

**FORD ENERGY RECOVERY FACILITY AND
WASTE SORTING AND TRANSFER FACILITY,
FORD CIRCULAR TECHNOLOGY PARK**



ENVIRONMENTAL
STATEMENT
CHAPTER 15
TRAFFIC AND
TRANSPORT

15 Traffic and transport

Introduction

- 15.1 This chapter addresses impacts in relation to effects of traffic and transport associated with the proposals. It also includes an assessment of impacts on pedestrians, cyclists, equestrians and drivers or passengers in vehicles, for example cars, light goods vehicles, buses and heavy goods vehicles (HGVs).
- 15.2 The chapter describes the methods used to assess the baseline conditions currently existing at the site and surroundings, the potential direct and indirect effects of the development on traffic and access, the mitigation measures required to prevent, reduce or offset the effects and the residual effects.

Legislation and policy

- 15.3 The following section introduces the national, regional and local planning policy which has been used to guide the traffic and transport chapter.

National policy

National Planning Policy Framework, 2019

- 15.4 The National Planning Policy Framework¹ (NPPF) is a key part of the reforms to make the planning system less complex and more accessible, to protect the environment and to promote sustainable growth. There is an overarching presumption in favour of sustainable development that should be the basis of every plan and every decision. The NPPF notes at paragraph 8 that there are three dimensions to sustainable development: economic, social and environmental. The role of the planning process is to contribute to building a strong, responsive and competitive economy, and to identify and coordinate development requirements, including the provision of infrastructure. Chapter 9 of the NPPF refers to promoting sustainable transport.
- 15.5 Paragraph 102 states *“Transport issues should be considered from the earliest stages of plan making and development proposals...”*
- 15.6 Paragraph 109 states *“Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.”*
- 15.7 In addition, paragraph 111 states *“All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed”*.

¹ National Planning Policy Framework, 2019

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/810197/NPPF_Feb_2019_revised.pdf]

Local policy

West Sussex Transport Plan 2011-2026 (LTP3)

15.8 The West Sussex Transport Plan (WSTP) LTP3 is West Sussex County Council's (WSCC) main plan for transport in West Sussex and sets out the strategies and policies for transport in the authority area. It has four overriding strategies:

- Promoting economic growth
- Tackling climate change
- Providing access to services, employment and housing
- Improving safety, security and health

15.9 Under section 1.4.9 of the plan, the LTP3 sets out WSCC's approach for freight movements. It recognises that the efficient and safe movement of freight is vital to the success and growth of the West Sussex economy and to help achieve this, WSCC will maintain and promote a lorry route network for the main lorry movements in the county.

15.10 The A259 is identified as a strategic lorry route on the council's Advisory Lorry Routes map.

West Sussex Walking and Cycling Strategy 2016-2026

15.11 The West Sussex Walking and Cycling Strategy (WSWCS) is designed to complement the government's emerging Cycling and Walking Investment Strategy and sets out WSCC's aims and objectives for walking and cycling, together with their priorities for investment in infrastructure improvements.

15.12 As stated in section 3.1 of the strategy, the key design principles that will apply to new infrastructure are:

- *“Cycling and walking are recognised as a key part of the transport mix;*
- *All new (development) and improvement / maintenance schemes will consider, and wherever possible prioritise, the needs of cyclists and walkers; and*
- *The differing needs of users will be recognised in the design of routes and those needs will, wherever possible, be incorporated e.g. people with pushchairs, equestrians, etc.”*

15.13 Infrastructure improvements will reflect government and other best practice guidance (e.g. Design Manual for Roads and Bridges, Manual for Streets, etc.) and are considered in the following way:

- Segregated inter-community routes that connect places and are designed primarily for utility journeys e.g. commuting and accessing facilities
- Off road and / or less busy inter-community routes that enable access to and through the countryside and are designed primarily for leisure
- Routes and facilities in built up areas which are designed primarily to:
 - Re-allocate road space and improve safety at junctions on key distributor roads and public transport hubs to manage traffic speeds (where

appropriate with 20 mph limits), through traffic and safety at junctions in residential streets

- Create safer links to encourage sustainable journeys in particular travel to and from schools, employment sites, leisure destinations and transport hubs
- Encourage use of public transport (e.g. providing cycle parking)

West Sussex Waste Local Plan 2014 (WSWLP)

- 15.14 The West Sussex Waste Local Plan (WSWLP), which covers both WSCC and South Downs National Park, covers the period to 2031 and is the most up-to-date statement of the authorities' land-use planning policy for waste.
- 15.15 Policy W10: Strategic Waste Site Allocations, allocates the Ford Airfield site as being acceptable in principle for the development of proposals for the transfer, recycling and / or treatment of waste.
- 15.16 As stated in paragraph 7.3.9 the key transport development principles for the application site are:
- Assessment of the possible closure of the existing access north of Rodney Crescent and the use of an alternative access to the site from Ford Road
 - Assessment of impact of additional HGV movements on highway capacity and road safety, including at the Church Lane / A259 junction and possible mitigation required
 - Routing has been agreed under the current permission (WSCC/027/18/F) to ensure vehicles enter and exit via Ford Road to the south, and not to or from the A27 to the north. Access via Rollaston Park / B2233 for HGVs should also be prevented
- 15.17 The strategic objective recognises that where transport by rail and water is not possible, facilities should be located as close as possible to the lorry route network to minimise the impact of road transport in local communities and rural areas. This is repeated in Policy W3 on the location of built waste management facilities.
- 15.18 Policy W18: Transport, states that proposals for waste development will be permitted provided that:
- *“Where practicable and viable, the proposal makes use of rail or water for the transportation of materials to and from the site;*
 - *Transport links are adequate to serve the development or can be improved to an appropriate standard without an unacceptable impact on amenity, character, or the environment; and*
 - *Where the need for road transport can be demonstrated:*
 - *materials are capable of being transported using the Lorry Route Network with minimal use of local roads, unless special justification can be shown;*
 - *vehicle movements associated with the development will not have an unacceptable impact on the capacity of the highway network;*

- *there is safe and adequate means of access to the highway network and vehicle movements associated with the development will not have an adverse impact on the safety of all road users;*
- *satisfactory provision is made for vehicle turning and parking, manoeuvring, loading, and, where appropriate, wheel cleaning facilities; and vehicle movements are minimised by the optimal use of the vehicle fleet."*

Guidance

Guidelines for Environmental Impact Assessment, 2004

- 15.19 The *Guidelines for Environmental Impact Assessment*² written by the Institute of Environmental Management and Assessment (IEMA) aim to assist all participants in the development process and contribute to the improvement of environmental impact assessment (EIA) practice by setting out the statutory requirements and the expectations.
- 15.20 EIA is "a systematic process to identify, predict and evaluate the environmental effects of proposed actions and projects"². In the short-term EIA informs decision makers of the likely environmental consequences of development proposals, and identifies appropriate measures for mitigating the potential impacts. In the longer-term EIA contributes to safeguarding the maintenance of critical environmental systems and the health and wellbeing of communities.

Guidelines for the Environmental Assessment for Road Traffic, 1993

- 15.21 The purpose of the *Guidelines for the Environmental Assessment for Road Traffic*³ is to provide the basis for a systematic, consistent and comprehensive coverage for the appraisal of traffic impacts for a wide range of development projects. The environmental assessment process should be a continuous activity running throughout the planning and design stages of a project.
- 15.22 To ensure the comprehensive coverage of the environmental impacts arising from changes in traffic levels, the guidelines identify a check list of potential impacts covering noise, vibration, visual effects, driver severance and delay, pedestrian severance and delay, pedestrian amenity, fear and intimidation, accidents and safety, hazardous loads, air pollution, dust, ecological effects, and heritage conservation.
- 15.23 According to the Guidelines the assessment of the environmental impacts of traffic requires a number of stages, namely:
- Determination of existing and forecast traffic levels and characteristics
 - Determining the time period suitable for assessment
 - Determining the year of assessment
 - Identifying the geographical boundaries of assessment

² Guidelines for Environmental Impact Assessment, Institute of Environmental Management and Assessment, 2004.

³ Guidelines for the Environmental Assessment for Road Traffic, Institute of Environmental Management & Assessment, 1993.

- 15.24 Further, the study area will be defined by identifying any link or location where it is considered that significant environmental effects may occur as a result of the proposed development.
- 15.25 The IEMA guidelines state two rules to be considered when assessing the impact of development traffic on a highway link:
- Rule 1 - include highway links where traffic flows will increase by more than 30% (or the number of heavy goods vehicles (HGVs) will increase by more than 30%)
 - Rule 2 - include any other specifically sensitive areas where traffic flows will increase by 10% or more
- 15.26 Less than a 30% increase is considered to result in imperceptible changes in the environmental effects of traffic. The IEMA guidelines considered that projected changes in traffic flows of less than 10% create no discernible environmental effect. Department for Transport guidance within the IEMA guidelines assume 30%, 60% and 90% changes in traffic levels should be considered as “slight”, “moderate” and “substantial” impacts, respectively.

Methodology

Consultation

- 15.27 A formal pre-application process has been undertaken with WSCC, in their capacity as the Local Highway Authority. The EIA scoping report was issued to WSCC on 24th January 2020. WSCC issued its scoping opinion on 13th March 2020. A copy of the scoping report and WSCC’s scoping opinion can be seen in Technical Appendix A.

Study area

- 15.28 The study area has been discussed and agreed with WSCC as part of the pre-application engagement and through the EIA scoping process. In accordance with the IEMA guidelines, the study area has been defined by identifying any link or location where it is considered that significant environmental impacts could occur as a result of the proposed development.
- 15.29 Pedestrian facilities within walking distance of the application site have been considered, plus local public transport access points. Cycle routes passing through the site, or adjacent to the site have been identified. No equestrian routes have been identified within the study area, and therefore have not been considered further in this assessment.
- 15.30 Access to bus stops and public transport stations / interchanges within walking distance of the application site have been considered.
- 15.31 The traffic and transport study area for the ES has been informed by Rule 1 and Rule 2 as set out in ‘*Guidelines for the Environmental Assessment of Road Traffic*’ in paragraph 15.25 above.

- 15.32 Traffic assessment in the Construction Year and Opening Year is limited to the roads immediately adjacent to the application site and any roads further afield where Rule 1 of the IEMA guidelines is breached.
- 15.33 The accident and safety study area is based upon the local highway network within the vicinity of the application site and includes any key links with an increase of 30% or more in traffic, as per IEMA guidelines.
- 15.34 The assessment should be undertaken when the perceived environmental impact is at its greatest, which is considered to be when construction works complete and the site becomes fully operational in 2026. The assessment considers the 'Do Nothing' scenario, which assumes no proposed development, against the 'Do Something' scenario, which adds proposed development traffic to the 'Do Nothing' baseline.
- 15.35 Furthermore, additional perceived environmental impact is expected during the construction phase, due to the combination of construction and operational traffic accessing the proposed development site. Therefore, the 2025 Construction Year is also considered for assessment alongside the 2026 Opening Year.

Baseline and impact assessment

- 15.36 The following assessment scenarios have been considered within this chapter of the ES. These assessment scenarios are defined fully in the accompanying Transport Assessment (Technical Appendix K).
- 2018 Adjusted Baseline
 - 2025 Without Construction ('Do Nothing')
 - 2025 With Construction ('Do Something')
 - 2026 Without Development ('Do Nothing')
 - 2026 With Development ('Do Something')
- 15.37 Specific traffic surveys were not undertaken for the Transport Assessment due to the current COVID-19 pandemic and resultant lock-down restrictions leading to significantly reduced and therefore non-representative traffic flows on the local highway network. As an alternative, the assessment was based upon the traffic data contained within the Ford Airfield Transport Assessment⁴ (Planning Application Reference F/4/20/OUT). The traffic survey took place over a period of 7 days between 02 July - 08 July 2018, and forms the 2018 Baseline.
- 15.38 Due to a change in access arrangement to the application site since the traffic surveys were undertaken, as per planning application WSCC/027/18/F, it is necessary to adjust the 2018 Baseline. This adjustment has been made on the basis of the 'Development Only – Consented Planning Scheme' AM and PM peak traffic flows contained within Appendix D to the approved Transport Statement for planning application WSCC/027/18/F, to form the Adjusted 2018 Baseline. The Adjusted 2018 Baseline data has been taken forward to define the

⁴ Ford Airfield Transport Assessment DS/EF/AI/ITB13091-003E R, i-Transport, 23 October 2019

Construction Year and Opening Year 'Do Nothing' scenarios with the addition of background traffic growth and committed development traffic.

- 15.39 Potential construction traffic impacts from the proposed development in the Construction Year, and potential operational traffic impacts from the proposed development in the Opening Year, have been assessed based upon the number of vehicle movements identified within the Transport Assessment (Technical Appendix K).
- 15.40 The assessment considers the value of delays or benefits occurring to road users on the local highway network based upon the estimated increase in traffic resulting from the proposed development.
- 15.41 There is no formal guidance for assessing the environmental effects of developments on the public transport network. Therefore, the assessment has considered access to key public transport access points and has been undertaken by application of professional judgement. It should be noted that the use of public transport should be encouraged and therefore an increase in demand would be considered as beneficial in terms of traffic impact, and sustainable travel more broadly.
- 15.42 Pedestrian and cyclist severance, delay, amenity, fear and intimidation has been assessed by considering baseline traffic flows, future year traffic flows for 2025 and 2026, as well as the potential impact of the proposed development in terms of change in traffic flows on each link within the study area. Consideration has been given to daily traffic flows (24-hour annual average daily traffic (AADT)) in respect of pedestrian severance, amenity, fear and intimidation.
- 15.43 The assessment considers the likely increase or decrease in the number of accidents resulting from the changes in traffic flows and composition. Personal Injury Accident (PIA) data have been obtained from Sussex Police for a five-year period from 01/01/2016 to 31/12/2020.
- 15.44 To address cumulative impacts, the analysis in the Transport Assessment (Technical Appendix K) applies background growth factors and committed development trips to the 2018 Adjusted Baseline traffic flow for 2025 and 2026.
- 15.45 Background traffic growth factors have been derived from the National Trip End Model (NTEM) v7.2 dataset for Arun 006 output area, adjusted to a local growth figure using the National Transport Model (NTM) forecasts within the Department for Transport's TEMPro software. This is an industry recognised method for forecasting future baseline traffic flows according to TAG Unit M4⁵, and accounts for increases in vehicle usage using ownership, mileage and planning data.
- 15.46 Committed development trips have been included for schemes anticipated to generate trips on the network links / junctions identified for assessment prior to the Construction Year and Opening Year. Some schemes listed on figure 5.2 'Location of projects considered in the assessment of cumulative effects' have been discounted on the basis that no additional trips are anticipated on the local network, compared to the existing use. Furthermore, trips generated by

⁵ TAG Unit M4: Forecasting and Uncertainty. Department for Transport. May 2019. Paragraph 9.1.4.

strategic allocated developments under the Arun Local Plan Housing Implementation Strategy are accounted for within TEMPro background growth factors, so are not manually added to avoid double-counting. The full schedule of committed developments with justification for their inclusion/exclusion from the assessment, and the associated data, is appended to the Transport Assessment (Technical Appendix K).

Significance criteria

15.47 The IEMA guidelines were reviewed in order to identify appropriate significance criteria applicable to the assessment. Paragraph 4.5 of the IEMA guidelines states that:

“For many effects there are no simple rules or formulae which define thresholds of significance and there is, therefore, a need for interpretation and judgement on the part of the assessor, backed-up by data or quantified information wherever possible”.

15.48 The effects are described as either:

- Beneficial – meaning that the changes produce benefits in terms of transportation and access (such as reduction of traffic, travel time or patronage, or provision of a new service, access or facility); or
- Adverse – meaning that changes produce dis-benefits in terms of transportation and access (such as increase of traffic, travel time, patronage or loss of service or facility).

15.49 The proposed approach to assessing the significance of effects on transport and accessibility, based on magnitude of impacts and receptor sensitivity, is identified below.

Driver delay

15.50 IEMA guidelines note that driver delay can occur at several points on the network, although the effects are only likely to be significant when the traffic on the highway network is predicted to be at, or close to, the capacity of the system. Professional judgment has been applied to determine the significance of residual effects.

Public transport

15.51 There is no formal published guidance for the assessment of effects on public transport. The assessment has been undertaken by applying professional judgment to determine the significance of the residual effect.

Pedestrian and cyclist severance, delay, amenity, fear and intimidation

15.52 The significance of pedestrian and cyclist severance, delay, amenity, fear and intimidation effects has been determined by considering change in traffic flows on each link within the study area by reference to the IEMA guidelines and applying professional judgment. It should be noted that IEMA guidelines refer specifically to pedestrians, but in this assessment have also been applied to consider potential effects on cyclists as vulnerable road users.

Pedestrian and cyclist severance

- 15.53 The IEMA guidelines acknowledge that the measurement and prediction of severance is extremely difficult and that the correlation between the extent of severance and the physical barrier of a road is not clear. It notes that there are no predictive formulae which give simple relationships between traffic factors and levels of severance. However, the IEMA guidelines do accept that in general, marginal changes in traffic flows are, by themselves, unlikely to create or remove severance.
- 15.54 Factors which need to be considered when determining severance comprise road width, traffic flows, speed of traffic, the presence of pedestrian crossing facilities and the number of pedestrian movements across the affected route. Similarly, increases in traffic flows may deter cyclists.
- 15.55 The IEMA guidelines suggest that:
- Changes in flow of up to 30% would produce “slight” changes in severance
 - Changes in flow of up to 60% would produce “moderate” changes in severance
 - Changes in flow of up to 90% would produce “substantial” changes in severance
- 15.56 It is recognised that these are guidelines only and are highly dependent on existing ambient traffic levels. They are not considered to be definitive measures of severance and should be used with care and regard paid to specific local conditions. The assessment therefore also takes account of road width, maximum speed limits, and pedestrian/cyclist amenity.
- 15.57 The guidelines have been used to inform impact magnitude criteria for the assessment. Professional judgment has been applied to identify the likely scale of effects.

Pedestrian delay

- 15.58 The IEMA guidelines note that changes in the volume, composition and or speed of traffic may affect the ability of pedestrians to cross roads. Typically, increases in traffic levels result in increased pedestrian delay, although increased pedestrian activity itself also contributes. The IEMA guidelines do not set any thresholds for absolute or actual changes in delay, recommending instead that assessors use their judgment to determine the significance of the impact.
- 15.59 Any link road without crossing facilities with a two-way flow of less than 1,400 vehicles per hour is deemed to have a negligible impact on pedestrian delay. Roads with higher actual or anticipated vehicle flow are assessed on the basis of professional judgment.

Pedestrian and cyclist amenity

- 15.60 IEMA guidelines define pedestrian amenity as the relative pleasantness of a journey that is considered to be affected by traffic volumes and composition, along with pavement width, segregation from traffic, and pedestrian activity. Fear and intimidation, and more broadly exposure to noise and air pollution, may also

be relevant to pedestrian amenity. The IEMA guidelines suggest that a tentative threshold for judging the significance of changes in pedestrian amenity would be where the traffic flows (or its HGV component) are halved or doubled. Similarly, this guidance has been applied to consider amenity for cyclists.

- 15.61 The guidelines have been used to inform impact magnitude criteria for the assessment. Professional judgment has been applied to identify the likely scale of effects.

Pedestrian and cyclist fear and intimidation

- 15.62 A number of factors are considered relevant in determining changes in the level of fear and intimidation experienced by pedestrians and cyclists, including: volume of traffic, percentage of HGVs, speed of traffic, proximity to people and the availability and quality of pedestrian infrastructure. The IEMA guidelines set out the criteria in table 15.1 for measuring the effects of fear and intimidation as a ‘first approximation’. However, other factors should be taken into account such as vehicle proximity to people and footway widths.

Degree of Hazard	Average Traffic Flow over 18hr day (vehicles per hour)	Total 18 hour HGV Flow (vehicles)	18-hr Average Speed (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

Table 15.1: Pedestrian fear and intimidation criteria

- 15.63 The IEMA guidelines stress the need for professional judgment when applying the above criteria. Accordingly, the guidelines have been used to inform impact magnitude criteria for the assessment. Professional judgment has been applied to identify the likely scale of effects for both pedestrians and cyclists.

Accidents and safety

- 15.64 There is no formal published guidance for the assessment of accidents and safety. Therefore, professional judgment has been applied to assess the implications of local circumstances and the proposed development’s likely effect which may increase or decrease the risk of accidents.

Receptor sensitivity

- 15.65 The potential receptors are the users of transport networks within the relevant study area. The sensitivity of a road can be defined by the vulnerability of the user groups who are likely to use it, i.e. the elderly or children. A sensitive area may be where pedestrian activity is high, near a school, or a location with a cluster of historical accidents. It also takes into account the existing character of the road, i.e. an existing residential area is likely to be more sensitive than an A road.

15.66 Professional judgement has been used to define the value of receptors in accordance with LA 104⁶ Section 3.1. Table 15.2 presents the criteria for identifying receptor sensitivity.

Receptor sensitivity	Criteria
High	Receptors of greatest sensitivity to traffic flow: schools, colleges, playgrounds, accident clusters, retirement homes, roads without footways that are used by pedestrians.
Medium	Receptors of moderate sensitivity to traffic flow: congested junctions, doctors' surgeries, hospitals, shopping areas with roadside frontage, roads with narrow footways, recreation facilities.
Low	Receptors with some sensitivity to traffic flow: places of worship, public open space, tourist attractions and residential areas with adequate footway provision.
Negligible	Receptors with very low sensitivity to traffic flows and those sufficiently distant from affected roads and junctions.

Table 15.2: Receptor sensitivity

15.67 The key highway links and associated receptors considered within this chapter are:

- Yapton Road – adjacent residential properties on Horsemere Green Lane
- Ford Road – residential properties on Nelson Row
- Church Lane - residential properties, St Mary's Church, and adjacent residential properties on Horsemere Green Lane
- A259 (east of Church Lane roundabout) – Climping C of E Primary School, and restaurant/caravan park at junction of A259/B2233
- Public rights of way (PRoW) and cycle routes and users within the study area
- Road users on the local network

15.68 School users are considered receptors of High sensitivity, and pedestrians and cyclists are considered receptors of Medium sensitivity. All other receptors are considered to be of Low sensitivity.

Magnitude of effects

15.69 The determination of the importance and sensitivity of the receptors and the magnitude of change specifically relating to road traffic has been informed by the IEMA guidelines⁷.

15.70 Where the existing baseline HGV or total traffic flows are very low, a small increase in vehicles would produce a large change in magnitude, whereas in real terms the increase in traffic may still be considered to be negligible or slight. Such an assessment requires appropriate professional and experienced judgements to be made.

15.71 The criteria for assessing the impact magnitude is summarised in table 15.3.

⁶ LA 104 Environmental assessment and monitoring, Rev 01, DMRB, July 2019.

⁷ Guidelines for Environmental Impact Assessment, Institute of Environmental Management and Assessment, 2004.

Impact	Assessment Criteria			
	Negligible	Small	Medium	Large
Severance	Increase in total traffic flows of 30% or under	Increase in total traffic flows of 30% – 60%.	Increase in total traffic flows of 60% - 90%.	Increase in total traffic flows of 90% and above.
Pedestrian Delay	This will be assessed on a case by case basis using professional judgement subject to the sensitivity and vulnerability of the receptor to determine whether pedestrian delay is a significant impact.			
Pedestrian Amenity	Threshold for judging the significance of changes to pedestrian amenity where the traffic flows (or HGV component) is halved or doubled.			
Driver Delay	This will be assessed on a case by case basis using professional judgement subject to the sensitivity and vulnerability of the receptor and the results of any capacity assessments/traffic modelling undertaken as part of the Transport Assessment. Impacts are only likely to be significant when the traffic on the network surrounding the development is already at, or close to, the capacity of the system.			
Public transport	There is no formal guidance for assessing the environmental effects of developments on the public transport network. Therefore, the assessment has been undertaken by application of professional judgement			
Accidents and Safety	Accident data for the local area will be reviewed and professional judgement will be applied to assess the implications of potential increase/decrease in traffic.			

Table 15.3: Magnitude of impact

Significance of effects

15.72 The significance of the environmental effect has been derived by considering both the sensitivity of the receptor and magnitude of impact, as demonstrated in table 15.4. The matrix has been informed by the DMRB LA 104 guidelines⁸.

Magnitude	Sensitivity			
	High	Medium	Low	Negligible
Large	Very Substantial	Substantial	Moderate	Slight
Medium	Substantial	Moderate	Slight	Slight
Small	Moderate	Slight	Slight	Negligible
Negligible	Negligible	Negligible	Negligible	Negligible

Table 15.4: Significance of effect

15.73 Very substantial, substantial and moderate effects are considered to be significant.

15.74 The temporal scope of effects is described as short, medium, long-term or permanent. For the operational assessment the effects are long-term, whereas the construction effects are likely to be medium-term:

- Short term: <12 months
- Medium term: 1-10 years
- Long term: +10 years
- Permanent: effects that are considered to be irreversible or long-lasting

⁸ LA 104 Environmental assessment and monitoring, Rev 01, DMRB, July 2019.

15.75 In all cases a degree of professional judgement has been applied to assess whether the effect is considered significant.

Limitations and uncertainties

15.76 The following assumption is relevant to this assessment:

- The assessment has been based upon the information made available at the time. The assessment has been informed by data from the Ford ERF and WSTF Transport Assessment as contained in Technical Appendix K.

15.77 The following limitations are relevant to this assessment:

- Due to the unprecedented current travel restrictions resulting from COVID-19 it has not been feasible to undertake new traffic surveys. Baseline data has therefore relied upon historic data from the Ford Airfield Transport Assessment scheme (otherwise referred to as The Landings). This assessment is based upon survey data from July 2018. The survey data was reviewed against historic data and deemed to be representative of typical network conditions, and therefore considered appropriate for the assessment.

Baseline

15.78 The application site is located at the Ford Circular Technology Park (CTP) (the former Tarmac blockworks site) which forms part of the former Ford Airfield to the west of the village of Ford, as shown in figure 1.1. The application site boundary is shown in figure 1.2. An aerial photograph of the site is shown in figure 2.1.

Local highway network

15.79 The site is located approximately 500 m west of Ford Road. The site access road runs from the south east corner of the main site to the junction with Ford Road. The 'site access road' comprises the southern link road (SLR) (i.e. the new access road to the Ford CTP site for which Grundon received planning consent in August 2019 and completed construction in January 2020) which joins the proposed development site to Viridor's existing site access road. Viridor's existing site access road runs from Viridor's existing materials recycling facility to Ford Road.

15.80 The SLR section of the site access road is a private road and does not form part of the adopted highway. It is designed to an appropriate standard with a road width of 7.3 m and a 2 m footway on the west side of the carriageway. The route is approximately 180 m in length and has a near straight alignment with no active frontages along its route.

15.81 The site access road is of sufficient width to accommodate all potential vehicles. Swept path analysis undertaken as part of the SLR planning application identified that two 3-axle articulated HGVs (at the maximum legal length of 16.5 m) could pass each other at all points along the SLR, demonstrating the road is appropriate for two-way HGV usage.

- 15.82 The SLR planning application also demonstrated that the priority junction with Viridor's existing site access road is designed to appropriate highways standards. The junction has good sightline visibility to the left and right from the minor arm and further swept path analysis demonstrated that the priority junction can safely accommodate turning movements for two 16.5 m articulated HGVs at the junction.
- 15.83 Ford Road is an unclassified road and is moderately trafficked, connecting the A259 in the south with the A27 at Arundel to the north. Throughout much of its length, Ford Road has a 40 mph speed restriction and is mostly unlit.
- 15.84 Station Road has a controlled railway level crossing approximately 1 km to the north of the site access road, which is situated to the east of Ford Railway Station. Ford Railway Station is situated on the busy Southampton to Brighton railway line and therefore the level crossing is in regular operation.
- 15.85 Ford Road to the south of the site is generally straight and has limited frontages. Nelson Row is a residential street of 23 properties, set back approximately 25 m from the eastern boundary with Ford Road, and running parallel to Ford Road approximately 120 m south of the site access road. It provides three access points onto Ford Road, including an 'entry only' connection at its northern end and an 'exit only' connection at its southern end.
- 15.86 HMP Ford is located approximately 550 m south of the site access road on Ford Road and is located on both sides of Ford Road, with a pelican crossing joining the two sites. Around this area, there are also several accesses to the west of Ford Road to predominately commercial and light industrial sites.
- 15.87 The southern end of Ford Road is known as Church Lane. Church Lane forms a roundabout junction with the A259 at its southern extent. This junction, known as the Crookthorn Roundabout, is located approximately 1.7 km to the south of the site access road on Ford Road.
- 15.88 The southern arm of Crookthorn Roundabout is formed by Crookthorn Lane, a minor road providing access to an industrial site, a small number of residential properties, and Climping C of E Primary School.
- 15.89 The eastern and western arms of Crookthorn Roundabout are formed by the A259. The A259 is a strategic route that links Chichester with Worthing via Bognor Regis and Littlehampton. To the west of Crookthorn Roundabout, between the junction of Yapton Road and Ford Road, the A259 is a 40 mph, unlit single-carriageway road. This section of highway is heavily trafficked, with no frontages other than an aquatics shop. This link continues towards Bognor Regis. To the east of Crookthorn Roundabout, the A259 maintains these characteristics for c.660 m, until the speed restriction increases to 60 mph. The A259 then connects to Bridge Road roundabout across the River Arun and continues to Wick and Littlehampton.
- 15.90 Table 15.5 identifies the Adjusted 2018 Baseline traffic flows for all vehicles, and the HGV component of this total traffic flow, on the local highway network. Figure 15.1 shows a map of the local highway network identifying the links which form the extent of the study area.

Link ID	Link Name	AM Peak (08:00-09:00)		PM Peak (17:00-18:00)		AADT-24	
		Vehicles (one-way)	Of which HGVs	Vehicles (one-way)	Of which HGVs	Vehicles (one-way)	Of which HGVs
1_4	North End Rd SB	235	17	541	25	4597	249
4_1	North End Rd NB	457	28	233	8	4087	213
4_16	Ford Ln EB	231	12	244	17	2814	172
16_4	Ford Ln WB	248	18	186	6	2571	142
16_3	Ford Ln EB	216	16	299	7	3051	136
3_16	Ford Ln WB	227	6	134	8	2138	83
2_3	Station Rd SB	238	13	342	8	3436	124
3_2	Station Rd NB	340	17	236	6	3412	136
3_14	Ford Rd SB	356	25	534	11	5272	213
14_3	Ford Rd NB	469	19	263	10	4336	172
14_7	Ford Rd Access	33	10	33	10	391	118
7_14	Ford Rd Access	20	10	28	10	284	118
8_8a	Rollaston Park (EB)	80	1	162	4	1434	30
8a_8	Rollaston Park (WB)	118	11	111	3	1357	83
14_9	Church Lane SB	419	39	662	9	6404	284
9_14	Church Lane NB	630	42	316	18	5604	355
9_11	A259 Crookthorn Ln WB	806	47	1273	18	12315	385
11_9	A259 Crookthorn Ln EB	905	56	1114	37	11960	551
9_10	A259 Crookthorn Ln EB	1145	71	1504	40	15692	658
10_9	A259 Crookthorn Ln WB	1237	65	1305	29	15058	557
9_9a	Crookthorn Ln SB	24	1	5	0	172	6
9a_9	Crookthorn Ln NB	44	1	17	1	361	12
11_15	B2233 Yapton Rd NB	316	5	314	6	3732	65
15_11	B2233 Yapton Rd SB	222	18	404	18	3708	213
11_12	A259 Grevatt's Ln WB	633	40	1090	17	10207	338
12_11	A259 Grevatt's Ln EB	805	41	784	25	9413	391
15_8	B2233 Yapton Rd NB	285	10	364	9	3844	113
8_15	B2233 Yapton Rd SB	417	21	417	15	4940	213
8_6	A259 Burndell Rd WB	461	14	322	10	4638	142
6_8	A259 Burndell Rd EB	400	12	533	17	5527	172
6_13	Bilsham Rd SB	190	6	309	10	2956	95
13_6	Bilsham Rd NB	532	11	248	9	4621	118
6_5	B2233 Main Rd WB	794	20	427	10	7233	178
5_6	B2233 Main Rd EB	391	13	699	18	6457	184
5_4	North End Rd NB	420	12	149	5	3371	101
4_5	North End Rd SB	123	11	397	14	3080	148

Table 15.5: Adjusted 2018 Baseline AM Peak, PM Peak and AADT-24 vehicles flows

15.91 No specific data for the site access road was available in the baseline survey data (based on the Ford Airfield Transport Assessment, 2018). Therefore, an estimate of vehicles using the site access road has been derived based upon the Development Only – Consented Planning Scheme’ AM and PM peak traffic flows contained within Appendix D to the approved Transport Statement for planning application WSCC/027/18/F. This is considered to be in line the current WTS and Viridor operation at the Ford CTP site based on weighbridge data.

15.92 Vehicles to/from the application site have been distributed throughout the highway network in accordance with the assumptions in the approved Transport Statement for planning application WSCC/027/18/F, as presented in the Transport Assessment:

- All HGV movements to / from the south via Church Lane
- All other vehicles will be distributed as 10% to / from the north of the site access road on Ford Road and 90% to / from the south via Church Lane
- 50 / 50 split distribution for all vehicles at the Church Lane / A259 roundabout.

15.93 It is noted that the WSCC/027/18/F permission imposes a HGV capacity cap of up to 240 HGV movements to and from the application site on the SLR per day (120 HGVs in and 120 HGVs out) between 06:00 and 20:00 (Mon-Fri); and up to 120 HGV movements to and from site per day (60 HGVs in + 60 HGVs out) between 08:00 and 18:00 on Saturdays. This cap is reflected in HGV movements associated with the application site on the SLR in all assessment scenarios.

Pedestrian accessibility

15.94 Public rights of way within the vicinity of the proposed development have been extracted from WSCC, identified in figure 15.2, are summarised below:

- Footpath 363 which runs to the north of the site and provides a connection to Footpaths 170, 200.2, 360 on towards Burndell and Yapton
- Footpaths 200.3 and 200.4 which run to the north east of the site and provide a connection between the site and Ford Road
- Footpath 366 and 366.1 which provide a connection to Ford Lane and Footpath 365
- Footpath 175 which runs to the south of the site and provides a connection between Ford Road and Yapton Road

15.95 A footway of circa 2.5 m wide running north-south along the west side of Ford Road crosses the site access road without deviation from its course. Dropped kerbs are provided across the access road.

15.96 There is no footway provision along the site access road from the Ford Road junction to the entrance of the Southern Water waste water treatment works site, however, a footway is provided on the SLR section of the access road, that runs from the Southern Water entrance to the application site.

15.97 To the north of the site, Ford Road leads into Station Road and along its length the footway is separated by a wide grass verge circa 2.5 m wide. To the south, Ford Road leads into Church Lane where the pedestrian footway continues on the western side of the carriageway. A signalised pedestrian crossing is located on Ford Road, approximately 550 m south of the site access road. A pedestrian refuge island is provided to the north of the access to Rudford Industrial Estate allowing pedestrians to cross to the eastern side of the carriageway. The footway on the western side ends to the south of the junction with Horsemere Green Lane, but the route continues on the A259 on the eastern side.

15.98 A pedestrian footway is also present on the east side of Yapton Road, along its entire length to the north west of its junction with Rollaston Park and until the bus stop at approximately 50 m south-east of the junction. On Rollaston Park footways are present on both sides of the road, apart from a section of approximately 90m to the north-west of its junction with Sproule Close. It should be noted there is no direct pedestrian access from the site to Rollaston Park.

15.99 No footways are present on either side of Ford Lane.

Cycle accessibility

15.100 There are no dedicated cycling facilities within the study area. Figure 15.3 has been extracted from WSCC, and identifies the section of Yapton Road between Horsemere Green Lane and Bilsham Road as part of the Local Cycle Network 38. It should be noted that this section of Yapton Road is subject to a 40 mph speed limit.

15.101 National Route 2 of the National Cycle Network (NCN) runs along the A259 to the south of the application site and the closest access points to NCN2 are the junctions of the A259 with Yapton Road and Church Lane. A shared footway / cycleway runs along the northern side of the A259.

Public transport network

15.102 There are no bus stops within a reasonable walking distance to the site. The nearest bus stops are on Yapton Road at the junction with Rollaston Park served by c.2 buses per hour to Littlehampton and c.2 buses per hour to Chichester.

15.103 The nearest railway station to the site is Ford Railway Station which is approximately 1.6 km to the north east and is served by Southern Railway with c.13 trains per hour on weekdays. The station has step-free access and ramps are available for train access. There is sheltered storage provided for 14 cycles with CCTV coverage.

Accident analysis

15.104 Personal Injury Accident (PIA) data for the highway network in the vicinity of the development site have been obtained from Sussex Police for a five-year period from 01/01/2016 to 31/12/2020. The study area covers Ford Road between the railway line and the junction with Horsemere Green Lane, covering all links with an increase of 30% or more in traffic, as per IEMA guidelines.

15.105 Locations of the accidents are shown in figure 15.4 and accidents that occurred within the study area (highlighted in purple on figure 15.4) are summarised in table 15.6.

Year	Severity			Total Accidents	Vulnerable Road Users			Total Casualties
	Slight	Serious	Fatal		Pedestrians	Cyclists	Motorcycle	
2016	1	1	0	2	0	0	0	2
2017	1	0	0	1	0	0	0	2
2018	1	0	0	1	0	0	0	3

Year	Severity			Total Accidents	Vulnerable Road Users			Total Casualties
	Slight	Serious	Fatal		Pedestrians	Cyclists	Motorcycle	
2019	1	1	0	2	0	0	0	2
2020	1	1	0	2	0	0	0	2
Total	5	3	0	8	0	0	0	11

15.106 In total 8 accidents have been recorded within the study area between 2016 and 2020, out of which 5 were slight, 3 serious and none were fatal. No vulnerable road users were involved in any of the accidents recorded.

Key trip generators

15.107 Key trip generators and local amenities within the study area have been identified in figure 15.5 and table 15.7.

15.108 Table 15.7 identifies local amenities within the vicinity of the application site that could be attractive to pedestrians, cyclists and equestrians. It should be noted that the distances have been measured using Google maps and based upon the PRow map (figure 15.2) extracted from the WSCC website. There are no direct links between the application site and some of the existing local amenities presented in table 15.7.

Purpose	Existing Local Amenities	Total Distance (m)
Employment	Rudford Industrial Estate	1,000
	Ford Lane Industrial Estate	800
	Ford Airfield Industrial Estate	600
	Southern Water Waste Water Treatment Works	100
	HM Prison Ford	800
Leisure	Arun Sports Arena	300

Table 15.7 Existing Local Amenities

Future baseline

15.109 The assessment has considered a future Construction Year of 2025 and Opening Year of 2026. Both background traffic growth and committed development traffic has been accounted for in the future baseline, as detailed in paragraphs 15.45 and 15.46.

15.110 In the absence of the proposed development, the site will remain in its current use (i.e. the WTS will continue in operation) and access / egress to the site will continue from the site access road.

15.111 A review has been undertaken of the proposed improvements to walking, cycling and public transport facilities associated with the committed development identified. There are a number of local improvements to walking and cycling facilities, providing connectivity between local networks and the proposed new developments. These are considered to have limited benefits to users of the proposed development site.

15.112 Application F/4/20/OUT includes 1,500 dwellings, employment space and improvements to pedestrian and cycle connectivity along Rollaston Park, Horsmere Green Lane and Ford Road. The scheme also includes improved pedestrian and cycling connectivity to Ford Railway Station via PRoW 200.3. The scheme will also provide connectivity to footpaths 363, 366, 366.1 and 175, improving pedestrian connectivity within the local area.

Effects during construction (2025)

15.113 The construction traffic effects are anticipated to be medium-term and relate to the arrival and departure of construction workers, construction materials / equipment and waste, and the impact on existing traffic, the highway network and walking and cycling routes in the area. Full details of the construction phase of the development is set out in chapter 3.

15.114 All vehicles would access the proposed ERF and WSTF from Ford Road, as per the existing HGV restrictions. No construction HGV vehicles will be permitted to leave or access the site to / from the northern stretch of Ford Road.

15.115 The construction programme is anticipated to take 51 months.. Phasing of the construction programme is summarised as follows:

- Month 1 to month 7: Construction of the WSTF, during which the existing WTS will remain operational. The WSTF will become operational upon completion from Month 8.
- Month 6 to month 9: Demolition of the existing WTS.
- Month 10 to month 45: Construction of the ERF, including excavation in month 10 to month 15. Commissioning of the ERF will begin from Month 40, and the ERF will become fully operational from Month 46.
- Month 40 to month 51: Construction of the landscaping bunds.

15.116 For the construction phase, daily trip generation has been estimated for each month of the 51-month construction programme according to design parameters, vehicle payloads and previous experience on similar schemes. Construction trips have been profiled with trips associated with WSTF and ERF operation when they come online, estimated according to assumptions made by the Ford ERF plant designers (Fichtner), to understand the total volume of daily traffic accessing the application site during each month of the construction phase. All construction and operational vehicles are classified as HGVs, with the exception of passenger vehicles (cars and vans) to enable staff access.

15.117 The number of passenger vehicles for each stage has been calculated using the estimated construction workforce and a vehicle occupancy of 1.5, which is in line with standard practice.

15.118 Given peak construction phase trip generation is anticipated in 2025, the Construction Year is defined as 2025. Peak overall trip generation, determined as the highest %HGV, is anticipated to occur in month 42 of the construction programme when the ERF is in the commissioning phase of construction, the WSTF is operational, and landscaping works are ongoing. The daily estimated vehicle flow for month 42 has therefore been applied to represent a robust worst-case in the 2025 Construction Year assessment scenarios.

15.119 The daily trip generation incorporated in the 2025 Construction Year is profiled across the day according to the following hourly profile assumptions:

- Construction staff vehicles – estimated by ERF and WSTF plant designers based on similar schemes
- ERF Construction HGVs – construction HGV trip estimates have been distributed throughout the day, so as to avoid large numbers of HGVs arriving and departing during the network peak hours and for movements to be spread throughout the day
- WSTF Operational staff vehicles - estimated based on the current operation
- WSTF Operational HGVs – HGV arrival and departure trip profile at the existing Ford WTS recorded by the on-site weighbridge from October 2019 to January 2020

15.120 The outline construction environmental management plan (CEMP) provided in Technical Appendix L seeks to minimise the impact of the construction of the proposed development on the local area. Once a contractor is appointed in due course the outline CEMP will be reviewed and updated in line with the construction programme and include details of the following:

- Preferred hours of deliveries and removals (out of peak hours)
- Agreed construction traffic routing
- Road cleaning facility provisioning
- Off-loading and storage areas
- Personnel and vehicle segregation
- Equipment e.g. temporary fencing, signage etc.
- Site inductions

Local highway network

15.121 The peak construction vehicle movements for the 2025 Construction Year is presented in table 15.8, comparing the 'Without Construction' (DN) and 'With Construction' (DS) scenarios. The definition of these scenarios is detailed further in the Transport Assessment (Technical Appendix K).

Link ID	Name	2025 Without Construction (DN) AADT-24		2025 With Construction (DS) AADT-24		% Change between DS and DN scenarios AADT-24	
		Vehicles (one-way)	Of which HGV	Vehicles (one-way)	Of which HGV	Vehicles (one-way)	Of which HGV
1_4	North End Rd SB	5820	255	5820	255	0%	0%
4_1	North End Rd NB	5426	218	5426	218	0%	0%
4_16	Ford Ln EB	5017	176	5017	176	0%	0%
16_4	Ford Ln WB	4442	145	4442	145	0%	0%
16_3	Ford Ln EB	3877	139	3877	139	0%	0%
3_16	Ford Ln WB	2655	85	2655	85	0%	0%
2_3	Station Rd SB	3898	127	3918	127	1%	0%
3_2	Station Rd NB	4032	139	4052	139	0%	0%
3_14	Ford Rd SB	6055	218	6075	218	0%	0%
14_3	Ford Rd NB	4968	176	4987	176	0%	0%
14_7	Ford Rd Access	415	121	712	220	71%	81%

Link ID	Name	2025 Without Construction (DN) AADT-24		2025 With Construction (DS) AADT-24		% Change between DS and DN scenarios AADT-24	
		Vehicles (one-way)	Of which HGV	Vehicles (one-way)	Of which HGV	Vehicles (one-way)	Of which HGV
7_14	Ford Rd Access	299	121	596	220	99%	81%
8_8a	Rollaston Park (EB)	1575	30	1575	30	0%	0%
8a_8	Rollaston Park (WB)	1471	85	1471	85	0%	0%
14_9	Church Lane SB	10291	291	10568	390	3%	34%
9_14	Church Lane NB	8955	364	9232	462	3%	27%
9_11	A259 Crookthorn Ln WB	15990	424	16128	473	1%	12%
11_9	A259 Crookthorn Ln EB	15357	599	15495	648	1%	8%
9_10	A259 Crookthorn Ln EB	19207	708	19345	758	1%	7%
10_9	A259 Crookthorn Ln WB	18312	599	18451	649	1%	8%
9_9a	Crookthorn Ln SB	201	6	201	6	0%	0%
9a_9	Crookthorn Ln NB	393	12	393	12	0%	0%
11_15	B2233 Yapton Rd NB	4786	102	4786	102	0%	0%
15_11	B2233 Yapton Rd SB	4832	252	4832	252	0%	0%
11_12	A259 Grevatt's Ln WB	13132	346	13270	394	1%	14%
12_11	A259 Grevatt's Ln EB	11944	406	12082	455	1%	12%
15_8	B2233 Yapton Rd NB	4900	115	4900	115	0%	0%
8_15	B2233 Yapton Rd SB	6122	218	6122	218	0%	0%
8_6	A259 Burndell Rd WB	6019	145	6019	145	0%	0%
6_8	A259 Burndell Rd EB	6920	176	6920	176	0%	0%
6_13	Bilsham Rd SB	3917	97	3917	97	0%	0%
13_6	Bilsham Rd NB	6087	121	6087	121	0%	0%
6_5	B2233 Main Rd WB	9601	182	9601	182	0%	0%
5_6	B2233 Main Rd EB	8333	188	8333	188	0%	0%
5_4	North End Rd NB	6190	103	6190	103	0%	0%
4_5	North End Rd SB	5605	152	5605	152	0%	0%

Table 15.8: Comparison of AADT-24 vehicle flows for the 2025 Construction Year DN and DS scenarios

Note: links with a significant increase in traffic (i.e. >30%) are shown in red text. Links with no change in traffic are shown in grey text.

15.122 Table 15.8 identifies a minimal percentage increase in HGVs as a result of the construction of the proposed development across the local highway network. The site access road off Ford Road will experience an increase in two-way HGV movements of 81% due to construction activities, representing a medium impact, but this is an internal access link and is not considered a sensitive receptor. Therefore, the significance of effect is considered slight adverse and not significant.

15.123 Furthermore, the SLR will operate within the permitted HGV cap of up to 240 HGV movements to and from the site on the SLR per day, as per the SLR planning permission. In addition, construction traffic will be managed through the CEMP to minimise impact on the site access road, including scheduling movements outside of peak hours and encouraging construction workers to car share or use sustainable modes of travel to the site. This will reduce the magnitude of impact and significance of effect further.

15.124 It is anticipated that Ford Road/Church Lane (southbound), south of the site access road, will experience an increase in HGV movements of 34%. When combined with change in northbound movements this reflects an increase of

30.3% in two-way HGV movements. This is considered a small impact, however receptor sensitivity is considered to be low and the significance of effect is therefore slight adverse and not significant.

15.125 Change in HGV movements on all other links, including the sensitive receptors identified in section 15.67, are considered to have a negligible impact and are therefore not considered significant.

15.126 An assessment of the site access / Ford Road junction is presented in the Transport Assessment (Technical Appendix K). The junction assessment demonstrates that the site access / Ford Road junction will operate within capacity during the AM and PM network peaks with construction phase traffic.

15.127 Furthermore, an assessment of the existing Church Lane / A259 roundabout is presented in the Transport Assessment (Technical Appendix K). The junction assessment demonstrates that the Church Lane / A259 roundabout has capacity issues without construction phase traffic in 2025, and the addition of construction traffic has minimal impact on the roundabout's performance. Modelling has not been undertaken for the operational phase, given that traffic flows through the junction are anticipated to be lower during the operational phase compared to the construction phase, and as such operational traffic flows will not exceed the permitted HGV capacity cap. It is understood that a mitigation scheme has been secured to increase capacity of this roundabout.

15.128 Based upon the above, the receptor sensitivity on links with an increase in traffic of over 30% is considered to be low. The magnitude of impact is considered to be small due to the overall marginal increase in construction traffic movements on the local highway network, and the minimal impacts identified through junction assessment. The overall significance of effect is therefore considered to be slight adverse, and not significant.

Driver Delay

15.129 It is anticipated that there may be some delay to road users at times due to construction vehicles entering / exiting the application site. However, the outline CEMP commits to ensuring deliveries are co-ordinated to avoid vehicles being held up on the local highway and that, wherever feasible, deliveries would be undertaken outside of peak hours. The junction assessment demonstrates that the site access/Ford Road junction operates within capacity during the AM and PM network peaks with construction phase traffic, and minimal delay is expected.

15.130 Based upon the above, the receptor sensitivity is considered to be low. The magnitude of impact is considered to be small due to the overall marginal increase in construction traffic movements on the local highway network. In addition, measures would be implemented as set out in the outline CEMP to manage the volume of construction traffic and propose safety measures. The overall significance of effect is therefore considered to be slight adverse, and not significant.

Public transport

- 15.131 During the construction phase there would be no anticipated change to access to local public transport services.
- 15.132 Construction workers will be encouraged to use public transport services, where feasible. Any potential additional demand in public transport services is considered beneficial.
- 15.133 Based upon the above, the receptor sensitivity is considered to be medium. The magnitude of impact is considered to be negligible with no change anticipated to access or demand to public transport. The overall significance of effect is therefore considered to be negligible, and not significant.

Pedestrian and cyclist severance, delay, amenity, fear and intimidation

- 15.134 The PRowS identified within the study area are separate from the proposed construction route and will not be affected. Access to the site for pedestrians would remain unchanged via footpaths 200.3 and 200.4, 363, 366.1 and 366. The public right of way in the north eastern corner, will remain in its current form and will be kept open during construction with appropriate fencing in place for safety. However, there is no direct access between this public right of way and the application site. There are no dedicated cycleways along the construction route, although cyclists will use the local highway network.
- 15.135 Due to the required construction traffic routing there are no effects predicted on the following sensitive receptors:
- Yapton Road – adjacent residential properties on Horsemere Green Lane
 - Designated PRow within the study area
- 15.136 During the construction peak, there would be a 30% increase in two-way HGV movements along Ford Road/Church Lane, south of the junction with the site access road (27% increase in northbound HGV movements and 34% increase in southbound HGV movements), adjacent to the residential properties on Nelson Row. The IEMA guidelines suggest that changes in flow of 30-60% could produce slight changes in pedestrian severance, which are not considered significant.
- 15.137 IEMA guidelines also suggest road width, maximum speed limits and pedestrian/cyclist amenity have bearing on severance. Ford Road is circa 6.9 m wide adjacent to the application site; circa 6.5 m wide adjacent to Nelson Row; and circa 9.8 m wide at the pedestrian crossing 550 m south of the junction with the site access road.
- 15.138 Pedestrians heading south from Nelson Row along Ford Road, will be able to use the signalised crossing to the south to safely cross Ford Road. Pedestrians walking north from Nelson Row will be required to cross Ford Road to the footway on the opposite side and may incur some delay due to the increase in construction traffic. The number of pedestrians using this route is considered to be low in view of the limited number of residential properties on Nelson Row. Combined with the 40 mph maximum speed limit, these conditions are

considered to have a negligible impact on pedestrian/cyclist severance on Ford Road and therefore are not considered significant.

- 15.139 An increase in two-way HGV movements of 9.6% and 13% are anticipated on A259 Crookthorn Lane and A259 Grevatt's Lane, respectively, which is considered a negligible impact in terms of severance and therefore not considered significant.
- 15.140 In terms of fear and intimidation experienced by pedestrians and cyclists, IEMA guidelines suggest 18-hour traffic flows offer a good first approximation. The following 18-hour annual average weekday traffic (AAWT-18) flows are attached to the Transport Assessment (Technical Appendix K). In the 2025 'Without Construction' scenario, an average hourly two-way flow of 1,102 vehicles/hour and 675 total two-way HGV movements over an 18-hour day is anticipated on Ford Road/Church Lane. This equates to 'moderate' fear and intimidation experienced by pedestrians and cyclists. In the 2025 'With Construction' scenario, an average hourly two-way flow of 1,138 vehicles/hour and 905 total two-way HGV movements over an 18-hour day is anticipated on Ford Road/Church Lane. This also equates to 'moderate' fear and intimidation experienced by pedestrians and cyclists. Therefore, it is considered that there will be no change in fear and intimidation on Ford Road/Church Lane due to the proposed development, and as such the impact is considered to be negligible and not considered significant.
- 15.141 Based upon the above, the receptor sensitivity is considered to be medium. The magnitude of impact is considered to be small due to the marginal increase in construction movements identified in table 15.8. There would be little change in severance, pedestrian delay, amenity or fear and intimidation for pedestrians and cyclists resulting from this change in HGV movements against the existing background traffic. The overall significance of effect for pedestrians and cyclists is therefore considered to be slight adverse, and not significant.

Accidents and safety

- 15.142 An outline CEMP has been prepared (see Technical Appendix L) which seeks to minimise the impact of construction activities and traffic on the surrounding area and recognises the safety of other road users, pedestrians and cyclists.
- 15.143 Based upon the small increase in construction traffic along Ford Road, adjacent to the residential properties at Nelson Row and the potential impact on pedestrians and cyclists, the receptor sensitivity is considered to be medium. The magnitude of impact is considered to be small due to the small increase in traffic and the measures outlined in the CEMP to manage the volume of construction traffic and proposed safety measures. The overall significance of effect for accidents and safety is therefore considered to be slight adverse, and not significant.

Grid connection

- 15.144 The proposed ERF will export the majority of the power generated to the National Grid. The local distribution network operator will be responsible for connecting the ERF to the National Grid. It will also be responsible for obtaining any permissions or permits required to develop the necessary connection

infrastructure. As such the planning application boundary does not include the grid connection route from the proposed development site to the existing substation to the north of Arundel Road / A27 near Crockerhill, which is the closest available point of connection for the ERF.

15.145 It is assumed that the off-site grid connection provided by SSE will involve the excavation of a trench within public highway (i.e. along existing roads and paths). It is likely that the installation contractor will seek to open as much trench at a time as possible so that suitable ducts can be laid quickly. Once the trench is backfilled and reinstated the electricity cable will be drawn through the ducts. Where the cable crosses the railway line, it is anticipated that directional drilling will be employed to install the cable beneath the railway lines to ensure minimal disturbance to both road traffic and rail movements.

15.146 For the purposes of the assessment the 12.1km connection route indicated by SSE in correspondence with the applicants in April 2020 has been assessed, as shown in figure 5.1. In the short term the installation of the cable is likely to affect traffic flows on:

- Ford Road
- Ford Lane
- North End Road / B2132 / Yapton Lane
- A27 / Arundel Road
- Earham Lane at Crockerhill

15.147 The effects of the construction would be mitigated through the implementation of traffic management measures and consultation with key stakeholders. The outline CEMP would include details of the following:

- Preferred hours of deliveries and removals (out of peak hours)
- Agreed construction traffic routing
- Road cleaning facility provisioning
- Off-loading and storage areas
- Personnel and vehicle segregation
- Equipment e.g. temporary fencing, signage etc.
- Site inductions

Effects post-construction (2026 onwards)

15.148 Based on the expected construction programme, it is anticipated the WSTF will become operational in month 8, and the ERF will become operational in month 46. Construction works will complete in month 51. This assessment considers the long-term effects of operational traffic once all construction works are complete.

15.149 All vehicles will access the proposed ERF and WSTF from Ford Road and the existing site access road. No changes are proposed to the local highway network, footways or cycleways.

15.150 Full details of the site's operation are provided in chapter 3. The ERF and WSTF will operate from 06:00 to 20:00 Mondays to Fridays, 08:00 to 18:00 on Saturdays.

15.151 The ERF will employ a total of 54 staff, mostly in a shift pattern. At any given time approximately 26 personnel will be present on site during the day. The site will operate 24 hours per day, with the shift changeover taking place outside of the peak traffic flow hours on the public highway. Overall staff traffic generation will therefore be minimal.

15.152 The WSTF will also employ a total of 4 staff. These staff will work on a single shift basis, with start and finish times varying depending on the unique nature of each individual role.

15.153 All operational HGVs will access / depart the site via the existing site access road, to / from the south on Ford Road and then onto the A259 and the wider network. No operational vehicles will be permitted to leave or access the site from the northern stretch of Ford Lane.

15.154 Typical daily traffic generation in the operational phase for staff vehicles and HGVs has been based on anticipated waste throughput and experience in the operation of similar sites. The estimated daily traffic generation is profiled across the day according to the following hourly profile assumptions:

- ERF Operational staff vehicles – based on estimates of shift patterns by ERF plant designers.
- ERF Operational HGVs - HGV arrival and departure trip profile for Lakeside ERF, another ERF facility operated by Grundon and Viridor.
- WSTF Operational staff vehicles - estimated based on the current operation.
- WSTF Operational HGVs – HGV arrival and departure trip profile at the existing Ford WTS recorded by the on-site weighbridge from October 2019 to January 2020.

Local highway network

15.155 The vehicle movements for the 2026 Opening Year is presented in table 15.9, comparing the 'Without Development' (DN) and 'With Development' (DS) scenarios. The definition of these scenarios is detailed further in the Transport Assessment (Technical Appendix K).

Link ID	Name	2026 Without Development (DN) AADT-24		2026 With Development (DS) AADT-24		% Change between DS and DN scenarios AADT-24	
		Vehicles (one-way)	Of which HGV	Vehicles (one-way)	Of which HGV	Vehicles (one-way)	Of which HGV
1_4	North End Rd SB	5846	256	5846	256	0%	0%
4_1	North End Rd NB	5449	219	5449	219	0%	0%
4_16	Ford Ln EB	5033	176	5033	176	0%	0%
16_4	Ford Ln WB	4457	146	4457	146	0%	0%
16_3	Ford Ln EB	3894	140	3894	140	0%	0%
3_16	Ford Ln WB	2668	85	2668	85	0%	0%
2_3	Station Rd SB	3915	128	3920	128	0%	0%

Link ID	Name	2026 Without Development (DN) AADT-24		2026 With Development (DS) AADT-24		% Change between DS and DN scenarios AADT-24	
		Vehicles (one-way)	Of which HGV	Vehicles (one-way)	Of which HGV	Vehicles (one-way)	Of which HGV
3_2	Station Rd NB	4052	140	4056	140	0%	0%
3_14	Ford Rd SB	6086	219	6090	219	0%	0%
14_3	Ford Rd NB	4993	176	4997	176	0%	0%
14_7	Ford Rd Access	417	122	552	215	32%	77%
7_14	Ford Rd Access	300	122	435	215	45%	77%
8_8a	Rollaston Park (EB)	1584	30	1584	30	0%	0%
8a_8	Rollaston Park (WB)	1478	85	1478	85	0%	0%
14_9	Church Lane SB	10328	292	10459	385	1%	32%
9_14	Church Lane NB	8986	365	9117	459	1%	26%
9_11	A259 Crookthorn Ln WB	16062	425	16128	472	0%	11%
11_9	A259 Crookthorn Ln EB	15425	601	15491	649	0%	8%
9_10	A259 Crookthorn Ln EB	19297	711	19362	757	0%	7%
10_9	A259 Crookthorn Ln WB	18400	602	18465	648	0%	8%
9_9a	Crookthorn Ln SB	202	6	202	6	0%	0%
9a_9	Crookthorn Ln NB	395	12	395	12	0%	0%
11_15	B2233 Yapton Rd NB	4808	102	4808	102	0%	0%
15_11	B2233 Yapton Rd SB	4853	253	4853	253	0%	0%
11_12	A259 Grevatt's Ln WB	13192	347	13257	394	0%	14%
12_11	A259 Grevatt's Ln EB	11999	408	12064	455	1%	12%
15_8	B2233 Yapton Rd NB	4923	116	4923	116	0%	0%
8_15	B2233 Yapton Rd SB	6150	219	6150	219	0%	0%
8_6	A259 Burndell Rd WB	6046	146	6046	146	0%	0%
6_8	A259 Burndell Rd EB	6952	176	6952	176	0%	0%
6_13	Bilsham Rd SB	3935	97	3935	97	0%	0%
13_6	Bilsham Rd NB	6114	122	6114	122	0%	0%
6_5	B2233 Main Rd WB	9644	183	9644	183	0%	0%
5_6	B2233 Main Rd EB	8371	189	8371	189	0%	0%
5_4	North End Rd NB	6207	103	6207	103	0%	0%
4_5	North End Rd SB	5623	152	5623	152	0%	0%

Table 15.9: Comparison of AADT-24 vehicle flows for the 2026 Opening Year DN and DS scenarios

Note: links with a significant increase in traffic (i.e. >30%) are shown in red text. Links with no change in traffic are shown in grey text.

15.156 Table 15.9 identifies a minimal percentage increase in HGVs as a result of the operation of the proposed development across the local highway network. The site access road off Ford Road will experience an increase in two-way HGV movements of 77%, representing a medium impact, but this is an internal access link and is not considered a sensitive receptor. Furthermore, the SLR will operate within the permitted HGV cap of up to 240 HGV movements to and from the site on the SLR per day, as per the SLR planning permission. Therefore, the significance of effect is considered slight adverse and not significant.

15.157 Moreover, it is anticipated that Ford Road/Church Lane (southbound), south of the site access road, will experience an increase in HGV movements of 32% which could be considered to have a small impact. However, when combined with change in northbound movements this reflects an increase of 28% in two-

way HGV movements. This is therefore considered a negligible impact overall, and not significant.

15.158 Change in HGV movements on all other links, including the sensitive receptors identified in section 15.67, are considered to have a negligible impact and are therefore not considered significant. An assessment of the site access / Ford Road junction is presented in the Transport Assessment (Technical Appendix K). The junction assessment demonstrates that the site access / Ford Road junction will operate within capacity during the AM and PM network peaks with operational phase traffic.

15.159 Furthermore, an assessment of the existing Church Lane / A259 roundabout is presented in the Transport Assessment (Technical Appendix K). The junction assessment demonstrates that the Church Lane / A259 roundabout has capacity issues without construction phase traffic in 2025, and the addition of construction traffic has minimal impact on the roundabout's performance. Modelling has not been undertaken for the operational phase, given that traffic flows through the junction are anticipated to be lower during the operational phase compared to the construction phase. It is understood that a mitigation scheme has been secured to increase capacity of this roundabout.

Driver Delay

15.160 It is anticipated that there may be some delay to road users at times due to vehicles associated with the proposed development entering / exiting the proposed development site. An assessment of the site access / Ford Road junction is presented in the Transport Assessment. The junction assessment demonstrates that the site access/Ford Road junction operates within capacity during the AM and PM network peaks with operational phase traffic, and minimal delay is expected.

15.161 Based upon the above, the receptor sensitivity is considered to be low. The magnitude of impact is considered to be medium due to the overall marginal increase in traffic movements on the local highway network related to the proposed development, and potential for delay to drivers. The overall significance of effect is therefore considered to be slight adverse, and not significant.

Public transport

15.162 There are no known changes to public transport access from the site or changes to services in the future baseline. Staff will be encouraged to access the site using public transport services where feasible. Any potential additional demand in public transport services is considered beneficial.

15.163 Based upon the above, the receptor sensitivity is considered to be medium. The magnitude of impact is considered to be negligible. The overall significance of effect is therefore considered to be negligible, and not significant.

Pedestrian and cyclist severance, delay, amenity, fear and intimidation

15.164 There are minimal changes to traffic resulting from the proposed development at the following sensitive receptors identified:

- Yapton Road – adjacent residential properties on Horsemere Green Lane
- Designated PRow within the study area

- 15.165 There is a 28% increase in two-way HGV movements resulting from the proposed development along Ford Road/Church Lane, adjacent to the residential properties on Nelson Road. The IEMA guidelines suggest that changes in traffic flow of under 30% would produce negligible changes in pedestrian severance.
- 15.166 IEMA guidelines also suggest road width, maximum speed limits and pedestrian/cyclist amenity have bearing on severance. Ford Road is circa 6.9 m wide adjacent to the application site; circa 6.5 m wide adjacent to Nelson Row ; and circa 9.8 m wide at the pedestrian crossing 550 m south of the junction with the site access road. Combined the 40 mph maximum speed limit, these conditions are considered to have a negligible impact on pedestrian/cyclist severance on Ford Road.
- 15.167 Pedestrians heading south from Nelson Row along Ford Road, would be able to use the signalised crossing to the south to safely cross Ford Road. Pedestrians walking north from Nelson Row would be required to cross Ford Road to the footway on the opposite side and may incur some delay due to the increase in construction traffic. The number of pedestrians using this route is considered to be low in view of the limited number of residential properties on Nelson Row, and the lack of frontages and trip attractors on the opposite side of Ford Road.
- 15.168 An increase in two-way HGV movements of 9.2% and 12.5% are anticipated on A259 Crookthorn Lane and A259 Grevatt's Lane, respectively, which is considered a negligible impact in terms of severance.
- 15.169 In terms of fear and intimidation experienced by pedestrians and cyclists, IEMA guidelines suggest 18-hour traffic flows offer a good first approximation. The following 18-hour annual average weekday traffic (AAWT-18) flows are attached to the Transport Assessment (Technical Appendix K). In the 2026 'Without Development' scenario, an average hourly two-way flow of 1,105 vehicles/hour and 677 total two-way HGV movements over an 18-hour day is anticipated on Ford Road/Church Lane. This equates to 'moderate' fear and intimidation experienced by pedestrians and cyclists. In the 2026 'With Development' scenario, an average hourly two-way flow of 1,123 vehicles/hour and 895 total two-way HGV movements over an 18-hour day is anticipated on Ford Road/Church Lane. This also equates to 'moderate' fear and intimidation experienced by pedestrians and cyclists. Therefore, it is considered that there will be no change in fear and intimidation on Ford Road/Church Lane due to the proposed development, and as such the impact is considered negligible and not significant.
- 15.170 Based upon the above, the receptor sensitivity is considered to be medium. The magnitude of impact is considered to be small noting the overall increase in vehicle movements identified in table 15.9. Overall, there would be little change in severance, pedestrian delay, amenity or fear and intimidation resulting from this change in traffic movements against the existing background traffic. The overall significance of effect for pedestrians is therefore considered to be slight adverse, and not significant.

Accidents and safety

15.171 No changes to the highway network are proposed as a result of the proposed development. Receptor sensitivity is considered to be low. The magnitude of impact is considered to be small due to the overall minor increase in traffic. The overall significance of effect for accidents and safety is therefore considered to be slight adverse, and not significant.

Mitigation and monitoring

15.172 No additional mitigation measures beyond those already incorporated into the proposed development and set out in the outline Construction Environmental Management Plan would be required during either the construction phase or for the operational proposed development.

Residual effects

15.173 No significant residual traffic and transport effects are predicted as a result of the proposed development.

Cumulative effects

15.174 The assessment has considered committed (cumulative) development traffic as identified in detail in the Transport Assessment (Technical Appendix K) and summarised in sections 15.45 and 15.46. No significant traffic and transport effects are predicated as a result of the proposed development.

Fall-back position

15.175 In 2015, Grundon Waste Management Ltd secured planning permission for an energy from waste facility and a materials recovery facility, known as the Circular Technology Park (application reference: WSCC/096/13/F). The application was subject to Environmental Impact Assessment (EIA) and was accompanied by an Environmental Statement (ES) written in October 2013. The extant consent for the site represents a theoretical alternative development scenario *or fall back position* with its own potential effects. The potential traffic and transport effects of the consented scheme have been summarised for comparative purposes.

15.176 The 2013 ES identified the following effects on the wider road network:

Construction phase:

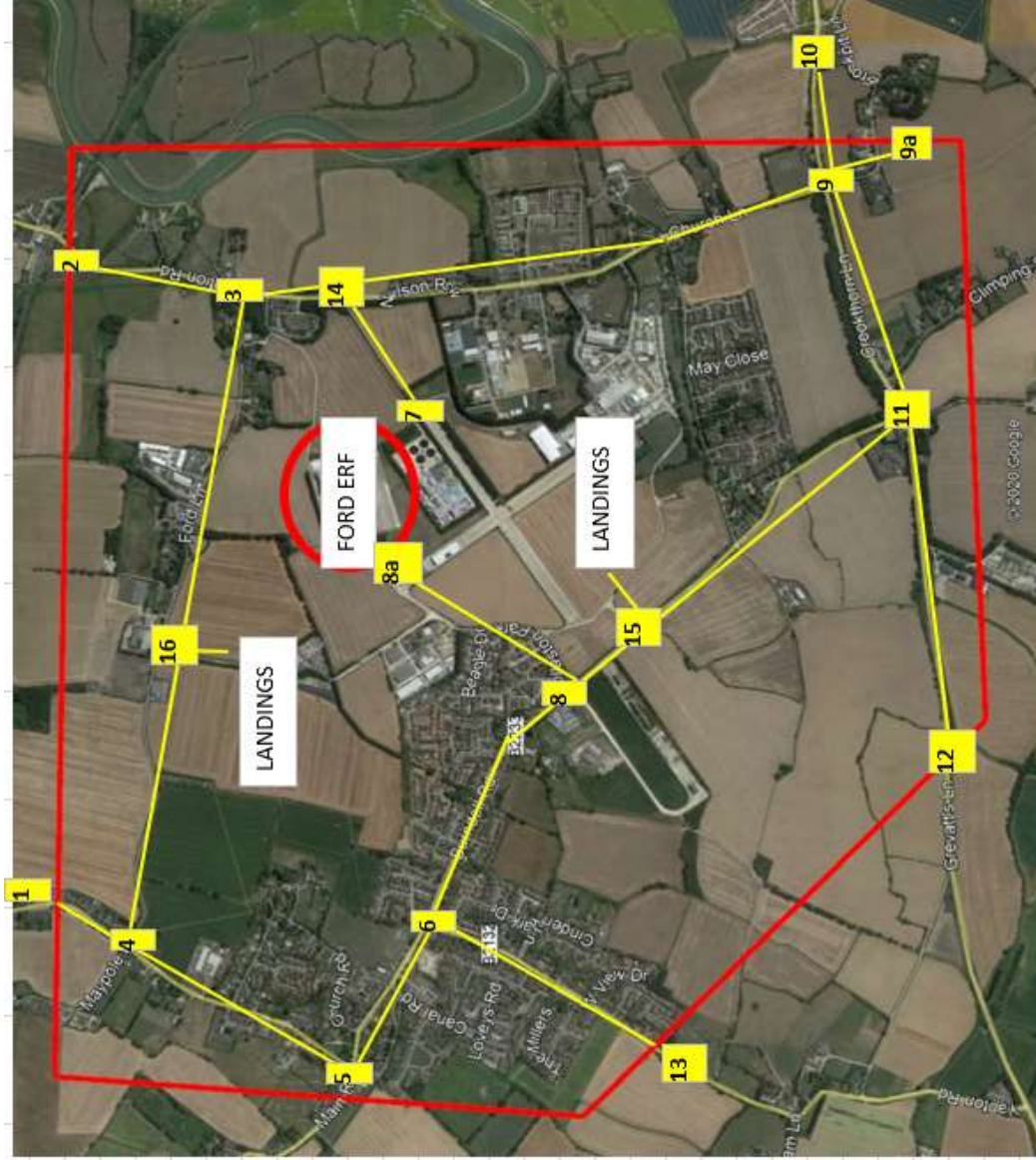
- Site access east – Minor Adverse
- Site access west and Rollaston Park – Minor Adverse
- Ford Road – Negligible
- Yapton Road – Negligible
- A259 – Negligible

Operational phase:

- Site access east – Minor Beneficial
- Site access west and Rollaston Park – Minor Adverse

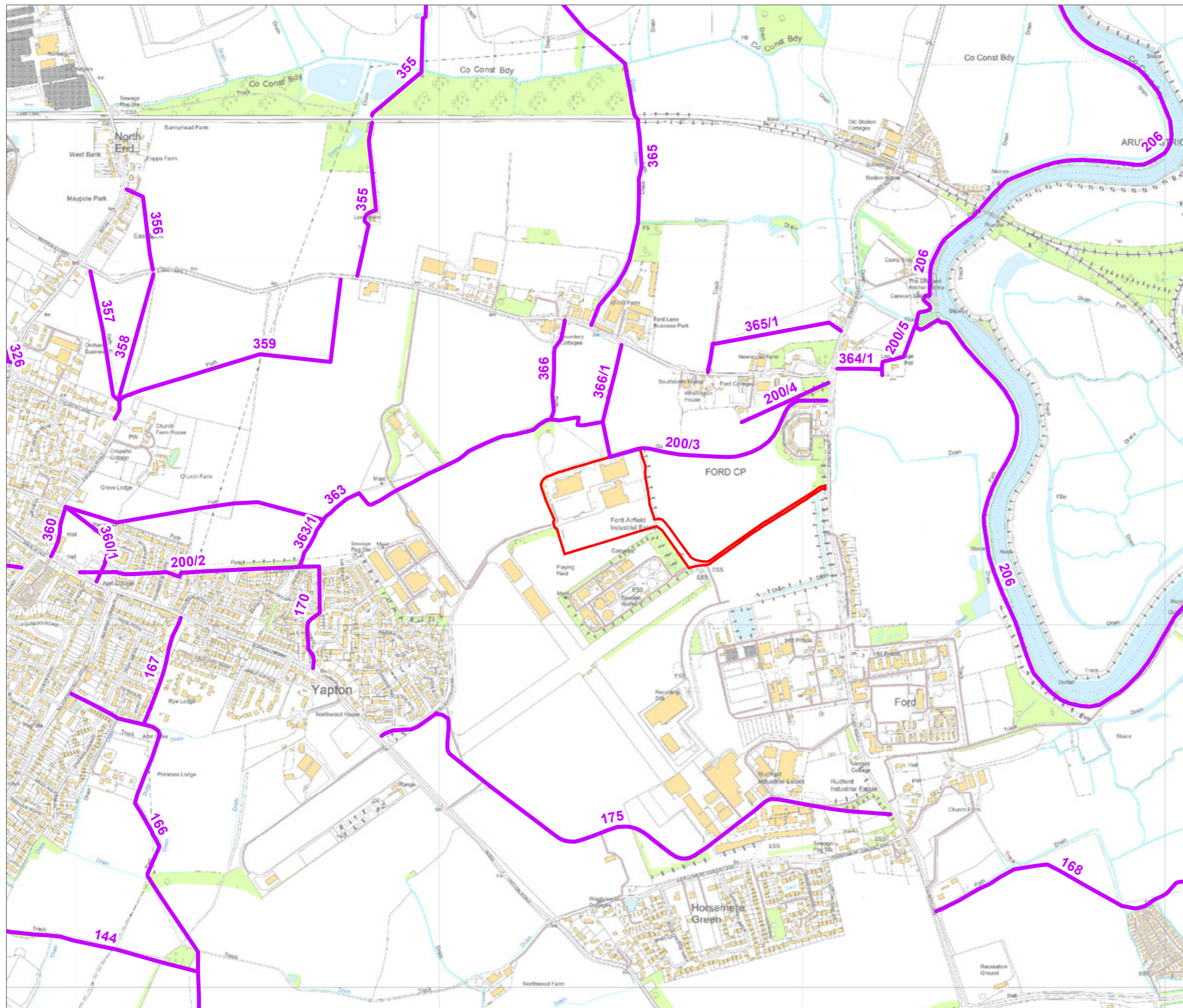
- Ford Road – Negligible
- Yapton Road – Negligible
- A259 – Negligible

15.177 None of the effects noted above were considered to be significant. The assessment undertaken within this ES has also not identified any significant impacts, thus the findings of both assessments are considered to be consistent.

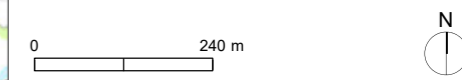


From	To	Link ID	Name
1	4	1_4	North End Rd SB
4	1	4_1	North End Rd NB
4	16	4_16	Ford Ln EB
16	4	16_4	Ford Ln WB
16	3	16_3	Ford Ln EB
3	16	3_16	Ford Ln WB
2	3	2_3	Station Rd SB
3	2	3_2	Station Rd NB
3	14	3_14	Ford Rd SB
14	3	14_3	Ford Rd NB
14	7	14_7	Ford Rd Access
7	14	7_14	Ford Rd Access
8	8a	8_8a	Rollaston Park (EB)
8a	8	8a_8	Rollaston Park (WB)
14	9	14_9	Church Lane SB
9	14	9_14	Church Lane NB
9	11	9_11	A259 Crookthorn Ln WB
11	9	11_9	A259 Crookthorn Ln EB
9	10	9_10	A259 Crookthorn Ln EB
10	9	10_9	A259 Crookthorn Ln WB
9	9a	9_9a	Crookthorn Ln SB
9a	9	9a_9	Crookthorn Ln NB
11	15	11_15	B2233 Yapton Rd NB
15	11	15_11	B2233 Yapton Rd SB
11	12	11_12	A259 Grevatt's Ln WB
12	11	12_11	A259 Grevatt's Ln EB
15	8	15_8	B2233 Yapton Rd NB
8	15	8_15	B2233 Yapton Rd SB
8	6	8_6	A259 Burredell Rd WB
6	8	6_8	A259 Burredell Rd EB
6	13	6_13	Blisham Rd SB
13	6	13_6	Blisham Rd NB
6	5	6_5	B2233 Main Rd WB
5	6	5_6	B2233 Main Rd EB
5	4	5_4	North End Rd NB
4	5	4_5	North End Rd SB

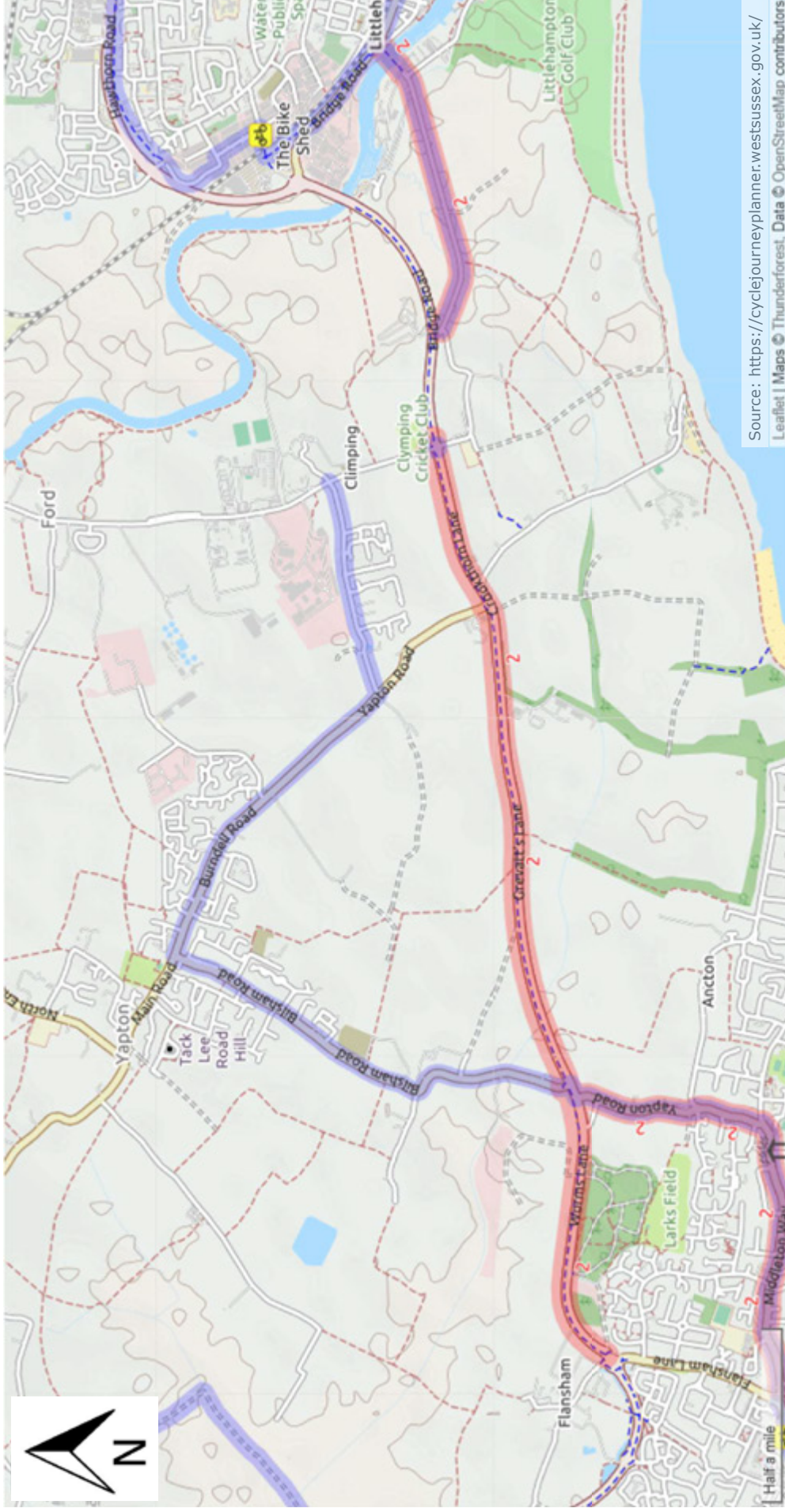
Figure 15.1
Network links



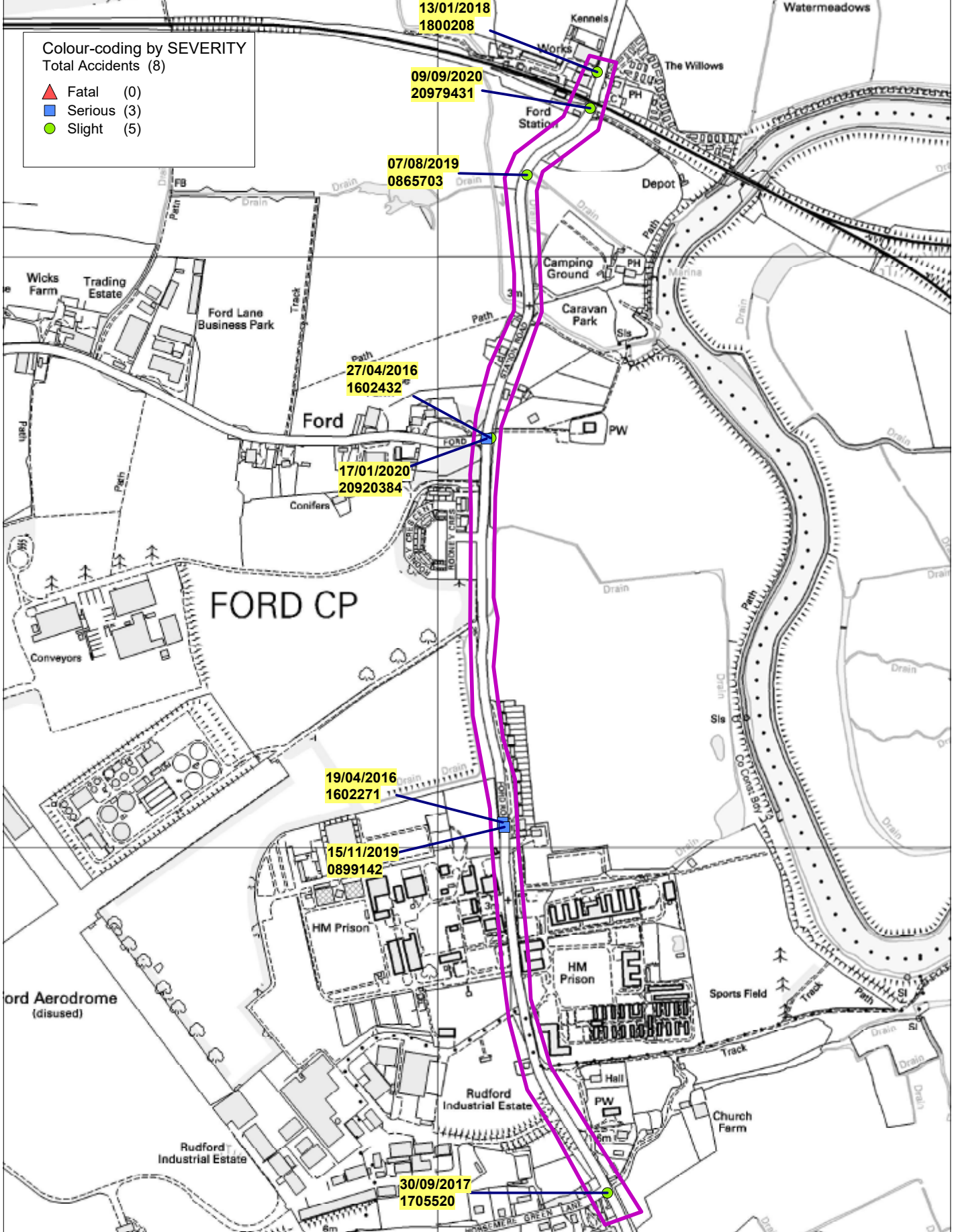
- Site boundary
- Public Rights of Way



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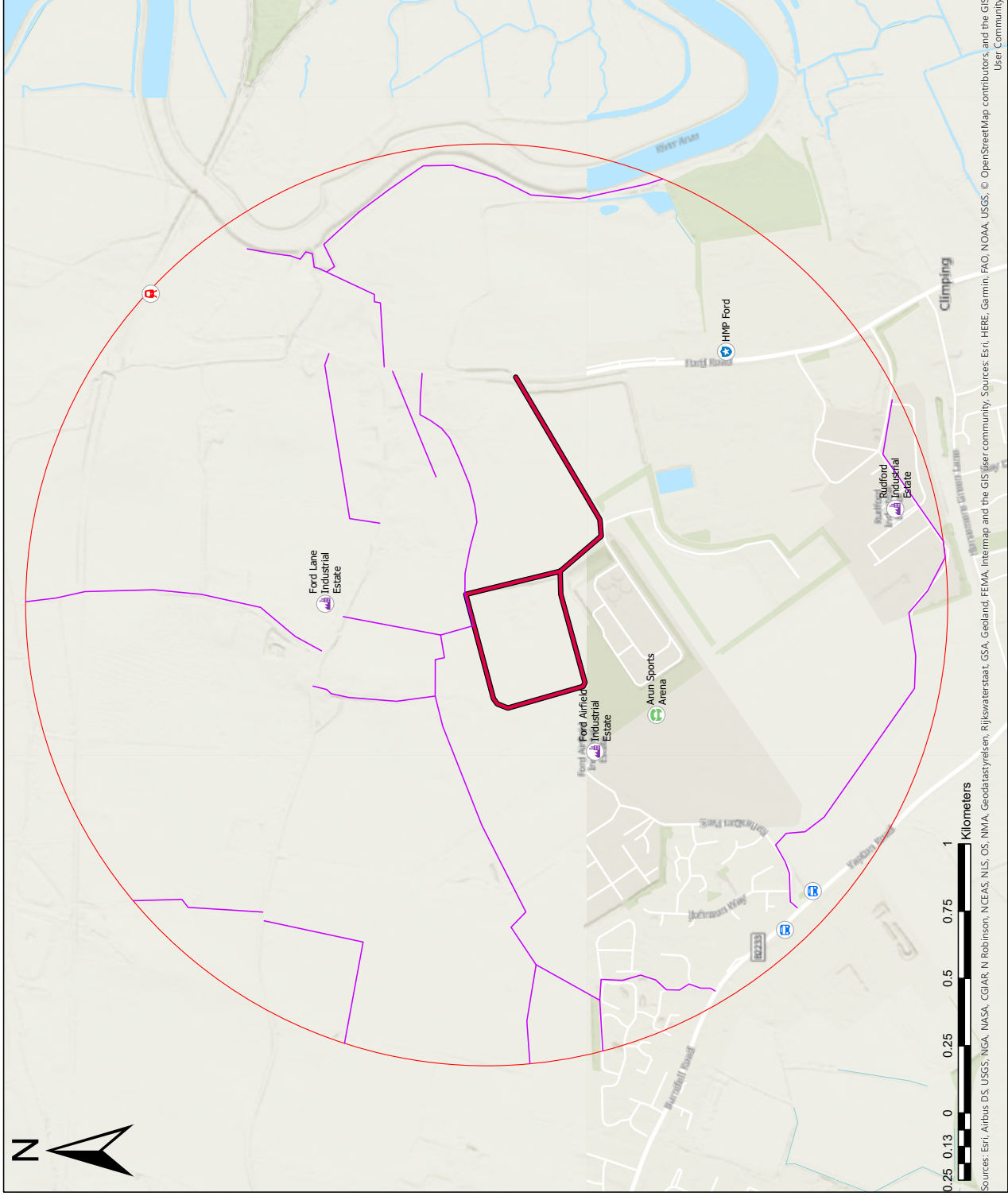


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Source:

Sussex Safer Roads
PARTNERSHIP



- Study Area
 - Proposed Development Site
 - Bus Stops
 - Rail Station
 - PRoW
- Existing Local Amenities**
- Employment Land Use
 - Leisure Land Use
 - Prison



Figure 15.5
Key trip generators / local amenities within the study area

Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatasyrstelen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community. Sources: Esri, HERE, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community