic flow over an 18-hour day on Hamble Lane in the vicinity of the proposed site is between 1,200 – 1,800 vehicles per hour, which would indicate great levels of fear and intimidation. The average traffic flow of HGVs is however less than 1,000 vehicles over an 18-hour period, which would indicate moderate levels of fear and intimidation. Whilst the proposed development is anticipated to increase traffic, the development will not result in a change to any of the existing thresholds for fear and intimidation. It is also not anticipated that the proposed development will result in an increase in vehicle speeds.

13.5.46 On this basis, the proposed development is not anticipated to have a material impact in terms of fear and intimidation.

Accidents and Safety

- 13.5.47 Personal injury accident data for the most recently available five-year period has been obtained and reviewed, as set out in Section 13.4 of this report.
- 13.5.48 The latest available accident records do not highlight any existing highway defects or safety issues that would be exacerbated by the proposed development.

Hazardous Loads

- 13.5.49 The IEMA Guidelines acknowledge that most proposals will not result in increases in the number of movements of hazardous / dangerous loads. It is not anticipated that the proposed development will result in vehicle movements containing hazardous / dangerous loads.

Dust and Dirt

- 13.5.50 Dust and dirt created by traffic can be a problem arising from the operations of certain types of development, notably quarrying and the transport of quarried materials. The guidelines suggest that problems with dust and dirt are unlikely to occur at distances greater than 50m from the road. The impact of dust and dirt will depend on the management practices undertaken on site. The proposed facility will have various management practices in place to manage dust and dirt. From a highway and transport perspective, this will include wheel washing facilities and appropriate measures to cover loads. This will appropriately manage impacts associated with dust and dirt from a highway and transport perspective.

13.6 Embedded Mitigation

- 13.6.1 As outlined above wheel washing facilities and appropriate measures to cover loads will be provided on site to prevent dust and dirt being deposited on the highway. The site would also have bowsers which would be used to keep the site clean where necessary. These can be secured via an Air Quality/Environmental Management Plan if necessary.
- 13.6.2 HGVs arriving and departing from the site would also be subject to a routing strategy, as part of a construction traffic and logistics plan for the site. It is intended that all HGVs arriving and departing the site would arrive and depart to the north (towards the M27) to minimise the impact on more rural and local access roads, this is reinforced through the design of the access which physically prevents HGVs from turning left out of the site (towards Hamble Le Rice).
- 13.6.3 Further embedded mitigation involves keeping the infill movements low whilst extraction is ongoing to help minimise the overall trip generation in traffic phases one and two.
- 13.6.4 Additional embedded mitigation measures are set out in Section 13.8 which relate to climate change measures.

13.7 Additional Mitigation, Compensation, Enhancement Measures

- 13.7.1 It is acknowledged that Hamble Lane can suffer from congestion during the peak periods of the day. To help address this Hampshire County Council has come up with a package of measures to improve Hamble Lane in terms of performance/capacity.
- 13.7.2 The proposed improvement scheme has been developed which aims to:
- Improve traffic flow and reduce journey time delays along Hamble Lane;
 - Ensure that the environmental impact of the scheme is mitigated as far as possible; and
 - Reduce reliance on the private car by increasing the use of sustainable modes for journeys to/from Hamble.
- 13.7.3 The main focus is on the northern section of Hamble Lane between the Windhover Roundabout and the Pound Road junction, but the scheme also looks at complementary measures on the wider network and further south on Hamble Lane.
- 13.7.4 The package of improvements has been approved by County Council's Executive Member for Environment and Transport (EMET) (in March 2019), and the County Council remains committed to delivering these improvements. However, funding for the identified improvements has yet to be secured.
- 13.7.5 Consequently, given the proposed development would have a (small) impact on Hamble Lane to the north of the site, CEMEX have confirmed they would

be willing to provide a reasonable and proportional contribution towards the improvements identified.

13.8 Impact of Climate Change

- 13.8.1 The proposed development is well located to good quality walking and cycling facilities, public transport services, and will provided cycle parking for all permanent staff on the site. As such there are realistic opportunities for staff to travel by sustainable modes of transport to reduce the emissions generated by staff commuting trips.
- 13.8.2 CEMEX fleet drivers are trained in Safe and Fuel-Efficient Driving (SAFED) scheme and are regularly assessed on their fuel usage and driving style, in order to reduce the quantity of fuel used and as such, carbon dioxide and other emissions accordingly. CEMEX also runs a dedicated programme called Be CareFUEL focussing on all aspects of fuel usage including a general awareness campaign, fuel saving information in driver handbooks, MPG reports by driver, vehicle, type and locations, allowing for specific targeting of areas for improvement.
- 13.8.3 A 50% bio-diesel fuel blend is also being trialled and subject to outcomes may be rolled out across the business. CEMEX also focus on logistics planning to maximise payload and minimise empty running vehicles, decreasing overall journeys.
- 13.8.4 CEMEX's own fleet of vehicles are on average under 5 years old and are constantly being replaced in order to ensure the operation of modern, clean and fuel-efficient vehicles. Over 20% of the fleet meets Euro IV or higher standards, with the majority of the remaining fleet exceeding Euro III standards.
- 13.8.5 Finally, the location of the site will prevent vehicles driving from further afield to bring mineral to the local area, thereby saving emissions overall.

13.9 Conclusion

13.9.1 This chapter has assessed the environmental effects of the predicted increases in traffic associated with the proposed development. The long-term operational effects of the development on the transport network and people will be negligible.

13.9.2 A summary of the assessment is tabulated in Table 13.16.

Table 13.16: Summary of Environmental Effects

Potential impact	Nature of impact	Significance prior to mitigation	Mitigation / Enhancement measures	Residual effect
Severance	Direct	Negligible	Environmental Management Plan and HGV Routing Management Plan	Negligible
Driver Delay	Direct	Negligible		Negligible
Pedestrian Delay	Direct	Negligible		Negligible
Pedestrian Amenity	Direct	Negligible		Negligible
Fear and Intimidation	Direct	Negligible		Negligible
Accidents and Safety	Direct	Negligible		Negligible
Hazardous Loads	Direct	Negligible		Negligible
Dirt on the Highway	Direct	Negligible		Negligible