



# **Sevington Inland Border Facility**

An Analysis of the Likely Environmental Effects of  
the Development Report

18 November 2020

Confidential



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# 1 Introduction

## 1.1 Purpose of the Report

Mott MacDonald has been appointed by the Department for Transport (DfT) to undertake an analysis of the likely environmental effects of the development for the proposed use of a site at Sevington near Ashford in Kent (hereafter referred to as 'the site') for a temporary Inland Border Facility (IBF) (hereafter referred to as 'the scheme'). The analysis is presented within this report, and it is required as per article 4(2)(h) of the *Town and Country Planning (Border Facilities and Infrastructure) (EU Exit) (England) Special Development Order 2020*. The objective of this analysis is to identify any likely adverse or beneficial significant environmental effects as a result of the scheme, and where relevant outline the measures incorporated in the scheme design and delivery methods to avoid, eliminate or reduce what might otherwise have been significant adverse environmental effects.

Chapter 2 of this report describes the physical characteristics and location of the scheme. Chapter 3 of this report describes the environmental baseline, environmental constraints, sensitivity of the environmental receptors and the potential environmental effects of the scheme. The analysis has been undertaken in accordance with the guidance provided in the Sustainability and Environmental Sections of the *Design Manual for Roads and Bridges* (DMRB). As the scheme is principally a transport related project, and as such, the DMRB provides the most appropriate published guidance for undertaking the analysis of environmental effects. Additional discipline specific guidance has also been applied where relevant, in order to provide a robust analysis of the effects. Relevant guidance is referenced for each discipline in Chapter 3 of this report.

## 1.2 Screening under the Environmental Impact Assessment (EIA) Regulations

*The Town and Country Planning (Environmental Impact Assessment) Regulations 2017* (as amended) ('the EIA Regulations') set out procedures for determining whether or not development is 'EIA Development' for which an Environmental Statement must be prepared to accompany a planning proposal. The EIA Regulations defines 'EIA Development' as either:

- (a) "Schedule 1 development; or,
- (b) *Schedule 2 development likely to have significant effects on the environment by virtue of factors such as its nature, size or location.*"

Regulation 2(1) defines 'Schedule 2 development' as:

*"Development, other than exempt development, of a description mentioned in Column 1 of the table in Schedule 2 where –*

- (a) *Any part of the development is to be carried out in a sensitive area; or,*
- (b) *Any applicable threshold or criterion in the corresponding part of Column 2 of that table is respectively exceeded or met in relation to that development."*

The scheme does not comprise development listed under Schedule 1 of the EIA Regulations. However, there are particular provisions under Schedule 2 that are of relevance. The scheme, as described in Chapter 2 of this report is likely to comprise development listed under Column 1 of Schedule 2, i.e. *"Category 10(b) Urban development projects, including the construction of*

*shopping centres, car parks, sports stadiums, leisure centres and multiplex cinemas, where the overall area of the development exceeds 5 hectares.”*

### 1.2.1 Selection Criteria for Screening

Schedule 3 of the EIA Regulations sets out selection criteria for screening Schedule 2 development, which are the criteria used to determine whether the development is considered to be EIA Development.

Table 1.1 outlines where the relevant Schedule 3 selection criteria can be found within this report.

**Table 1.1 Locations within this Report of the Selection Criteria for Screening Schedule 2 Development**

Selection criteria for screening Schedule 2 development	Location within the report
<b>1. Characteristics of development</b>	
(a) the size and design of the whole development	2.2 and 2.3
(b) cumulation with other existing development and/or approved development	3.12
(c) the use of natural resources, in particular land, soil, water and biodiversity	3.5, 3.6, 3.7, 3.10 and 3.11
(d) the production of waste	3.7
(e) pollution and nuisances	3.2, 3.5, 3.7, 3.8, 3.10 and 3.15
(f) the risk of major accidents and/or disasters relevant to the development concerned, including those caused by climate change, in accordance with scientific knowledge	3.11 and 3.14
(g) the risks to human health (for example, due to water contamination or air pollution)	3.2, 3.4, 3.5, 3.8, 3.9, 3.10 and 3.15
<b>2. Location of development</b>	
(a) the existing and approved land use	2.2 and 2.3
(b) the relative abundance, availability, quality and regenerative capacity of natural resources (including soil, land, water and biodiversity) in the area and its underground	NA – the scheme is not anticipated to affect the abundance, availability, quality or regenerative capacity of natural resources
(c) the absorption capacity of the natural environment, paying particular attention to the following areas	
(i) wetlands, riparian areas, river mouths	NA – the scheme is not located within and would not affect a wetland, riparian area or river mouth
(ii) coastal zones and the marine environment	NA – the scheme is not located within and would not affect a coastal zone and has no interactions with the marine environment
(iii) mountain and forest areas	NA – the scheme is not located within and would not affect a mountainous or forested area
(iv) nature reserves and parks	3.4 and 3.6 The scheme location is not situated within any nature reserves or parks. Designations within the Zone of Influence (ZOI) are discussed under Section 3.6
(v) European sites and other areas classified or protected under national legislation	The scheme location is not situated within any European Sites and other areas classified or protected under national legislation. Designations within the Zone of Influence (ZOI) are discussed under Section 3.6
(vi) areas in which there has already been a failure to meet the environmental quality standards, laid down in	No Environment Agency pollution incidents have been declared on the site.

Selection criteria for screening Schedule 2 development	Location within the report
Union legislation and relevant to the project, or in which it is considered that there is such a failure	
(vii) densely populated areas	NA – the scheme is not located within a densely populated area
(viii) landscapes and sites of historical, cultural or archaeological significance	3.3
<b>3. Types and characteristics of the potential impact</b>	
(a) the magnitude and spatial extent of the impact (for example geographical area and size of the population likely to be affected)	2.2 and 3.2 – 3.14
(b) the nature of the impact	3.2 – 3.14
(c) the transboundary nature of the impact	N/A – the scheme is located entirely within the UK and no transboundary effects are anticipated.
(d) the intensity and complexity of the impact	3.2 – 3.14
(e) the probability of the impact	3.2 – 3.14
(f) the expected onset, duration, frequency and reversibility of the impact	3.2 – 3.14.
(g) the culmination of the impact with the impact of existing and/or approved development	3.12
(h) the possibility of effectively reducing the impact	Relevant mitigation measures are included within Sections 3.2 – 3.14 and outlined within the REAC (Appendix C).

## 2 The Scheme

### 2.1 Background to the need for the Special Development Order

The United Kingdom (UK) has left the European Union (EU) and a transition period is now in place until 31 December 2020. The transition period is a timeframe in which the UK and EU negotiate a future trading relationship, as the UK's membership of both the Single Market and the Customs Union will end. The current rules on trade, travel, and businesses for the EU and UK continue to apply during the transition period until new rules are brought into effect as of 1 January 2021.

With the new rules in place, there would be greater requirements for inland border infrastructure. This includes providing facilities to provide checks on goods moving under a Common Transit Convention and providing customs checks on non-transit imports and exports (including sanitary / phyto-sanitary checks where required).

Given the national importance of the timely delivery of border infrastructure, a Special Development Order (SDO) has been made under the provisions of Schedule 59 of the *Town and Country Planning Act 1990*. The SDO specifically is the *Town and Country Planning (Border Facilities and Infrastructure) (EU Exit) (England) Special Development Order 2020*<sup>1</sup>.

The SDO grants temporary planning permission for development consisting of the use of land in specified parts of England for border processing and the associated stationing of vehicles entering or leaving the UK, and the provision of facilities and infrastructure associated with this use.

The SDO requires a further site-specific 'Relevant Approval' from the Secretary of State for Housing, Communities and Local Government (MHCLG) for the use of the land and operations comprised in the development. Proposals granted under this SDO, grant temporary planning permission until 31 December 2025 (unless a shorter duration is specified) for the use of the sites for customs management and would require reinstating by 31 December 2026 (unless an earlier date is specified).

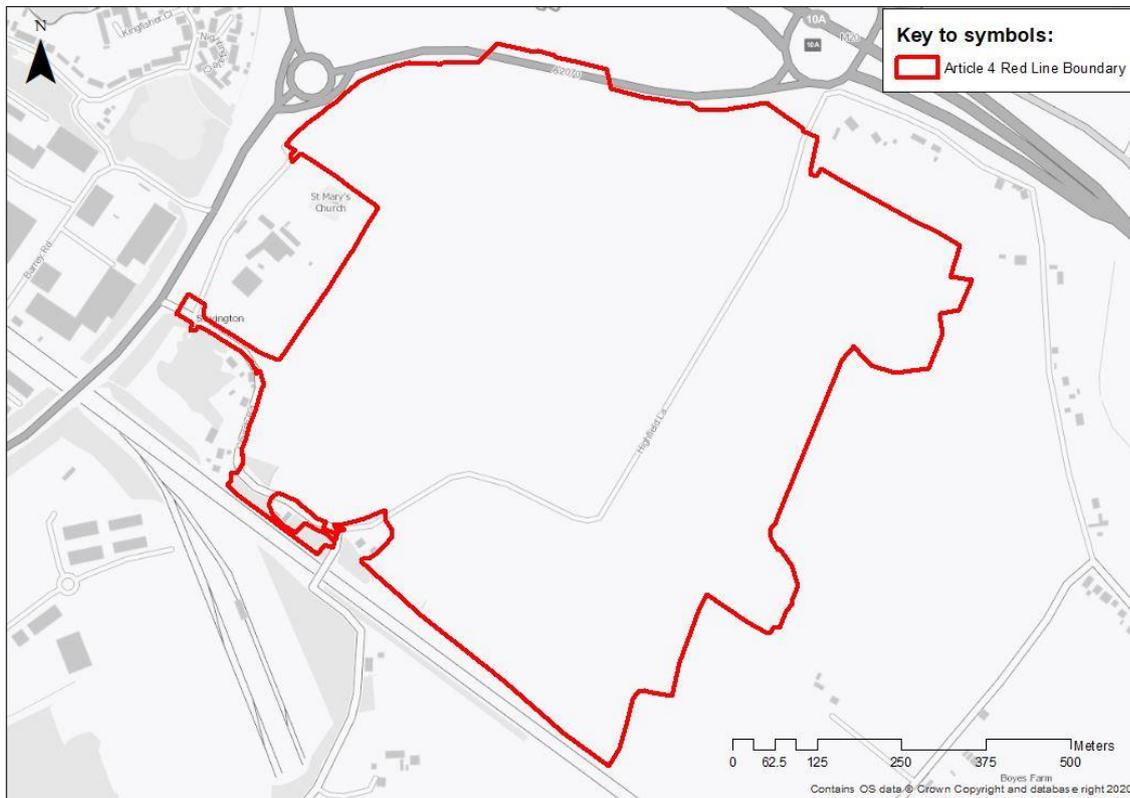
### 2.2 Site Description

The site is in a strategic location near the M20 Junction 10a, south of Ashford between Sevington and Mersham. The land is divided into two distinct parcels divided by Highfield Lane running north to south. The land which is the subject of the Article 4 submission is principally focussed on the western parcel which comprises 48ha of agricultural land, with all operational facilities limited to land west of Highfield Lane. A further 19.58ha of land to the east of Highfield Lane has been included in the Article 4 Red Line Boundary (drawing ref: 419419-MMD-00-MO-DR-Z-0002) in order to authorise the temporary stockpiling of material necessary for the earthworks and associated bunding and landscaping. There is also a smaller portion of land to the south adjacent to the railway line, made up of woodland included within the Article 4 Red Line Boundary. This small portion of land would be used for drainage and strategic utilities required to support the use of the site. In total the land subject to the Article 4 submission would be 67.58ha and is shown on plan Article 4 Land Plan (drawing ref: 419419-MMD-00-MO-DR-Z-0002) edged in red. The location of the site can be seen in Figure 2.1 below.

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<sup>1</sup> Town and Country Planning (Border Facilities and Infrastructure) (EU Exit) (England) Special Development Order 2020 (2020/928). Available at: <https://www.legislation.gov.uk/uksi/2020/928/contents/made>

**Figure 2.1 Site Location Plan**



Source: Mott MacDonald (2020)

The M20 motorway runs to the east of the site from Folkestone towards London. The M20 Junction 10 is located approximately 250m north-west, and the new M20 Junction 10a, now approaching completion, is located approximately 80m north-east. The A2070 is approaching construction completion and is located north of the site connecting an existing section of the A2070 to the new M20 Junction 10a. The site is also bounded by Church Road and the rail link for the Channel Tunnel to the south. Residential properties are present along Church Road and further east along Kingsford Street.

The local area is a mixture of residential, commercial and agricultural land use. Ashford, specifically Willesborough, is the main settlement located 100m west of the site. The existing land use and character of the area is a mixture of commercial and light industry in nature. Within the wider area, the William Harvey Hospital is located approximately 660m north of M20 Junction 10.

Immediately to the west of the site is the Church of St Mary, a Grade I Listed Building, and the Milbourn Equine Centre. Numerous Grade II Listed Buildings are located on the site's southern boundary along Church Road and Hatch Park Registered Park and Garden is situated approximately 390m north-east of the scheme at its closest point. The Church of St Mary has a significant visual relationship with the Church of St John the Baptist in Mersham, which is also a Grade I listed building. Visibility between the spires of the two churches is maintained on the route of the public footpath that runs across the site as described below. As such, the central corridor of the site along the route of this footpath is termed as the 'viewing corridor' between the two churches.

There are four Public Right of Ways (PROW) within the scheme boundary. There are two PROW which run west to east across the site (AE639 and AE363); AE639 runs across the western parcel of land and AE363 runs across the eastern parcel of land. Two PROW connect to AE639 (AE337A, and AE338) and run north to south in the western section of the site. A list of PROW within and surrounding the site is detailed in Section 3.9. The closest site designated for nature conservation is Ashford Green Corridors Local Nature Reserve (LNR) 50m west of the site. Hatch Park Site of Special Scientific Interest (SSSI) is 550m north-east. All are shown in the Environmental Constraints Plan in Appendix A.

The site is located within National Character Area (NCA) 120 (Wealden Greensand) and NCA 121 (Low Weald). These areas are rich in biodiversity, with woodland and farmland present across the landscape. Low Weald comprises an intricate mix of woodlands, much of it ancient, including extensive broadleaved oak over hazel and hornbeam coppice, shaws, small field copses and tree groups, and lines of riparian trees along watercourses. Veteran trees are a feature of hedgerows and in fields. In the east of Kent, the Wealden Greensand has a gentler and more open aspect than in the wooded west. This part of the area is also more marked by development, with the presence of major towns and communication corridors including the M26, M25 and M20 motorways and railway lines including the HS1 line.

In addition, the site consists of arable land, occupying over 75% of the site, along with hedgerows, ditches, improved grassland, plantation woodland, poor semi-improved grassland, mature scattered trees, scrub, tall ruderal vegetation and hardstanding. The most notable habitats are considered to be the hedgerows which would be retained along Highfield Lane, along with the mature belt of trees in the north-western corner which would also be retained as these provide an effective screening function.

An Outline Planning Application for the Stour Park Development was submitted in 2014 (reference: 14/00906/AS). The Stour Park Development was intended as a mixed-use scheme, it is described as follows in the planning application:

*'Development to provide an employment led mixed use scheme, to include site clearance, the alteration of highways, engineering works and construction of new buildings and structures of up to 157,616 sq. m ... together with ancillary and associated development including utilities and transport infrastructure, car parking and landscaping'.<sup>1</sup>*

The Stour Park Development planning permission was approved in 2018 (in line with amended details submitted in 2018). In July 2019, a reserved matters application (19/00579/AS) was granted for the development Phase 1A of the Stour Park Development, relating to the formation of the internal estate roads, the landscaping scheme and its sustainable drainage system. The construction of these works has subsequently commenced on-site.

## 2.3 Scheme Description

The scheme requires Heavy Goods Vehicle (HGV) parking and border checking facilities for Her Majesty's Government (HMG) for a temporary period, commencing on the 1 January 2021 up until 31 December 2025. However, as set out below the extent, use and operation of the facility, along with the associated earthworks, HGV parking areas and extend and scale of buildings and structures would be implemented on a phased basis in response to the respective requirements of DfT, Her Majesty's Revenue and Customs (HMRC) including Border Force as its operational agent, Department for Environment, Food and Rural Affairs (Defra), Department for Business, Energy and Industrial Strategy (BEIS), and Driver and Vehicle Standards Agency (DVSA). The site would operate 24-hours, seven days a week over the course of all phases of its operation.

The Article 4 (2) Submission is seeking relevant approval for the temporary use for of land for up to 5 years for an Inland Border Facility, including the laying out of up to 1,272 HGV parking spaces, formation of a new access (main access to the M20 junction 10a link road) onto the highway and an emergency access point to the north, the erection of buildings and structures for border processing purposes (as set out in drawings Day 1 General Arrangement 419419-MMD-01-MO-DR-C-0181 and Day 200 General Arrangement 419419-MMD-01-MO-DR-C-0182 for Day 200) to a maximum height of 12m, security fencing to a maximum height of 2.1m, noise attenuation bunds and fences to a maximum height of 5m, lighting columns to a maximum height of 12m, drainage and all associated engineering and extensive hard and soft landscape works.

Approval is also sought for the temporary use of part of the site (see plan 419491-MMD-01-MO-DR-C-0142) for a period of up to 12 months for storage of stockpile material. The full details of all these works are set out in Table 2.2 and Table 2.3, along with the details of the drawings that are being submitted for approval.

The majority of the construction works in terms of the development plot areas, and drainage etc. would be carried out with the aim of providing Day 1 readiness by 1 January 2021. However, there would be a 'transition period' where works associated with the Day 200 operations would be carried out. There is a commitment by DfT to ensure the early delivery of the extensive landscape works so as to ensure mitigation measures are given the best possible opportunity to mature over the lifetime of the proposed development and it is anticipated the landscape works (as shown on Environmental Masterplan Day 1 419491-MMD-01-MO-DR-L-3030 and Environmental Masterplan Day 200 419491-MMD-01-MO-DR-L- 3031) and programme for their delivery, would be the subject of a suitably worded condition.

There are four key stages in the phasing of the construction and operation of the scheme, and these are summarised in Table 2.1 below.

**Table 2.1 Summary of Works and Operational Phases**

Phasing	Description
Construction up until Day 1	The construction of the facility for the Day 1 scenario and the associated works as set out in Table 2.2.
Day 1 to Day 200 Operation and Construction of Day 200 infrastructure	<p>The operation of the Day 1 scenario (with the DfT, HMRC / Border Force (include the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) on behalf of Defra), Drivers and Vehicle Standards Agency (DVSA), BEIS (Business, Energy and Industrial Strategy) and trading standards use of the site).</p> <p>This phase would also include the construction of the Defra Border Control Post (BCP), additional HMRC inspection sheds, to be operational by 1 July 2021. These works are set out in Table 2.2.</p> <p>This phase will also include the carrying out of the landscape works and mitigation measures as per drawing:</p> <ul style="list-style-type: none"> <li>• Environmental Masterplan Day 1 419491-MMD-01-MO-DR-L-3030</li> </ul>
Day 200 Operation	<p>Defra, HMRC / Border Force, BEIS, and trading standards use of the site.</p> <p>This phase would include the suspension of the parking areas in the north and the south of the site 'reserved areas', and the removal of the parking areas in the viewing corridor.</p> <p>This phase will also include the carrying out of the landscape works and mitigation measures as per drawing:</p> <ul style="list-style-type: none"> <li>• Environmental Masterplan Day 200 419491-MMD-01-MO-DR-L- 3031</li> </ul>
Reinstatement	This phase would involve the complete reinstatement of the site, and the removal of the infrastructure associated with the Inland Border Facility, following the five-year use of the site (described further below). Plus, additional enhancement works including public access, additional soft landscape works and interpretation

Phasing	Description
	materials as per the Long-Term Enhancement Plan 419491-MMD-01-MO-DR-L-3032.

The above scenarios and phasing are shown on the following plans:

- General Arrangement Day 1 Plan (drawing ref: 419419-MMD-01-MO-SK-C-0028)
- General Arrangement Day 200 Plan (drawing ref: 419419-MMD-01-MO-SK-C-0029)
- Environmental Masterplan Day 1 (drawing ref: 419491-MMD-01-MO-DR-L-3030)
- Environmental Masterplan Day 200 (drawing ref: 419491-MMD-01-MO-DR-L-3031)

Long-Term Enhancement Plan (drawing ref: 419419-MMD-01-MMD-01-MO-DR-L-3032) Further details of the individual phases in terms of their operation and associated works are set out below.

### 2.3.1 Day 1 Operation and Works

#### 2.3.1.1 Operations

The following operations would be undertaken on-site by the respective Government Bodies from Day 1:

- DfT Border Readiness Advisory Checks facility and lorry holding as part of contingency traffic management purpose.
- HMRC / Border Force operations for Common Transit Convention (CTC) movements (Offices of Departure / Destination) & Admission Temporaire / Temporary Admission (ATA) Carnets and CITES checks on behalf of Defra.
- DVSA undertaking vehicle and driver checks. DVSA would bring vehicles to the site which their ANPR system recognises as being not border ready, they would examine the vehicle and the driver's hours aspects with a view to enforcement.

Market surveillance activities: checking compliance of imported goods for product safety compliance by market surveillance authorities (principally Local Authority Trading Standards) - discharging legal obligations and BEIS responsibilities. Market surveillance authorities would be operating on-site sharing the HMRC / Border Force premises (i.e. office buildings, inspection sheds, staff car park, HGV parking spaces). The site would be divided into the following parts:

- Entry check points, the entry lanes in the north-eastern end of the site, primarily serves as the entry point to the site. The lorries on entering the site through the main site entrance would be ushered into the entry lanes, at the end of which, there would be a brief security check and the lorry drivers would be guided to the relevant part of the site.
- Northern, and north-western, and central parts of the site are primarily allocated for DfT use (Plots A, B D & E, with D potentially shared depending on the operational need).
- Southern parts of the site would be primarily used for HMRC functions (Plots C & F, with C potentially shared depending on operational need).
- Within the northern section a small number of spaces would be allocated to DVSA.
- Market surveillance authorities may use the HMRC section of the site to discharge BEIS responsibilities for checking product safety compliance of imported goods. They would use parking allocated to HMRC of the site and would be required to use the inspection sheds.
- A staff car park would be located to the west of the site.
- There would be a designated area to the north of the site to deal with emergencies, i.e. spillages etc, where the vehicles would be directed upon entry to the site.

A maximum capacity of 1,272 HGV spaces, with an additional 286 bays contained within 42 entry lanes, would be provided in the Day 1 scenario. The DfT and DVSA operations at the site is expected to last between three to six months.

### 2.3.1.2 Works

Table 2.2 below sets out the physical works associated with the Day 1 scenario.

**Table 2.2 Works Associated with Day 1**

Works	Description of Works	Drawing / Document Reference
<b>Enabling works</b>		
Topsoil and Subsoil Stripping	Topsoil and subsoil stripping of western parcel of land and temporary stockpiling on the eastern parcel of land. Stockpiling would be limited to 12 months as per agreement with the Environment Agency. The materials would be used for the construction of bunds on the western parcel of land to reduce noise, light and visual impacts from the facility on surrounding land users. The bunds and ponds to be constructed at the western parcel of land would comprise an approximate total of 42,160m <sup>3</sup> of the stockpiled materials, thus resulting in an excess of approximately 83,140m <sup>3</sup> of material being temporarily stockpiled at the eastern land.	Stockpile Location Drawing 419491-MMD-01-MO-DR-C-0142 Stockpile Cross Section Details 419419 MMD-00-MO-SK-C-0028
Temporary Access	Two temporary access points would be required during the construction phase, entrance off Church Road and temporary entrance off A2070.  A PROW diversion would be needed for the footpath which runs through the middle of the site (AE639) and also for the footpath that extends to the eastern parcel of land (AE363).	
Vegetation and ecological works	Vegetation clearance and associated ecological mitigation works defined within this report and outlined in the Framework Ecological Management Plan.	Vegetation Clearance Drawing 419419-MMD-01-MO-DR-C-0201 Framework Ecological Management Plan 419419-MMD-XX-SV-RP-BD-0002
Archaeological investigation	Archaeological investigations across the site as defined within this report and outlined in the Written Scheme of Investigation Technical Note.	Written Scheme of Investigation Technical Note 419419-MMD-XX-SV-RP-HE-0001
<b>Main construction works</b>		
Permanent Access	An access and egress road would be created on the northern end of the site off the A2070. An access and egress road would be created on the western side of the site off Church Road. HGVs would enter and exit through the dedicated entrance on the A2070. This would be a new signalised junction, constructed specifically for the use of the site. Staff vehicles would enter the site through a dedicated access on the western side of the Site (Church Road access). The temporary access off the A2070 would be retained as a permanent emergency access. There would be a separate pedestrian gate on the northern perimeter.	Permanent Access General Arrangement Drawing 419419-MMD-01-MO-DR-C-0110-A1
Drainage	Sustainable Drainage System (SuDS) ponds would be constructed, one is proposed in the	The location of the SuDS ponds is shown in General Arrangement

Works	Description of Works	Drawing / Document Reference
	north-eastern corner of the site, two are proposed in the north-western portion of the site, and three along the southern boundary.	Drawing Day 1 419419-MMD-01-MO-SK-C-0028
Development Plot Areas	<p>Hardstanding is proposed to be constructed for access, parking areas and entry lanes, as well as internal road layouts. Staff parking would be constructed in the western portion of the site adjacent to the Church Road access. This would provide 357 spaces. The parking areas for both HGVs and staff parking would be created through the painting of white lines. Works would involve the levelling of the ground and works associated with the development plot areas.</p> <p>The roads would be paved, and the parking would be gravel with a cellular plastic reinforcement (grasscrete).</p>	<p>General Arrangement Drawing Day 1 419419-MMD-01-MO-DR-C-0181</p> <p>Ground Levelling Plans 419419-MMD-01-MO-M3-C-0007</p>
Lighting/Fencing	<p>Lighting columns are proposed on the site, at 12m height in the lorry parking areas and in the entry lanes, with 8m columns near the staff parking areas.</p> <p>Fencing surrounding the site would be palisade permanent fencing at a height of 2.1m. Acoustic fencing / noise barriers would also be required, to the north of the site (5m in height), the south of the site (a 2m bund with a 3m barrier on top and a 5m barrier where there are no bunds), south-west corner (2m bund plus 3m barrier and a 5m barrier where there are no bunds) and a 4.5m barrier along the access road to the staff car park off Church Road.</p> <p>CCTV is proposed on-site at the entry lanes area and the staff parking area, at 8m high for all CCTV cameras not facing the entry lanes.</p>	<p>Lighting Details are shown on Plan 419419-MMD-01-MO-DR-E-1361</p> <p>Fencing and Noise Barriers are shown on Drawing 419419-MMD-01-MO-DR-C-0301-A1</p>
Buildings	<p>The following buildings would be required:</p> <ul style="list-style-type: none"> <li>• Two HMRC Examination Buildings</li> <li>• Two HMRC Inspection Building Office</li> <li>• Two HMRC Marshals Building</li> <li>• Two HMRC Driver Welfare Building</li> <li>• Two HMRC Accommodation Building</li> <li>• DfT / DVSA Office Building</li> <li>• One Control Building</li> </ul> <p><i>Covering a development plot area of 10,762m<sup>2</sup> (HMRC, BEIS) and 1,106m<sup>2</sup> (DfT).</i></p> <p>In terms of site design, it should be noted that the height of any building would not exceed 12m and no building would be erected or extended within 25m of the boundary of the curtilage of any residential dwelling', in accordance with the conditions set out in the SDO.</p>	See General Arrangement Drawing Day 1 419419-MMD-01-MO-DR-C-0181
Landscape	<p>Implementation of landscaping would be undertaken throughout construction and may need to extend into the first year of operation to ensure the mitigation is in place during operation and for the 5-year operational period.</p> <p>Further environmental enhancements have been proposed for implementation following the 5-year period, which are outlined further in Section 2.3.4 below.</p>	Environmental Masterplan Day 1 419491-MMD-01-MO-DR-L-3030

Works	Description of Works	Drawing / Document Reference
Bunds	Four earth bunds would be constructed on the site, ranging from 2-3m height (along the eastern, southern and western sections of the site). Some acoustic fencing would also be provided on top of the bunds, as described previously.	See Earth Bund drawing 419419-MMD-01-MO-DR-C-0603

## 2.3.2 Day 200 Operation and Works

### 2.3.2.1 Operation

The following operations would be undertaken on-site by the different Government Bodies in Day 200:

- Defra checks in relation to live animals<sup>2</sup>, animal products and food and feed of non-animal origin border control posts (BCP). BCP (operational for Eurotunnel) would be operated by the Port Health Authority. Defra would also use the site to undertake sanitary and phyto-sanitary checks at the BCP designated for consignments from Eurotunnel inbound to the UK.
- Continued HMRC / Border Force operations for Common Transit Convention (CTC) movements (Offices of Departure / Destination) & Admission Temporaire / Temporary Admission (ATA) Carnets, as well as CITES checks on behalf of Defra
- Marshall surveillance activities would be operating on-site to discharge BEIS responsibilities for checking product safety compliance of imported goods, sharing the HMRC / Border Force premises (i.e. office buildings, inspection sheds, staff car park, HGV parking spaces).

On Day 200 a total of 651 HGV spaces would be provided. On completion of DfTs role in border readiness, the northern and southern plots (Plots E and F) would be suspended and would become 'reserved spaces', all temporary infrastructure in these areas would be removed, and the parking spaces in the viewing corridor would also be removed. The operational arrangements for such processes as traffic management, although reduced in numbers, would be expected to remain the same. In readiness for July 2021 operations (or herein after referred to as 'transition period') Defra BCP would be constructed as well as three additional inspection sheds for HMRC / Border Force.

### 2.3.2.2 Works

Table 2.3 below sets out the physical works associated with the Day 200 scenario; these works would commence within the Day 1-200 period (between month four to six).

**Table 2.3 Works Associated with Day 200**

Works	Description of works	Drawing / Document Reference
Suspension of parking areas to the north and south of the site	Prior to the day 200 Scenario, the northern and southern plot areas would be suspended, with the removal of the all built infrastructure (excluding lighting columns) within these areas. The hardstanding and drainage within these plots would remain.	See General Arrangement Drawing Day 200 419419-MMD-01-MO-DR-C-0182

<sup>2</sup> In line with Eurotunnel guidance, animals accepted on passenger shuttles include dogs, cats and ferrets (pets or for commercial purposes); rodents, rabbits, birds, invertebrates, amphibians, and reptiles; and domestic equidae (horses, ponies, donkeys and mules).

Works	Description of works	Drawing / Document Reference
Viewing Corridor	Removal of all parking infrastructure, including hardstanding and lighting, within the viewing corridor and implementation of soft landscaping within this corridor.	See Environmental Masterplan Day 200 Details 419491-MMD-01-MO-DR-L-3031
Landscape Works	Implementation of landscaping would be undertaken throughout construction and may need to extend into the first year of operation to ensure the mitigation is in place during operation and for the 5-year operational period.  Further environmental enhancements have been proposed for implementation following the 5-year period, which are outlined further below.	See Environmental Masterplan Day 200 Details 419491-MMD-01-MO-DR-L-3031
Buildings	Construction of the following buildings <ul style="list-style-type: none"> <li>• Defra BCP, containing buildings for plant, produce and live animals.</li> <li>• Three additional HMRC Examination and Inspection Buildings</li> </ul> <p><i>Covering a development plot area of 10,762m<sup>2</sup> (HMRC, BEIS) 14,546m<sup>2</sup> (Defra) and 582m<sup>2</sup> (DVSA).</i></p> <p>In terms of site design, it should be noted that the height of any building would not exceed 12m and no building would be erected or extended within 25m of the boundary of the curtilage of any residential dwelling', in accordance with the conditions set out in the SDO.</p>	See General Arrangement Drawing Day 200 419419-MMD-01-MO-DR-C-0182

### 2.3.3 Security Arrangements (During both Day 1 and Day 200 Scenario)

Approximately 322 staff from Day 1 and 406 staff on Day 200 would be required on the site for the processing of vehicles, marshalling and security purposes. The following security arrangements would be put in place:

- Each site would be manned by staff provided by a chosen security company.
- The security staff that are present on-site would be part of a basic command structure on-site which involves senior marshals and a site supervisor or duty manager.
- Access and egress for the site would be controlled using security measures which would be outlined in the Operational Management Plan (OMP) (to be submitted as a subsequent site approval).
- Security marshals would deal with incidents as they occur on-site.
- Some security staff would be required to take on Traffic Management Roles, and Fire Marshall Roles separate from a security role.
- Some security staff would also be trained in dealing with spillages separate from a security role.
- Combined spill kits and fire extinguishers would be available at regular intervals across the site and regular inspections of parked vehicles would be carried out.

- The use of land for repairs to goods vehicles (examining the vehicle on land) would not take place other than to enable a vehicle to leave the site or to be assisted to the site.

Table 2.4 sets out a summary of the Day 1 and Day 200 scenarios.

**Table 2.4 Summary table of Day 1 and Day 200 scenarios**

	Day 1	Day 200
<b>Government body on-site</b>	DfT, HMRC, Border Force, Trading Standards, DVSA, BEIS	HMRC, Border Force, Defra (PHA operating BCP), BEIS, Trading Standards
<b>HGV Parking Spaces</b>	1,272 (plus 286 in entry lanes)	651 (plus 286 in entry lanes)
<b>Staff Parking Spaces</b>	357	357
<b>Building Requirements</b>	<ul style="list-style-type: none"> <li>• Two HMRC Examination Buildings</li> <li>• Two HMRC Inspection Building Offices</li> <li>• Two HMRC Marshals Building</li> <li>• Two HMRC Driver Welfare Building</li> <li>• Two HMRC Office Buildings</li> <li>• 1 x DfT / DVSA Office Building</li> <li>• 1 x Control Building</li> </ul> <p><i>Covering a development plot area of 10,762m<sup>2</sup> (HMRC) and 1,106m<sup>2</sup> (DfT/DVSA)</i></p>	<ul style="list-style-type: none"> <li>• 1 x DVSA Office Building</li> <li>• Five HMRC Examination Buildings</li> <li>• Five HMRC Inspection Building</li> <li>• Two HMRC Marshals Building</li> <li>• Two HMRC Driver Welfare Building</li> <li>• Two HMRC Office Buildings</li> <li>• 1 x Control Building</li> <li>• Defra Border Control Post with buildings for plant, produce and live animals</li> </ul> <p><i>Covering a development plot area of 10,762m<sup>2</sup> (HMRC) 14,546m<sup>2</sup> (Defra) and 582m<sup>2</sup> (DVSA)</i></p>

### 2.3.4 Reinstatement Works

Further environmental enhancements have been proposed for implementation following the 5-year period, which are outlined further below. All operations on the site would cease by 31 December 2025. A Reinstatement Plan would be submitted by 30 June 2025 which would set out the reinstatement of the site following the five-year operation of the site.

In this case, the reinstatement would not encompass the complete reinstatement of the site to its former use. The reinstatement would involve the removal of all built infrastructure on the site as permitted under Article 3(1) of the SDO, including all buildings, cabins, fencing (including acoustic and security fencing) and lighting. The only elements that would be retained on the site would be the development hardstanding plot areas, the drainage system, including all SuDS ponds, and the landscaping, including all bunds.

A Long-Term Enhancement Plan (drawing ref: 419491-MMD-01-MO-DR-L-3024) is submitted with the Article 4 submission. This plan shows the retention of the landscape planting on the non-operational areas of the site which outlines the framework for reinstatement, providing a green framework and ensuring habitat connectivity in the long-term. The plan also identifies proposals for additional environmental enhancements that could be implemented on the site once the operational of the site ceases, and primarily when public access to a wider area of the site can be made available. The proposals include integration of trails for the public use and information boards to highlight the significance of the surrounding heritage assets and how the planting supports a range of biodiversity across the site.

A Reinstatement Plan would be submitted under Schedule 2 (Conditions) Part 4 (Reinstatement) for approval, which would further detail and develop the environmental enhancement proposals included in the Long-Term Enhancement Plan (drawing ref: 419491-

MMD-01-MO-DR-L-3024). This would be subject to further consultation with stakeholders including Ashford Borough Council and the local communities. The Landscape and Ecological Management plan (LEMP) (document ref: 419419-MMD-XX-SV-RP-L-0001) that has been submitted with the Article 4 submission provides the management and maintenance functions for the first five-years. The LEMP would need to be updated for the remaining ten-years when the Reinstatement Plan is submitted in detail.

## 2.4 Transport Assessment

A Transport Assessment has been prepared to assess the impact on the transport network of the scheme. The scheme would serve inbound and outbound HGVs and would operate in two phases. On opening (Day 1), the scheme would have a capacity for up to 1,272 HGV parking spaces, plus 286 spaces in entry lanes. After six months (Day 200), the scheme operation would be significantly reduced, and the HGV spaces would also reduce to 651, plus 286 in entry lanes. Throughout the scheme operation, there would be 357 staff parking spaces. The Transport Assessment predicts that, during the first six months of operation, the scheme would generate a maximum of 114 inbound HGVs and 268 outbound HGVs accessing and egressing from the site every hour. After this, HGV numbers would decrease. Modelling has assumed up to 183 staff vehicle movements in and out of the site would take place during key staff changeover periods throughout the life of the scheme.

Strategic traffic modelling has been undertaken to assess the impact of the scheme on the Strategic Road Network (SRN) (for disruption and non-disruption days), local junction modelling for seven key junctions between the M20 and the site access, as well as microsimulation modelling for the site itself to confirm that as HGVs enter the site there would be no 'blocking back' of queues onto the public highway.

For the first six months of operation, DfT would predominantly use the site to manage disruption caused by HGVs heading out of the UK via the Port of Dover or Eurotunnel which are not border ready, but could also be use the site to hold HGVs as part of Kent Traffic Management plans, along with HMRC who will be processing inbound and outbound HGV's. It has been assumed all HGVs would be required to travel through the Quick Moveable Barrier phase of Operation Brock on M20 (Operation Brock allows the storage of 2,100 HGVs on the M20 between Junction 8 and 9). After six months (from Day 200), HMRC would use the site to process inbound and outbound HGVs with Defra using the site to process inbound HGVs. Border readiness disruption is not expected to occur after six months and therefore the DfT would not require use of the site and Operation Brock would not be required on the M20.

In addition to assessing both 'disruption days' and 'non-disruption days' two demand scenarios have been considered; a Maximum Operating Capacity scenario and a Realistic Case scenario. The Maximum Operating Capacity scenario ensures a robust assessment of the impact of the site based on maximum possible HGV movements. The Realistic Case is based on HMRC profiled ferry crossing data and the number of HGVs expected to visit the site, with the numbers refined to reflect the total expected demand and the profile of vehicle arrivals and departures at the ports and the journey time between the ports and the site. The Realistic Case scenario represents the more likely impact on the site on the highway network. The total number of outbound HGVs visiting the site does not change on disruption days as any reduction in HMRC related HGV results in an equivalent increase in DfT HGVs.

The strategic modelling results indicate that key impacts are broadly similar across the two scenarios (Maximum Operating Capacity scenario and Realistic Case scenario) and for the first six months and beyond six months of site operation (disruption and non-disruption days). An increase of approximately 650-700 vehicles per hour (two-way) is forecast for the main access

route between the M20 and the site along the A2070 Link Road for the first six months of operation (disruption days). There are also small forecast changes in flow on the M20 both east and west of the site to reflect DfT operations sending HGVs back to their depot (rather than onto the ports) if not 'border ready'. After six months the forecast increase on the A2070 reduces to 500 or less per hour (two-way). Small levels of re-routing of local 'existing' traffic are forecast across all scenarios equating to approximately 100 two-way vehicles or less in the average hour on any single route. The forecast impacts of the operation of the site are predicted to be localised to Ashford.

Local junction modelling has been undertaken to assess the impact of the forecast numbers and routings of HGVs and staff trips at seven junctions on the road network between the Strategic Road Network (M20 motorway) and the site via the A2070 Link Road and A2070 Bad Munstereifel Road. Modelling has been undertaken for both 2021 and 2025, for both baseline and operational scenarios. As the traffic demand data used for the junction assessments is based on the 2020 traffic surveys, an uplift has been applied to account for any traffic increases associated with background traffic. The factors used to uplift the flows have been derived at Local Authority Level from TEMPro to take cognisance of local development. The 2021 modelling is based on the disruption scenario, while the 2025 modelling is based on the non-disruption scenario.

In both 2021 and 2025, the junctions are all predicted to operate within capacity for the baseline and operational scenarios. The assessment undertaken presents a robust assessment of the traffic generated by the site because it is based on the Maximum Operating Capacity scenario for the first six months of operation.

It should be noted that the 2025 local junction modelling has considered the proposed signalisation of the existing A2070 Orbital Park roundabout and indicates the scheme could accommodate the Maximum Operating Capacity scenario once operational. However, the programme for construction for this signalisation is currently unknown. This could present challenges if the construction of this signalisation is commenced during operation of the scheme, especially during the first six months of operation when traffic flows associated with the scheme are at their highest. The proposed signalisation would remove the u-turn from A2070 Bad Munstereifel Road westbound to the A2070 Bad Munstereifel Road eastbound which would be used by staff exiting the site requiring destinations accessed via the route to the M20 motorway. The signalisation of the A2070 Bad Munstereifel Road/Church Road junction has therefore been tested which would allow staff to turn right out of Church Road. The modelling of a signalised version of the Church Road junction (if required) indicates it would operate within capacity in the Maximum Operating Capacity scenario. The programme for construction for the Orbital Park signalisation is currently unknown and could present challenges for staff if the construction is commenced during operation of the scheme. At the time of writing, discussions are ongoing with Highways England to understand phasing of the works.

VISSIM micro-simulation modelling has been undertaken to confirm that the internal site layout has sufficient capacity to cater for the expected demand from HGVs based on the worst-case Maximum Operating Capacity scenario for the first six months of site operation. The results show that queues of HGVs can be managed within the site using the 42 proposed 'entry lanes' which are predicted to be sufficient for the expected arrivals of HGVs.

To mitigate impacts and support the operation of the site, an OMP will be developed as required under Schedule 2 Conditions of *The Town and Country Planning (Border Facilities and Infrastructure) (EU Exit) (England) Special Development Order 2020*. The aim of the OMP is to provide a comprehensive operational plan for the site and to deliver policies and procedures allowing for its safe operation. The document would contain a Traffic Management Plan,

Signage Strategy and Staff Travel Plan. Further details are included in the Transport Assessment in Appendix B.

## 2.5 Stakeholder Engagement

An extensive desk-based stakeholder identification and mapping exercise has been conducted to ensure all relevant stakeholders were identified and engaged prior to the planning consents being approved. Key environmental stakeholders, including the Statutory Environmental Bodies (SEBs) (Natural England, the Environment Agency and Historic England), have been engaged about the scheme proposals. A summary of this engagement is found in Table 2.5 below. Full details of the engagement undertaken can be found in the *Sevington Inland Border Facility Stakeholder Engagement Report* (document ref: 419419-MMD-XX-SV-RP-Z-0001).

**Table 2.5 Summary of SEB Engagement**

Organisation	Start and end of engagement period	Total period of engagement	Information provided	Date information provided
Historic England	Initial engagement: 20/07/2020	Informal engagement 85 days	Technical document – site layout	20/07/2020
			Meeting – discussions regarding operational management, parameter of the development, viewing corridor, existing consent and section 106	30/07/2020
	Start of formal engagement: 13/10/2020	Formal engagement 14 days	Technical document – drawing of the viewing corridor from St. Marys Church.	31/07/2020
			Introductory meeting – summary construction and operational plans	10/08/2020
	End of formal engagement: 27/10/2020		Red Line Boundary	10/08/2020
			Meeting – discussions regarding heritage and archaeology	10/08/2020
			Meeting – discussions regarding understanding of site, sect 106, landscaping / environmental mitigation, SDO process and lighting	13/08/2020
			Meeting – discussions regarding environment, section 106 and engagement	06/10/2020
			Notification of engagement period	13/10/2020
			Site General Arrangement Drawings	13/10/2020
			Meeting – environmental findings and Section 106	14/10/2020
			Engagement period reminder	20/10/2020
	Updated General Arrangement Drawings	20/10/2020		
Natural England	Initial engagement: 13/08/2020	Informal engagement 61 days	Technical document – method statement and works Schedule	13/08/2020
			Technical document – application form and charge screening form	13/08/2020
	Start of formal engagement: 13/10/2020	Formal engagement 14 days	Technical document – Reasoned statement and supporting documents to include: Her Majesty's Revenue and Customs site sifting report and Sevington Inland Border Facility supporting document	13/08/2020
			End of formal	

Organisation	Start and end of engagement period	Total period of engagement	Information provided	Date information provided
	engagement: 27/10/2020		Technical document – plans showing site detail	13/08/2020
			Notification of engagement period	13/10/2020
			Site General Arrangement Drawings	13/10/2020
			Meeting – Air quality, Stodmarsh Report and Engagement	13/10/2020
			Engagement period reminder	20/10/2020
			Updated General Arrangement Drawings	20/10/2020
			Wastewater Strategy	21/10/2020
The Environment Agency	Initial engagement: 30/07/2020	Informal engagement 79 days	Meeting – discussion regarding drainage and operations on site	30/07/2020
	Start of formal engagement: 13/10/2020	Formal engagement 14 days	Technical document – map provided of bund locations and water courses.	04/08/2020
	End of formal engagement: 27/10/2020		Meeting – discussion regarding community engagement, ground water & contaminated land, management, flood risk, site management and fisheries, biodiversity & geomorphology	13/08/2020
			Meeting – fire plans overview	18/08/2020
			Meeting – discussion regarding drainage, wastewater and management of materials	27/08/2020
			Meeting – discussion regarding fire safety, wastewater and management of materials	10/09/2020
			Meeting – design principles	10/09/2020
			Meeting – discussion regarding drainage, wastewater and management of materials	28/09/2020
			Meeting – draft of Flood Risk Assessment and Pollution Prevention Strategy	28/09/2020
			Meeting – draft operation and maintenance manual	02/10/2020
			Meeting – discussion regarding OMP	12/10/2020
			Notification of engagement period	13/10/2020
			Site General Arrangement Drawings	13/10/2020
			Meeting – draft of Flood Risk Assessment and Pollution Prevention Strategy	14/10/2020
			Meeting – review of SDO documents	19/10/2020
			Engagement period reminder	20/10/2020
			Updated General Arrangement Drawings	20/10/2020

## 3 Environmental Effects

### 3.1 Assessment Methodology

This chapter considers each environmental discipline in turn, describing the environmental baseline and providing an analysis of the likely environmental effects of the scheme, including those that are potentially significant. The consideration of effects for each environmental discipline has broadly followed the assessment methodology outlined in the Sustainability and Environmental Sections of the Design Manual for Roads and Bridges (DMRB). In addition, this has been supplemented by further guidance where appropriate in order to provide a more robust assessment of the effects. Further information on the guidance used for each environmental discipline is outlined in Sections 3.2 to 3.14 below.

The environmental constraints and receptors within the vicinity of the site are shown on the Environmental Constraints Plan in Appendix A. The environmental commitments including the management and mitigation requirements identified within this chapter are summarised within the Record of Environmental Actions and Commitments (REAC) in Appendix C. The REAC identifies which of those measures are required in order to prevent what would otherwise have been significant environmental effects. All of the measures would be incorporated into a Construction Management Plan (CMP) and OMP which would be adhered to by the Principal Contractor Principal Operator on-site during the construction and operation reinstatement respectively. The CMP contains the relevant environmental actions usually contained within a Construction Environmental Management Plan but for the purpose of this scheme is referred to as a CMP. In addition, a Reinstatement Plan is to be produced by the Principal Operator prior to the reinstatement of the site. This Reinstatement Plan would include the measures outlined within the REAC for the contractor responsible for the reinstatement to adhere to, hereafter referred to as the 'Reinstatement Contractor'. The Reinstatement Plan would also be developed taking into consideration and further developing the environmental enhancements which have been proposed in the Long-Term Enhancement Plan (drawing ref: 419419-MMD-01-MO-DR-L-3032). The CMP, OMP, and Reinstatement Plan are required under Schedule 2 Conditions of The Town and Country Planning (Border Facilities and Infrastructure) (EU Exit) (England) Special Development Order 2020.

#### 3.1.1 Key assumptions and limitations

The assessment has been undertaken in accordance with the scheme description outlined in Section 2.3. In addition, as outlined in Section 2.2, it is understood that development on-site has commenced under Phase 1A of the Stour Park Development planning permission (14/00906/AS). However, for the purpose of this assessment, the baseline has been assumed as being prior to the implementation of the Stour Park Development planning permission. This enables the assessment presented within this report to consider the worst-case scenario with regards to the amount of change, and captures all environmental effects associated with all elements of the scheme. As such, the construction phase within this assessment has been considered as six months in order to capture the construction works that have already commenced under the Stour Park Development in July 2020.

For the purposes of the air quality, noise and climate assessments, the traffic data for the Maximum Operating Scenario has been used. Refer to the summary of the Transport Assessment in Section 2.4 above and the full Transport Assessment in Appendix B for further details. This has considered two scenarios, a 'disruption scenario' and a 'non-disruption'

scenario. The disruption scenario is representative of the Day 1 to Day 200 operation of the scheme, i.e. the first six months, and the non-disruption scenario is representative of the Post-Day 200 operation of the scheme, i.e. the remaining 4.5 years. The two scenarios are:

- Scenario 1: With disruption
  - Do-Minimum traffic flows with disruption caused by the Quick Moveable Barrier (QMB) and an extended (by distance) Operation Traffic Access Protocol (TAP). These traffic management measures form part of Operation Brock.
  - Do-Something
    - Traffic flows with disruption caused by the Quick Moveable Barrier (QMB) and an extended (by distance) Operation TAP
    - Traffic flows associated with rerouting of HGVs heading into and out of the UK to the scheme
  - 549 staff movements per day (i.e. 1098 two-way movements)
- Scenario 2: No disruption
  - Do-Minimum traffic flows
  - Traffic flows associated with rerouting of HGVs heading into and out of the UK to the scheme
  - 549 staff movements per day (i.e. 1098 two-way movements)

Additional HGV movements associated with removal of wastewater from the site have not been explicitly included within the traffic model. It is expected that the number of additional movements would be 2-4 per day, on the basis that the current assessment for air quality, noise and climate assumes a Maximum Operating Scenario, which is 100% capacity of the site every day of the year, the environmental assessment is already conservative. Therefore, the additional movements would not likely result in the current traffic flows which have formed the basis of assessment being exceeded on an annual basis.

### 3.2 Air Quality

In addition to *DMRB LA 105*<sup>3</sup>, the assessment of air quality was assisted by the Defra's *Local Air Quality Management Technical Guidance (TG16)*.

The study area for this environmental discipline is 200m from the site and the affected road network (ARN). In line with *DMRB LA 105*, the extent of the study area has been limited to within 200m of roads where a change in more than 200 heavy duty vehicle (HDV<sup>4</sup>) traffic movements is anticipated, and sensitive receptors are located.

There are approximately 40 residential properties and farms within 200m of the scheme. The closest residential properties are located along Church Road adjacent to the south of the site. In addition, there are multiple human health receptors located within 200m of the ARN as outlined in the Air Quality Impact Assessment (Appendix D). Ambient air quality monitoring undertaken in areas adjacent to affected roads where the scheme is anticipated to increase HDV movements is presented in the Air Quality Impact Assessment (Appendix D). Annual mean NO<sub>2</sub> concentrations in 2019 (the most recent full year of monitoring available) demonstrates that there are no recorded exceedances of the annual mean NO<sub>2</sub> objective at any of the presented monitoring locations.

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<sup>3</sup> DMRB (2019) *LA 105 Air Quality*. Available at: <https://standardsforhighways.co.uk/dmrb/search/10191621-07df-44a3-892e-c1d5c7a28d90>

<sup>4</sup> HDV refers to any vehicle with a weight above 3.5 tonnes and is the definition used within DMRBLA105

No Air Quality Management Areas (AQMAs) have been declared by Ashford Borough Council. However, there are expected to be increases in HDVs flows on the A20 through the Dover District Council (DDC) 'A20 AQMA' and on the M20 through the 'Maidstone Borough AQMA', both declared for exceedances of the annual mean NO<sub>2</sub> air quality objective.

There are eight ecological sites with statutory status, within 200m of the ARN as follows:

- North Downs Woodland Special Area of Conservation (SAC)
- Folkestone to Etchinghill Escarpment SAC
- Wouldham to Detling Escarpment Site of Special Scientific Interest (SSSI)
- Seabrook Stream SSSI
- Hatch Park SSSI
- Folkestone Warren SSSI
- Ashford Green Corridor Local Nature Reserve (LNR)
- Western Heights LNR

These sites have been considered in the Air Quality Impact Assessment (Appendix D).

Construction: In line with *DMRBLA 105*, the impact of construction activities on vehicles movements require assessment where construction activities are programmed to last for more than two years. Where construction activities are less than two years, it is unlikely that the construction activities would result in a significant air quality effect. In addition, construction traffic movements are anticipated to be approximately 220 HGV movements per day for a maximum of six months and therefore likely be lower than the assessment threshold of 200HDV<sup>5</sup> movements per day on an annual average daily traffic (AADT) basis. Given that the construction period would be relatively short (maximum of six months), and the likely number of construction traffic movements would not meet the assessment threshold, emission associated with construction traffic are not anticipated to cause a significant air quality effect.

Furthermore, there is potential for the creation of dust from the construction activities which could cause a potential nuisance to nearby residential properties. In addition, there is also the potential for wind-blown dust from the presence of the temporary stockpiling on the eastern side of the site. However, it is not anticipated that this would result in a significant effect. Nonetheless, the implementation of best practice construction methods to control dust such as ensuring that all vehicles with open loads of potential dusty materials are securely sheeted or enclosed and seeding of the stockpiles, would be implemented onsite to reduce the creation of dust during the construction phase. Such best practice measures are outlined in the REAC (AQ1) in Appendix C and would be included within the CMP, which would be adhered to and implemented by the Principal Contractor. Overall, no significant air quality effects are anticipated during construction of the scheme.

Operation: The potential impacts on air quality from an increase in oxides of nitrogen and particulate matter at the human health (residential properties) and ecological receptors has been modelled for both scenarios outlined in Section 3.1.1 above. The results are presented within the Air Quality Impact Assessment (Appendix D). This assessment found that at all modelled human health receptors, the resultant concentrations would be either below the relevant air quality objective or the difference in concentration is less than 1% of the relevant air quality objective. As such, it is concluded that there would be no significant air quality effects on human health receptors. Additionally, the results indicate that the scheme would not be predicted to cause any new exceedances of the critical level or a change in nitrogen deposition

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<sup>5</sup> An HDV is any vehicle with a gross weight greater than 3.5 tonnes.

greater than 1% of the relevant minimum critical load at any of the modelled ecological transects. As such, no significant effects on ecological receptors as a result of changes in air quality are anticipated. Therefore, the assessment has concluded that the operation of the scheme would be unlikely to cause a significant air quality effect in accordance with the DMRB. In addition, the assessment concluded that the scheme would have a low risk of causing non-compliance with the *Air Quality Directive*<sup>6</sup> and would not contravene relevant planning policy related to air quality.

Reinstatement: The reinstatement of the scheme is not anticipated to result in any new or materially different effects than the construction of the scheme as the temporary infrastructure would be removed from the site and the hardstanding and drainage retained. Therefore, no significant air quality effects are anticipated during the reinstatement phase. Nonetheless, the implementation of best practice construction measures such as ensuring that all vehicles with open loads of potential dusty materials are securely sheeted or enclosed would be implemented onsite to reduce the creation of dust and potential nuisance to nearby residential receptors. These methods are outlined in the REAC (AQ1) in Appendix C and would be included within the Reinstatement Plan, to be prepared and agreed six months prior to the reinstatement of the site.

### 3.3 Cultural Heritage

*DMRB LA 106*<sup>7</sup> has provided the assessment framework for cultural heritage. This has been supplemented by guidance from Historic England and the Chartered Institute for Archaeologists. This is outlined in the Cultural Heritage Assessment in Appendix E that has been undertaken to support this report.

The study area for this environmental discipline is 1.5km from the site for designated heritage assets, and 500m from the site for non-designated assets.

There are no designated heritage assets within the site. There are 100 designated heritage assets within the 1.5km study area, this includes four Grade I listed buildings, five Grade II\* listed buildings, 91 Grade II listed buildings, two Scheduled Monuments, one Grade II registered park and garden, and two Conservation Areas. These are outlined in detail in Appendix A of the Cultural Heritage Assessment in Appendix E.

There is one Grade I listed building, Church of St Mary (NHLE: 123390, MM002) located approximately 30m west of the site. It has a significant visual relationship with the Church of St John the Baptist (National Heritage List for England (NHLE): 1276693, MM003) in Mersham, which is also Grade I listed. The Church of St Mary has a significant visual relationship with the Church of St John the Baptist in Mersham. Visibility between the spires of the two churches is maintained on the route of the public footpath that runs across the site (termed as the viewing corridor). This contributes to the value of both churches as it maintains the historic relationship between the contemporary churches of neighbouring parishes.

Within 200m of the south and south-western edge of the site are seven Grade II listed buildings clustered along Church Road, associated with the historic village of Sevington:

- [REDACTED] (NHLE: 1276463, MM067)
- [REDACTED] (NHLE: 1276464, MM068)
- [REDACTED] (NHLE: 1233932, MM049)

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<sup>6</sup> Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe.

<sup>7</sup> Highways England (2020) *DMRB Sustainability and Environment Appraisal LA 106 Cultural heritage assessment*. Available at: <https://standardsforhighways.co.uk/dmrbs/search/8c51c51b-579b-405b-b583-9b584e996c80>

- [REDACTED] (NHLE: 1233763, MM046)
- [REDACTED] (NHLE: 1233936, MM050)
- [REDACTED] (NHLE: 1233764, MM047)
- [REDACTED] (NHLE: 1233971, MM051)

In addition, there are a collection of Grade II listed buildings along Kingsford Street situated north of the site:

- [REDACTED] (NHLE: 1233751, MM040)
- [REDACTED] (NHLE: 1233753, MM041)
- [REDACTED] (NHLE: 1276462, MM066), Ransley Cottage (NHLE: 1233755, MM042)
- [REDACTED] (NHLE: 1233765, MM048) and Longthorne Farmhouse (NHLE: 1276460, MM065)

Further details of the designated heritage assets within the study area are detailed in the Cultural Heritage Assessment in Appendix E.

Mersham Conservation Area is in the north of the settlement and the group of listed buildings surrounding Mersham Manor (MM001) and the Church of St John (MM003) is to the south. Hatch Park,<sup>8</sup> a Grade II registered park and garden (NHLE: 10021291, MM062) is located 390m north-west of the site at its closest point.

There are various non-designated heritage assets that have been recorded within the site, including the Royal Observer Corps underground monitoring post (HER: TR04SW126, MM110). Full details and their locations, and the archaeological potential of the site are outlined in the Cultural Heritage Assessment (Appendix E).

**Construction:** The full assessment of the effects upon heritage assets during construction is provided in Appendix E. In summary, there would be no direct impacts on any heritage assets as a result of the construction of the scheme. However, it is likely that the visual changes caused by construction plant, machinery and construction activities on the site, including within the viewing corridor for the Church of St Mary, would result in temporary changes to the setting of nearby heritage assets, including the Grade I listed Church of St Mary adjacent to the site, the collection of Grade II listed buildings along Church road to the south of the site, the collection of Grade II listed buildings along Kingsford Street to the east of the site, heritage assets within Mersham to the east of the site, and Loud House to the south-east of the site. The introduction of construction noise into the setting of the Church would disrupt the semi-rural setting and designed peacefulness of the churchyard. However, due to the existing noise from the M20 and the commercial and light industrial units on the edge of Ashford, HS1 and the A2070 Bad Munstereifel road, impacts to these heritage assets during construction are considered to be minor, with effects not considered to be significant. Further details are within the Cultural Heritage Assessment (Appendix E).

No excavation is proposed within the field east of Highfield Lane and therefore archaeology would not be removed. This area would be used temporarily for stockpiling material, however it is not anticipated that there would be any impacts to archaeology as it is unlikely that there would be any waterlogged or other sensitive archaeological features which could be impacted through compaction. Therefore, no significant effects on buried archaeology are anticipated on this portion of the site. However, construction would result in the removal or truncation of buried archaeology within the footprint of the scheme. As such, archaeological investigation would be undertaken during the construction phase where excavations are required. This would allow for

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<sup>8</sup> Historic England (2020) *Hatch park*. Via: <https://historicengland.org.uk/listing/the-list/list-entry/1001291> (accessed September 2020)

remains present to be recorded and interpreted to mitigate this impact. The archaeological investigation would be in accordance with the Written Scheme of Investigation (WSI) produced for the Stour Park Development. The application of the WSIs to the scheme and the suitability of this application is outlined in a Written Scheme of Investigation Covering Technical Note (document ref: 419419-MMD-XX-SV-RP-HE-001). The methodology applied in the WSIs has been extended, where required, to cover the area which is used for the scheme but did not form part of the Stour Park Development in consultation with the Kent County Council Archaeologist. This enhanced understanding of the remains reduces the harm created by their loss. As such, this programme of archaeological investigation would therefore prevent a significant adverse effect on buried archaeology. The details of this are outlined in the REAC (CH1) in Appendix C, and the requirements would be incorporated into the CMP adhered to and implemented by the Principal Contractor. The Royal Observer Corps monitoring post would be avoided during construction and as such would not experience any impacts. Overall, there are not anticipated to be any significant effects on heritage assets as a result of the construction of the scheme. Further details of the construction effects on non-designated heritage assets are detailed in the Cultural Heritage Assessment in Appendix E.

Operation: The full assessment of the effects upon heritage assets during operation is provided in Appendix E. In summary, the presence and operation of the scheme would result in a temporary change in setting to heritage assets, including the Grade I listed Church of St Mary, the collection of Grade II listed buildings along Church road, the collection of Grade II listed buildings along Kingsford Street, heritage assets within Mersham, and Loud House, through the introduction of the built infrastructure including hardstanding, buildings and lighting and potential increases in noise. The Church of St Mary would experience the greatest impact during the initial operational phase of the facility when the view line between the Church of St Mary and the Church of St John would be temporarily filled with parking spaces. This impact would vary throughout the Day 1 – Day 200 period dependent on the extent to which the parking bays are filled at any one time. Although the view would be impeded, reducing the ability to understand the relationship between the two churches, some intervisibility between the spires would remain. Therefore, the ability to appreciate some of this historic context would be retained. This impact would be temporary and as such would not result in a significant effect. After 200 days, the viewing corridor would not be used for HGV parking and would be constructed in accordance with the Day 200 General Arrangement Plan (drawing ref: 419419-MMD-01-MO-SK-C-0029) which includes planting used to draw attention to this viewing corridor.

The landscape design as shown in the Day 1 and Day 200 Environmental Masterplan (drawing ref: 419419-MMD-01-MO-DR-L-3030 and drawing ref: 419419-MMD-01-MO-DR-L-3031) would provide mitigation to the setting of heritage assets by softening the visual impact of the scheme. This mitigation is outlined in more detail in the Cultural Heritage Assessment in Appendix E, and includes retention of hedgerows and mature tree lines, woodland understorey planting, landscaping bunds, and planting within the SuDS ponds. This coupled with the integration of noise barriers within the design would ensure that there would be no significant effects on heritage assets as a result of the operation of the scheme. No impacts are anticipated on archaeology during the operation of the scheme.

Overall, given the temporary nature of the operation (maximum of five years) there are not anticipated to be any significant effects on heritage assets. Further details are provided in the Cultural Heritage Assessment in Appendix E.

Reinstatement: The reinstatement phase of the scheme is not anticipated to result in any new or materially different effects than those anticipated during the construction of the scheme as the site would have all temporary structures removed. The effects would likely be reduced

compared to that during the construction phase as the scale of works for reinstatement would be smaller. This is due to the retention of the hardstanding plots on-site and as such the reinstatement would only include the removal of associated infrastructure, such as the dismantling and removal of buildings, lighting and acoustic barriers. By this time the planting on-site would have further established, and along with the presence of the landscape bunds which would remain in situ would aid screening to the reinstatement works. As such, no significant effects are anticipated on designated and non-designated heritage assets upon reinstatement of the site.

Following the removal of infrastructure on the site, including buildings and lighting, permanent impacts would remain in the post-five-year consent period. This includes the loss of agricultural land within the site which contributes to the setting of the heritage assets, particularly the Church of St Mary, and the retention of the hardstanding. However, the retention of landscaping bunds and planting would soften the impact of the hardstanding, along with the proposed introduction of information boards and reintroduction of trails through the area, as outlined in the Long-Term Enhancement Plan (419419-MMD-01-MMD-01-MO-DR-L-3032) and included within the REAC (CH3) in Appendix C. The inclusion of landscaping and information boards would provide an enhancement on-site by resulting in a greater understanding of heritage assets around the site, particularly the Church of St Mary and the Royal Observer Corps Post. Further details are included in the Cultural Heritage Assessment in Appendix E.

### 3.4 Landscape and Visual Effects

*DMRB LA 107*<sup>9</sup> has provided the assessment framework for landscape and visual effects, which aligns with the *Guidelines for Landscape and Visual Impact Assessment 3* produced by the Landscape Institute and Institute of Environmental Management and Assessment (IEMA), third edition, 2013. Appendix F presents the Landscape and Visual Impact Assessment which has been undertaken to support this report.

Good practice indicates that a study area should extend to contain all areas in which visual impacts have the potential to occur based on topographical indications only. This is known as the Zone of Theoretical Visibility (ZTV). This is shown in the of the Landscape and Visual Assessment (Appendix F) and covers an area of 1km from the scheme boundary.

The scheme is not located within a National Park or Area of Outstanding Natural Beauty (AONB). The nearest AONB is the Kent Downs AONB, which is located approximately 2.6km north of the site. There are three Conservation Areas within the study area; one in the north at Willesborough Lees, one at Lacton Green in the north east of the study area and one covering the village of Mersham in the south. The local landscape character is a mixture of residential, commercial and agricultural land use as described in Section 2.2. The site is located within Natural England's National Landscape Character Area (LCA) 120 Wealden Greensand. Five Landscape Character Areas (LCAs) cover the study area as shown on the Landscape Character Plan in the Landscape and Visual Impact Assessment (Appendix F):

- LCA 1 Ashford Urban Centre
- LCA 2 Mersham Farmland
- LCA 3 Upper Stour Valley
- LCA 4 Mersham Village
- LCA 5 Brabourne Lees Mixed Farmland

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<sup>9</sup> Highways England (2020) *DMRB Sustainability and Environment Appraisal LA 107 Landscape and visual effects*. Available at: <https://standardsforhighways.co.uk/dmrb/search/bc8a371f-2443-4761-af5d-f37d632c5734>

The site itself lies within LCA 2 Mersham Farmlands and has historically been part of a long standing rural agricultural landscape. Further information on the landscape character baseline can be found in the Landscape and Visual Impact Assessment in Appendix F.

A number of visual receptors have been identified within the study area and included in the assessment. Of the 18 receptors identified as part of the assessment, the majority of receptors are located within 500m of the site, with several high sensitivity residential receptors neighbouring the periphery of the site, and PROW AE639 traversing the site itself from north west to south east. The visual receptors include:

1. PROW AE639 also representative of views from Court Lodge
2. Representative of the Church of St Mary
3. PROW crossing A2070 footbridge leading to the Church of St Mary
4. Residential properties on eastern edge of Ashford (Willesborough)
5. PROW AU534 representative of views from residential properties along the A20
6. PROW AE639
7. Representative of residential properties on Kingsford Street (western end)
8. Representative of residential properties on Kingsford Street (eastern end)
9. Properties on Blind Lane, Mersham
10. PROW AE363, off Blind Lane, Mersham
11. PROW AE365 off Church Road, Mersham
12. Hillcrest residential property off Blind Lane, Mersham
13. Properties on Cheeseman's Green Lane
14. Collier's Hill PROW AE401, east of Cheeseman's Green
15. Waterbrook Avenue junction between PROW AE667A and AE350
16. Representative of residential receptors [REDACTED] adjacent to junction of Church Road / Highfield Lane and Cheeseman's Green Lane
17. Representative of residential properties on Church Road
18. PROW AE138 at Devils' Kneading Trough, representative of elevated views from within Kent Downs AONB

Further information on the baseline views from these visual receptors is given in the Visual Impact Schedules and are shown on the Visual Receptor Plan in the Landscape and Visual Impact Assessment in Appendix F.

Construction: The full assessment upon landscape and visual receptors during construction is provided in Appendix F. During construction, there is potential for adverse effects on landscape character due to the presence of construction activities, which would bring new features into the landscape that would be at odds with the current agricultural landscape but set in the context of adjacent large-scale infrastructure. There would also be temporary stockpiling of earth on land to the eastern side of Highfield Lane. Only one of the five LCAs (LCA 2 Mersham Farmlands) assessed would be directly affected as a result of the construction of the scheme. However, given the presence of detracting features within the LCA and the limited impacts on the wider context of the LCA, the effects on the LCA during construction are not anticipated to be significant. In addition, the effects on the remaining four LCAs are also not anticipated to be significant during construction. Nonetheless, best practice measures would be implemented to reduce non-significant adverse effects. This includes ensuring stockpiles are seeded and kept to a maximum height of 2m and located as far away from residential receptors as possible, ensuring task lighting is kept to a minimum and is directional, and ensuring the site is well-

managed and tidy, with construction materials delivered on an as and when needed basis to reduce material stockpiles on-site. These measures are outlined in the REAC (LVE1, LVE2, LVE3, and LVE4) Appendix C. These measures would be carried through to the CMP that would be adhered to and implemented by the Principal Contractor.

The construction period would see the introduction of discordant features in views towards the site for a number of nearby receptors, including near distance views for properties neighbouring the scheme such as those on Church Road, Court Lodge and PROW AE639 immediately adjoining the site. Of the 18 receptors identified above, five receptors would be subject to changes in the immediate foreground of their view and the effects would be difficult to fully mitigate during the construction period. However, given the short duration and temporary nature of construction (maximum six months), the effects are not considered to be significant for these visual receptors. In order to aid visual screening and landscape integration any landscape bunds should be created early in the construction period and should be seeded as a priority to 'green up' earthworks. Planting would be implemented at the earliest opportunity to aid the integration of the scheme with the surrounding landscape. These measures are outlined in the REAC (LVE1) Appendix C, and would be carried through to the CMP that would be adhered to and implemented by the Principal Contractor.

Operation: The full assessment upon landscape and visual receptors during operation is provided in Appendix F. In summary, there is potential for adverse effects on the local character of the area due to the presence of infrastructure including buildings, cabins, fencing and lighting and HGVs within the site. Only one of the five LCAs (LCA 2 Mersham Farmlands) would be directly affected by the scheme, as these new features would be a distinct change from the existing landscape with notable development in a previously arable scene, albeit with detracting features in the immediate area. Whilst these features would appear discordant within the LCA as a whole, the detracting features are not uncommon within this part of the LCA, with the presence of the A2070, A20, M20 and associated junctions next to the site. Given the scale of the change to the LCA as a whole and following the implementation of the landscape design included in the Environmental Masterplan (419491-MMD-01-MO-DR-L-3022 and 419491-MMD-01-MO-DR-L-3023) (and LVE5 in the REAC in Appendix C), no significant adverse effects are anticipated on this LCA. In addition, no significant effects are anticipated on the remaining four LCAs as a result of the operation of the scheme.

As with the construction period, the operation of the scheme would see the introduction of new discordant features into several local views. For the majority of receptors (13 out of 18), the presence of existing intervening vegetation, and implementation of the 2m high landscape bunds and associated landscape mitigation included within the Environmental Masterplans (419491-MMD-01-MO-DR-L-3022 and 419491-MMD-01-MO-DR-L-3023), would screen views to the operational aspects of the scheme. However, for five out of the 18 receptors, the change during the short-medium term during the five-year operation would be moderate. Nonetheless, with the benefit of the landscape mitigation included within the Environmental Masterplans (419491-MMD-01-MO-DR-L-3022 and 419491-MMD-01-MO-DR-L-3023) (and LVE5 in the REAC in Appendix C), these views to site would be progressively softened during operation as structural planting establishes. As such with the implementation of mitigation detailed within the Environmental Masterplans and given the short to medium term nature of the operational aspects of the scheme, the overall effect for visual receptors would not be significant during operation.

Reinstatement: The reinstatement of the scheme is not anticipated to result in any new effects or effects of greater significance than those associated with the construction of the scheme. The effects would likely be reduced compared to that during the construction phase as the scale of

works for reinstatement would be reduced. This is due to the retention of the hardstanding plots on-site and as such the reinstatement would only include the removal of associated infrastructure, such as the dismantling and removal of buildings, lighting and acoustic barriers. By this time, the planting on-site would have further established, and this along with the presence of the landscape bunds which would also remain in situ, would aid screening to the reinstatement works. As such, no significant effects on landscape and visual receptors are anticipated from the reinstatement works. Nonetheless, best practice measures to reduce the risk of non-significant effects during reinstatement, such as keeping task lighting to a minimum and keeping a tidy and well managed site, would be included as part of the Reinstatement Plan to be implemented by the Reinstatement Contractor. These measures are outlined in the REAC (LVE3 and LCE4) to be incorporated in the Reinstatement Plan.

Upon reinstatement after five years, all infrastructure would be removed from the site, leaving only areas of hardstanding in the once operational plots of the site, along with the drainage infrastructure and the SuDS ponds. The green-blue infrastructure and all landscape bunds within the Environmental Masterplan (drawing ref: 419419-MMD-01-MO-DR-L-3030 and 419419-MMD-01-MO-DR-L-3031) would also remain on-site which would ensure that there are no adverse effects on visual receptors. As such, in summary the Landscape and Visual Impact Assessment (Appendix F) has concluded that following the removal of the infrastructure on the site and the retention of the landscape mitigation, there would be no significant adverse effects upon landscape character or visual amenity upon reinstatement of the site at Year 5 and beyond into the long-term, up to Year 15 when it is considered that planting would have fully established to meet its intended screening and landscaping integration functions. In time, it is expected that the retention of this green-blue infrastructure would provide long-term benefits for landscape character and visual receptors.

Additionally, in order to ensure a positive long-term legacy for the local community, further enhancements to the site would also be implemented at this stage. Indicative enhancement proposals are documented in the Long-Term Enhancement Plan (419419-MMD-01-MMD-01-MO-DR-L-3032) which would be further developed, and a detailed plan included as part of the Reinstatement Plan for the scheme. This is included in the REAC (LVE6) in Appendix C to be implemented by the Reinstatement Contractor.

### 3.5 Geology and Soils

*DMRB LA 109*<sup>10</sup> has provided the assessment framework for geology and soils. Appendix G presents the Geotechnical Desk Study which has been produced that supports this report.

The study area for this environmental discipline is 250m.

There are no geological designations or sensitive and valuable non-designated geological features within the study area. The high level (1:250,000 scale) Agricultural Land Classification (ALC) mapping from Natural England for London and the South East indicates that the study area is located in a Grade 2 (very good) area. The post-1988 ALC surveys for England identify that the area within the site boundary is mainly Grade 2, with areas of Grade 3a and 3b to the north and south of the western parcel of land and an area of Grade 1 on the eastern parcel of land. There is one historic landfill located within 250m of the site: the Mersham Quarry landfill located approximately 155m north-east of the site. There is one licenced waste management facility within 250m of the site: Brett Aggregates Limited located approximately 165m south-west of the site. No Environment Agency pollution incidents have been declared within 250m of the

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<sup>10</sup> Highways England (2019) *DMRB Sustainability and Environment Appraisal LA 109 Geology and soils*. Available at: <https://standardsforhighways.co.uk/dmrb/search/adca4c7d-4037-4907-b633-76eae30b9c0>

scheme. The underlying bedrock is Hythe Formation (sandstone and subequal/subordinate) limestone and Atherfield Clay Formation (mudstone, sandy).

The site has historically been agricultural land with no known development. Site investigation and laboratory analysis of soils on-site has not identified any elevated levels of contaminants above generic screening criteria, indicating that the soils are clean, natural material. Further details are shown within the Geotechnical Desk Study (Appendix G). The site is categorised as having a low risk for Unexploded Ordnance (UXO)<sup>11</sup>.

Construction: Excavations would be required for the construction of the hardstanding areas and drainage across the site. This includes a topsoil strip to allow the site to be surfaced as well as excavations to create the SuDS ponds. Valuable topsoils and subsoils would be stripped, segregated and stockpiled appropriately for re-use across the site within the landscaping bunds. Temporary stockpiles would be created on the eastern part of the site for a maximum period of 12 months in order to promote re-use of excess soils on nearby sites. The stockpiling itself would also be managed appropriately by the Principal Contractor in line with the Defra *Construction Code of Practice for the Sustainable Use of Soils on Construction-sites*<sup>12</sup> guidance to ensure that the topsoil is not lost as a resource. The stockpile may remain in the eastern parcel for up to one year from excavation if a use is not found for it. The pile would be seeded to maintain the quality of the soil and therefore its use as a resource. These measures are required to mitigate any potential significant effects and are included in the REAC (GS1) in Appendix C to be incorporated in the CMP to be adhered to and implemented by the Principal Contractor. Additionally, as the soils have been proven to be uncontaminated, there would be no impacts with regard to deterioration of the quality of soils underlying the stockpile as a result of leaching, nor any risks to construction workers from contact with contaminated soils, leachates or ground gases. No significant effects are anticipated due to contamination of soils from construction works. Nonetheless, best practice measures such as ensuring that any fuels, oils or hazardous materials used during the works are appropriately stored and kept in bunded areas to prevent contamination of any underlying soils, providing spill kits on-site for the duration of the works with construction staff trained in their correct application would be followed to reduce the risks of contamination. These measures are included in the REAC (GS2) in Appendix C.

The permanent loss of Grade 2, Grade 3a and Grade 3b agricultural land is expected on the western parcel of land to facilitate the scheme. However, considering the wider availability of Grade 2 agricultural land within the study area, along with the opportunities for the re-use of this resource elsewhere (as described above), it is not considered that the loss of these agricultural soils would be significant. In addition, as outlined in Section 2.2, construction works under the approved consent for the Stour Park Development have already commenced on site and as such the site is no longer an arable field with much of the agricultural resource lost to facilitate those works. Furthermore, the use of the eastern parcel of land for stockpiling would be temporary and would not involve any excavations, and therefore would not result in the permanent loss of agricultural land.

Overall, there are not anticipated to be any significant effects on geology and soils during the construction of the scheme.

Operation: There are not anticipated to be any adverse effects during the operation, as the operation of the scheme would not disturb the underlying geology and soils. This is due to the

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<sup>11</sup> Zetica UXO (2020) *Risk Maps*. Available at: <https://zeticauxo.com/downloads-and-resources/risk-maps/>

<sup>12</sup> Defra (2009) *Construction Code of Practice for the Sustainable Use of Soils on Construction-sites*. Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/716510/pb13298-code-of-practice-090910.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/716510/pb13298-code-of-practice-090910.pdf)

incorporation of impermeable hardstanding and a drainage system that does not allow for infiltration or soakaway within the design. Overall, no significant adverse effects on geology and soils is anticipated during the operation of the scheme.

Reinstatement: There are not anticipated to be any adverse effects from the reinstatement of the scheme. This is because the hardstanding of the development plots and drainage would remain in-situ, and as such the reinstatement activities would not disturb any underlying geology and soils.

### 3.6 Biodiversity

In addition to *DMRB LA 108*<sup>13</sup>, the assessment of biodiversity was guided by *Guidelines for Ecological Impact Assessment in the UK*<sup>14</sup> and the *CIEEM Sources of Survey Methods*<sup>15</sup>. A Biodiversity Assessment has been undertaken to support this report and can be found in Appendix H. An Arboricultural Impact Assessment has also been undertaken and is contained in Appendix I.

The study area for this environmental discipline varies for different ecological features depending on their sensitivity to an environmental change. The Zone of Influence (ZOI) are summarised below:

- Statutory designated sites: 2km from the site boundary
- Non-statutory designated sites: 1km from the site boundary
- Designated sites for bats: 30km from the site boundary
- Habitats/species: within and adjacent to the site boundary
- Great crested newt: 500m from the site boundary

The following sites designated for ecological conservation are located within the relevant study areas of the scheme:

- Hatch Park SSSI is located approximately 550m north east of the site.
- Ashford Green Corridors Local Nature Reserve (LNR) is located approximately 50m west of the site.
- Willesborough Lees and Flowergarden Wood Local Wildlife Site (LWS) (AS44) is located approximately 900m north of the site.
- South Willesborough Dyke LWS (AS19) is located approximately 1km south west of the site.

There are no European designated sites within 2km of the scheme, nor any European sites designated for bats within 30km of the scheme. However, the North Downs Woodland SAC and Folkestone to Etchingill Escarpment SAC are located within 200m of the ARN for the air quality assessment. In addition, the scheme would outfall to the Old Mill (Aylesford) Stream, which is hydrologically connected to the Stodmarsh SPA, SAC, and Ramsar. As such, a Habitats Regulation Assessment (HRA) (document ref: 419419-MMD-XX-SV-RP-BD-0001) has been produced to assess any potential likely significant effects on these designated sites.

The site consists of arable land, occupying over 75% of the site, hedgerows, ditches, improved grassland, plantation woodland, poor semi-improved grassland, mature scattered trees, scrub, tall ruderal vegetation and hardstanding as shown on the Phase One Habitat Survey map in

<sup>13</sup> Highways England (2020) *DMRB Sustainability and Environment Appraisal LA 108 Biodiversity*. Available at: <https://standardsforhighways.co.uk/dmrb/search/af0517ba-14d2-4a52-aa6d-1b21ba05b465>

<sup>14</sup> CIEEM (2018) *Guidelines for Ecological Impact Assessment in the UK and Ireland*. Available at: <https://cieem.net/resource/guidelines-for-ecological-impact-assessment-ecia/>

<sup>15</sup> <http://www.ieem.net/sources-of-survey-methods-sosm->

Appendix B of the Biodiversity Assessment (Appendix H). The most notable habitats are considered to be the hedgerows. Other habitats of note include the plantation woodland, ditches and the mature scattered trees. The majority of other habitats on-site are either species-poor, well represented in the local area or could easily be replicated if lost. Further details of habitat importance are outlined in the Biodiversity Assessment in Appendix H.

Phase 2 ecology surveys undertaken for the outline planning permission for the Stour Park Development on the site (14/00906/AS) confirmed the presence of reptiles, dormouse, birds and foraging and commuting bats. To support the Biodiversity Assessment (Appendix H), additional walkover surveys were undertaken in 2020. An active outlier badger sett with one entrance was identified towards the north-west of the site during the walkover in May 2020. In 2019, a dormouse survey of the site was undertaken. Dormice evidence was recorded in the small block of broadleaved woodland to the west of the site, within vegetation located to the north of Church Road, and towards the southern extent of the hedgerow along Highfield Lane. The site supports two areas that are considered to be 'Key Reptiles Sites' in accordance with Froglife<sup>16</sup> criteria. Further details are provided within the Biodiversity Assessment in Appendix H.

Construction: A temporary adverse effect is anticipated for nearby nature conservation features as a result of construction noise, lighting and visual disturbance from the associated personnel, plant and traffic management during the works. The proximity of Ashford Green Corridors LNR to the site means that some temporary minor indirect effects could occur as a result of dust deposition and noise pollution during construction. However, this would be temporary, lasting a maximum of six months, and would not result in a significant effect. As the two non-statutory designated sites are within 1km of the scheme, no direct or indirect construction effects are anticipated on any other designated sites.

There would be a permanent loss of approximately 47.73ha of habitat including a hedgerow, scrub and scattered trees, as a result of construction. The majority of this loss would be arable land (47ha). However, to avoid significant effects for protected species, vegetation clearance would be undertaken outside of the breeding bird season, between September and February, and supervised by a suitably qualified ecologist. This is included in the REAC (B6) to be incorporated in the CMP to be adhered to and implemented by the Principal Contractor on-site.

Mitigation measures, including waterborne pollution prevention measures and dust and noise suppression measures, would ensure retained hedgerows, ditches and habitat creation areas are protected from deterioration caused by the release of harmful pollutants during construction and disturbance to protected species is reduced. In addition, night-time working would not be allowed during the months when bats are actively foraging (April to October inclusive) to prevent light disturbance to foraging bats. These are outlined in the REAC (B1) in Appendix C to be incorporated in the CMP to be adhered to and implemented on-site by the Principal Contractor. A Natural England development licence would be acquired for the closure of the badger sett and the sensitive method of vegetation clearance of dormouse habitat to ensure no significant effects to badger and dormice (B4 and B5 in the REAC in Appendix D). A reptile mitigation strategy would be implemented prior to construction and would incorporate a number of sensitive working methods including translocation to a receptor site and ecological supervision to mitigate the impacts of construction on reptiles (B3 in the REAC in Appendix D). Appropriate ecological and arboricultural supervision would establish root protection areas of retained trees and hedgerows and prevent direct and indirect impacts. An Arboricultural Report (Appendix I) has been produced which sets out the measures required to protect trees that are being retained on-site, these include measures such as installing protective barriers at distances

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<sup>16</sup> Froglife (1999) *Reptile survey. An introduction to planning, conducting and interpreting surveys for snake and lizard conservation.* Froglife Advice Sheet 10. Froglife: Peterborough.

dictated by the root protection area of the trees (as identified in the Arboricultural Report). The impact of habitat degradation of retained habitats would not be significant. Nonetheless, best practice guidelines are outlined in the REAC (B2) in Appendix C to reduce the risk of non-significant effects. These measures would include protective fencing around retained trees and vegetation with the placement confirmed by an Arboriculturalist, the area within the barriers would be a construction exclusion zone (CEZ) which would include no mechanical digging or scraping, no storage of plant, no vehicular or plant access, no fire lighting within 10m of tree canopies, no handling of any chemical substance, no alteration to ground levels, no construction of hard surfaces, no attachment of boards, and no storage of excavated materials. These would be carried through to the CMP that would be adhered to and implemented by the Principal Contractor.

Overall, no significant effects on biodiversity are anticipated during the construction of the scheme. Further details can be found in the Biodiversity Assessment in Appendix H.

Operation: The Air Quality Impact Assessment (Appendix D) identified eight designated sites where there could be changes in nitrogen deposition as a result of the scheme due to changes in traffic flows on the ARN:

- North Downs Woodlands SAC
- Folkestone to Etchingill Escarpment SAC
- Wouldham to Detling Escarpment SSSI
- Seabrook Stream SSSI
- Hatch Park SSSI
- Folkestone Warren SSSI
- Ashford Green Corridors LNR
- Western Heights LNR

The assessment modelled the potential changes in nitrogen deposition on these sites. In accordance with the DMRB LA 105, the significance of impacts at ecological designations is assessed against changes in the critical loads. The assessment concluded that in both modelled scenarios outlined in Section 3.1.1 above, for all ecological sites there are no predicted increases in nitrogen deposition greater than 1% of the minimum nitrogen deposition critical load applied to the habitat. Therefore, on that basis in accordance with the DMRB LA 105, the effect on these ecological receptors is not considered to be significant. Refer to the Air Quality Impact Assessment in Appendix D for further details. Additionally, the impacts on North Downs Woodlands SAC and Folkestone to Etchingill Escarpment SAC were considered within the HRA (document ref: 419419-MMD-XX-SV-RP-BD-0001), which has concluded that there would be no likely significant effects on the two SACs as a result of nitrogen deposition from changes in traffic due to the scheme.

Nutrient rich run-off produced from activities within the scheme have been determined as having potential to result in Likely Significant Effects on the Stodmarsh SPA, SAC and Ramsar. Therefore, a Stage 2 Appropriate Assessment (Section 6, document ref: 419419-MMD-XX-SV-RP-BD-0001) has been undertaken to further assess the potential for an adverse effect on the integrity of the three European sites at Stodmarsh. The assessment concluded that as a result of the measures included in the drainage design for the scheme there would be no significant effect, alone or in-combination, on the integrity of Stodmarsh SAC, SPA or Ramsar or its dependant features during construction and operation.

There are no other operational phase effects anticipated for the non-statutory nature conservation-sites due to the distance from the site.

Polluted run-off and accidental pollution have the potential to cause habitat degradation, in particular to sensitive habitats such as ditches. This risk would be avoided or reduced by the SuDS features on-site which would provide sufficient treatment to the run-off as well as through the implementation of a pollution prevention plan which would be included within the OMP to be adhered to by the Principal Operator. Temporary effects from the accumulation of litter, fires and small pollution incidents would be appropriately managed through the OMP and are not considered to be significant. These measures are outlined in the REAC (B8) in Appendix C to be incorporated in the OMP which would be adhered to and implemented on-site by the Principal Operator.

The habitats lost would not be replaced on a like for like basis due to the nature of developing the area from predominantly arable to areas of hardstanding. However, the ecological attributes of the habitats would be replaced with habitats of greater ecological value than the existing habitats. The landscape design includes provision for woodland, hedgerows, species rich wildflower meadows, native shrub, specimen trees and hedgerows, and SuDS ponds with marginal and aquatic planting. In addition, 10 bat, 10 bird and six dormice boxes would be installed within the site. This is shown on the Environmental Masterplan (drawing ref: 419419-MMD-01-MO-DR-L-3030 and 419419-MMD-01-MO-DR-L-3031). The habitat replanting scheme would increase the biodiversity value resulting in a positive biodiversity net gain of 9.7 units which has been calculated using the Defra *Biodiversity Metric 2.0*<sup>17</sup>. Further details are outlined in the Biodiversity Assessment in Appendix H.

The new habitats would increase in ecological value as they become established, reach maturity and develop features of value to wildlife during operation. To ensure the value of these habitats is maintained, appropriate management and maintenance would be required as detailed within the LEMP (document ref: 419419-MMD-XX-SV-RP-L-0001). Therefore, operation of the scheme is anticipated to result in slight beneficial effects for habitats. Refer to the Biodiversity Assessment in Appendix H for further details.

The operation of the scheme has potential to result in disturbance to protected species through noise, lighting and pollution. However, the increase in noise levels is unlikely to exceed tolerable levels and SuDS features on-site which would provide sufficient treatment to the run-off as well as through the implementation of a pollution prevention plan which would be included within the OMP to be adhered to by the Principal Operator. In addition, the lighting strategy has been sensitively designed to minimise light spill and to ensure both retained and newly created habitats would provide 'dark' areas surrounding the parking areas. Once the planting has become established, they would provide suitable habitats for a range of species as outlined in the Biodiversity Assessment in Appendix H. Overall, there is not expected to be a significant effect on breeding birds, wintering birds, bats, and dormice during operation. No significant effects are anticipated on badgers, water voles, and brown hare/hedgehogs. However, there would be a slight beneficial effect on reptiles and invertebrates. Refer to the Biodiversity Assessment in Appendix H for further details.

Overall, there would be no significant effects on biodiversity as a result of the operation of the scheme. Further details are provided in the Biodiversity Assessment in Appendix H.

Reinstatement: The reinstatement of the scheme is not anticipated to result in any new or materially different effects than those anticipated during the construction of the scheme as all temporary structures would be removed, with the hardstanding and drainage remaining in situ. However, reinstatement activities could give rise to a temporary adverse effect on biodiversity

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<sup>17</sup> Defra (2019) Biodiversity Metric 2.0 – Calculation Tool – Beta Test December 2019 Update. Available at: <http://publications.naturalengland.org.uk/publication/5850908674228224>

features as a result of noise, lighting and visual disturbance from the associated personnel, plant, and traffic management during the works. Measures to minimise disturbance are outlined in the REAC (B1) (Appendix C) and include ensuring lighting is minimised to avoid light spill on habitats for dormice, careful siting of haul routes, material storage areas, compounds, lighting and generators away from sensitive habitats, and no night-time working during months when bats are actively foraging (April to October inclusive) to prevent lighting disturbance to foraging bats. These measures would be carried through to the Reinstatement Plan that would be adhered to and implemented by the Reinstatement Contractor, and are not considered to be significant

The green-blue infrastructure would remain in situ as would all landscape bunds which would have settled in the landscape with associated planting having established throughout, providing a net gain in biodiversity. Further enhancements to the site would also be implemented at this stage as proposed indicatively in the Long-Term Enhancement Plan (drawing ref: 419419-MMD-01-MO-DR-L-3032) to ensure a positive long-term legacy with respect to the site's habitats and wildlife that utilise them. In addition, monitoring for dormouse, habitats, bats, reptiles and breeding birds would be undertaken throughout the operational period which have been incorporated in the LEMP (document ref: 419419-MMD-XX-SV-RP-L-0001) and outlined in the REAC (B10) to be implemented by the Principal Operator. Overall, there is anticipated to be a biodiversity net gain in grassland, woodland, and wetland habitats, resulting in a beneficial effect for biodiversity in the long term.

### 3.7 Material Assets and Waste

*DMRB LA 110*<sup>18</sup> has provided the assessment framework for material assets and waste.

The study area for this environmental topic considers the site boundary and suitable waste management infrastructure within the vicinity of the scheme.

Material resources would be required for the construction of the scheme, including but not limited to, aggregates and minerals from primary, secondary and recycled sources and manufactured construction products, including modular style buildings for offices and inspection facilities. The study area is covered by a mineral safeguarding area (MSA) for limestone (Hythe Formation – Kentish Ragstone) under the *Kent Waste and Minerals Local Plan (2016)*.

Construction: There is the potential for adverse effects on material assets, due to the requirement for material resources to be used in construction, thus resulting in a reduction in the availability of material resources and the potential depletion of natural resources. The main construction materials required for the scheme include asphalt and aggregate for the parking areas, pipes for drainage and modular style buildings for offices and inspection facilities. In order to reduce potential effects on material resources, site-won materials would be used where possible, as well as sourced locally where required and possible. Additionally, materials would be delivered on an as and when basis to avoid damage or contamination, and pre-case elements would be used, where practical to ensure efficient use of materials. These measures are outlined in the REAC (M1) in Appendix C to be incorporated into the CMP which would be adhered to and implemented by the Principal Contractor on-site. In addition, the buildings and inspection facilities have been designed taking into consideration the principles of re-use elsewhere in the future. With these measures in place, no significant effects on material resources are anticipated from the construction of the scheme.

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<sup>18</sup> Highways England (2019) *DMRB Sustainability and Environment Appraisal LA 110 Material assets and waste*. Available at: <https://standardsforhighways.co.uk/dmrb/search/6a19a7d4-2596-490d-b17b-4c9e570339e9>

Waste from construction activities is likely to be generated from surplus site-won materials, vegetation clearance and materials brought to site which are not used for their original purpose (surplus construction materials and damaged stock or cut offs). Effects from waste generation during the construction phase may include temporary increased use of waste management facilities and permanent reduction to landfill capacity. In order to reduce effects from waste generation, mitigation would be implemented. This includes the implementation of the waste hierarchy to minimise disposal and maximum re-use and recycling of waste arisings. Opportunities for re-use and recycling onsite includes the re-use of excavated soils on-site in the landscaping bunds, chipping green waste on-site for use in the landscaping and re-use of surplus excavated materials on other nearby scheme or for uses with clear benefits to the environment, such as in the restoration of nearby quarries or other excavation-sites. In addition, materials would be delivered on an as and when basis to avoid damage or contamination to reduce the risk of waste. These measures are outlined in the REAC (M2) in Appendix C to be incorporated into the CMP which would be adhered to and implemented by the Principal Contractor on-site.

An estimated 125,300m<sup>3</sup> would be excavated from the western parcel of land to facilitate the scheme, comprising approximately 117,300m<sup>3</sup> of agricultural topsoils and 8,000m<sup>3</sup> of subsoils. Approximately 42,160m<sup>3</sup> of this material would be re-used onsite within the landscaping bunds, thus resulting in a surplus of approximately 83,140 m<sup>3</sup>. This would be managed through the production of a Materials Management Plan as outlined in the REAC (M3) in Appendix C, which would be incorporated into the CMP to be adhered to and implemented by the Principal Contractor on-site. This surplus material would be temporarily stockpiled on the eastern parcel of land for a maximum of 12 months (as shown in the stockpile drawings ref: 419419-MMD-01-MO-DR-C-0142 and 419419-MMD-00-MO-SK-C-0028) in order advertise the re-use of this material in other nearby schemes. The stockpiling itself would also be managed appropriately by the Principal Contractor in line with the Defra *Construction Code of Practice for the Sustainable Use of Soils on Construction-sites*<sup>19</sup> guidance to ensure that the topsoil is not lost as a resource. The stockpiling has been discussed and agreed with the Environment Agency, subject to the implementation of measures to reduce environmental effects of dust, noise and polluted run-off. These are included in the REAC (AQ1, NV2, RDWE1) in Appendix C which would be incorporated into the CMP to be adhered to and implemented by the Principal Contractor onsite. Should the temporarily stockpiled material be re-used off-site an appropriate permit would need to be obtained from the Environment Agency. If no use is found for the material within this 12-month period, it would be removed from site and be disposed of as waste to a suitably licenced waste management facility. However, the latest Kent County Council minerals and waste monitoring report<sup>20</sup> states that there is sufficient remaining capacity of inert waste landfill, more than is sufficient to meet Kent's need for their plan period. As such, should this material need depositing in landfill, no significant effects on the remaining landfill capacity in Kent is anticipated.

A very small proportion (<5%) of the mineral safeguarding area within which the scheme is located would be lost as a result of the scheme and therefore would not sterilise this resource as a whole. As such, this is not considered to constitute a significant effect.

Overall, no significant effects from waste generation are anticipated due to the construction of the scheme.

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<sup>19</sup> Defra (2009) *Construction Code of Practice for the Sustainable Use of Soils on Construction-sites*. Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/716510/pb13298-code-of-practice-090910.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/716510/pb13298-code-of-practice-090910.pdf)

<sup>20</sup> Kent County Council (2020) 13<sup>th</sup> Annual Minerals and Waste Monitoring Report [online] available at: [https://www.kent.gov.uk/\\_\\_data/assets/pdf\\_file/0016/110356/Kent-County-Council-Annual-Monitoring-Report-2018-2019.pdf](https://www.kent.gov.uk/__data/assets/pdf_file/0016/110356/Kent-County-Council-Annual-Monitoring-Report-2018-2019.pdf)

**Operation:** Small quantities of concrete, aggregate, bitumen and other materials, may be required for the maintenance of the proposed scheme during operation. This would include localised repairs to buildings, roads and parking areas. This has the potential to result in the reduction in the availability of those material resources and potentially the potential depletion of natural resources. However, maintenance is anticipated to require relatively negligible quantities of both primary raw materials and manufactured construction products compared to the construction phase. Therefore, it is anticipated that there would not be any significant adverse effects relating to the operation of the site as materials required for maintenance activities would be infrequent and unlikely to require large volumes of material resources.

The waste generated during operation would be managed by the placement of waste bins throughout the operational areas. It is assumed that waste would be managed by a number of wheeled bins around the site to accommodate the anticipated daily waste of the HGV drivers and staff on-site. The number of bins required would be estimate based on quantities of waste anticipated to be produced by drivers. Facilities management should ensure that waste bins are emptied and that litter pickers are utilised on-site. These best practice measures are outlined within the REAC (M4) in Appendix C which would be brought forward in the OMP and adhered to and implemented by the Principal Operator.

Materials for the construction of the additional HMRC sheds and Defra BCP for Day 200 would be required which would comprise of manufactured materials for the buildings. As no primary materials would be required, no significant effects from this element of the works are anticipated. In addition, the removal of parking infrastructure after Day 200 within the central viewing corridor for its restoration as a landscape area would likely generate some waste from the removal of aggregate in this location. This is expected to be fairly minimal and would be managed in accordance with the principles of the mitigation hierarchy as outlined in the REAC (M4) in Appendix C. As the number of HGV spaces would reduce on-site through the removal of parking in the central 'viewing corridor' along with the suspension in the north-western and southern plot areas, it is assumed that there would be less operational waste from drivers. Regardless, it is recommended that the four proposed 1100 litre wheeled bins are retained for this phase of operation. The placement of appropriately sixes waste bins throughout the operational area is included within the REAC (M4) (Appendix C) which would be included within the OMP to be adhered to and implemented by the Principal Operator.

Foul waste from the welfare facilities and the Defra BCP would be managed through the foul drainage system as outlined in the Drainage Strategy in Appendix K. This strategy has accounted for the capacity of the wastewater treatment facilities in discussions from Southern Water.

Given the temporary nature of the operation (maximum of five years) and the management arrangements that would be put in place, no significant effects are expected in relation to material assets and waste during the operation of the scheme.

**Reinstatement:** The reinstatement of the scheme is unlikely to require the use of any material resources. However, the temporary structures and associated infrastructure, such as lighting columns, would be removed which could constitute waste if not appropriately managed. The design of the modular buildings and inspection facilities have been designed with re-use in mind, and opportunities for these to be sold and re-used elsewhere following the reinstatement of the scheme would be explored.

Where possible, during reinstatement the waste hierarchy should be followed when dealing with waste on-site. The following opportunities include the re-use of excavated soils on-site, chipping green waste for use in landscaping, and the re-use of surplus excavated materials on other

nearby schemes or for uses with benefits to the environment, have been outlined within the REAC (M2) in Appendix C and would be incorporated within the Reinstatement Plan. This would be adhered to and implemented by the Reinstatement Contractor. With these measures in place, no significant effects are anticipated from waste generation. The hardstanding and drainage in the plot areas would remain which promotes the re-use of those materials for future development, and hence no waste would be produced. Following reinstatement, the site is unlikely to require any material resources nor generate any waste. As such, no significant effects are anticipated upon material assets and waste for the reinstatement phase.

### 3.8 Noise and Vibration

DMRB LA 111<sup>21</sup> has provided the assessment framework for noise and vibration. In addition, BS5228-1 *Code of practice for noise and vibration control on construction and open sites*<sup>22</sup>, BS4142 *Methods for rating and assessing industrial and commercial sound*, BS8233 *Guidance on sound insulation and noise reduction for buildings*<sup>23</sup>, Calculation of Road Traffic Noise (CRTN)<sup>24</sup> and IEMA (2018) *Guidelines for Environmental Noise Impact Assessment*<sup>25</sup> have also been used to inform this assessment. The Noise Impact Assessment has been undertaken to support this report and is contained in Appendix J.

The study area is identified as an area within 600m of the physical works associated with the scheme. Within this study area, road traffic noise calculations are performed at any sensitive receptor. Furthermore, routes are identified where there is a possibility of a change of 1dB  $L_{A10,18hr}$  upon scheme opening, or 3dB  $L_{A10,18hr}$  in the long term. Usually for these routes the assessment reports only the change in basic noise level (BNL) which is the noise level at a reference distance of 10m from the nearest carriageway edge. The change in basic noise level; enables the impact to be classified using the criteria set out in Table 4. LA 111 allows study areas to be expanded or restricted if deemed appropriate.

In this assessment, noise important areas were identified within 1km of the site and as such road traffic noise calculations were performed at any sensitive receptor within 1km of the site boundary. Outside of this 1km boundary, the basic noise level of routes with a change of greater than 1dB  $L_{A10,18hr}$  upon scheme opening are reported.

For further details on the study area used refer to the Noise Impact Assessment presented in Appendix J.

There were 21 representative receptors, including four farms and a place of worship located within the study area. These are detailed within the Noise Impact Assessment within Appendix J. Furthermore, there are two Noise Important Areas (NIA) located within the study area:

- One NIA is to the north west of the site along to A2070 to J10 (ref: r3\_ID: 4509) containing approximately 50 properties.
- One is located along a short stretch of the M20 near J10a and contains two properties (r3\_id: 4507).

Baseline noise conditions have been predicted at receptors within the study area using Datakustik's CadnaA MR 2020 software and were based on traffic volumes forecasted for

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<sup>21</sup> Highways England (2020) *DMRB Sustainability & Environment Appraisal LA 111 Noise and Vibration*. Available at: <https://standardsforhighways.co.uk/dmrb/search/cc8cfd7-c235-4052-8d32-d5398796b364>

<sup>22</sup> British Standards Institute (BSI) (2014) BS5228-1:2009+A1:2014. *Code of practice for noise and vibration control on construction and open sites – Part 1: Noise*.

<sup>23</sup> BSI (2014) BS8233. *Guidance on sound insulation and noise reduction for buildings*.

<sup>24</sup> Department of Transport (1988) *Calculation of Road Traffic Noise*.

<sup>25</sup> IEMA (2014) *Guidelines for Environmental Noise Assessment*.

2021. The available data shows that the study area is subject to noise from the nearby M20 motorway, and adjacent A2070. The site is also subject to railway noise from the channel tunnel line to the south of the site.

Construction: There is potential for temporary, adverse effects on nearby residential receptors as a result of noise and vibration arising from the construction works associated with the scheme. The construction would mostly consist of the construction of hardstanding and stockpiling of material on land to the east of the site boundary. Any raised structures are limited to site offices and inspection sheds. Noise barriers would be constructed around the site by auger methods. As such, works would not consist of any high noise and vibration inducing activities such as piling and would be short in duration (maximum of 6 months). The closest receptors to the site are situated approximately 10m to 300m from the Article 4 Red Line Boundary and approximately 100m from the proposed stockpile. The stockpiling is expected to store site-won material on land to the east of the site boundary for a temporary period (up to 12 months). The main noise source would consist of plant such as dumper trucks and excavators moving fill material around which do not constitute high noise level activities. As such, there are not anticipated to be any significant effects from noise and vibration during the construction of the scheme

Nonetheless, best practice measures during construction would be implemented during construction to reduce non-significant effects, such as completing all noisy operations between 08:00 to 18:00 on weekdays, and 08:00 to 13:00 on Saturdays and switching off noise-emitting equipment when not in use. In addition, construction works would comply with the recommendations for practical measures to minimise noise and the maximum permissible noise limits set out in *British Standard 5228-1*. Where out of hours working is required, prior agreement would be sought through a Section 61 with the local authority. These measures are outlined in the REAC (NV1, and NV2) in Appendix C, which would be carried through to the CMP that would be adhered to and implemented by the Principal Contractor. In addition, noise effects from the temporary stockpiling activities would be reduced through the incorporation of measures such as positioning material closest to the residential receptors first which would ensure a bund between the works and the receptors is formed. This would reduce noise levels for the remainder of the stockpiling works. These measures are outlined in the REAC (NV3) in Appendix C, which would be carried through to the CMP that would be adhered to and implemented by the Principal Contractor.

Overall, it is not expected that construction would result in significant noise and vibration effects and a quantitative assessment has not been carried out.

Operation: The scheme has the potential to give rise to temporary increase in noise levels at nearby receptors in the daytime and night-time. These are predominantly due to increases in road traffic noise from HGVs and staff cars using access roads to the site and noise from HGVs and staff cars moving around the site. Vehicle idling would not be permitted on-site whilst the HGVs are stationary and any refrigerated HGVs that are not able to hook-up to an electricity supply to power their generators would be located within the northern most plot on the site away from the closest residential receptors. These measures are outlined in the REAC (NV4) to be incorporated in the OMP to be implemented and adhered to by the Principal Operator. The potential changes in noise levels for both the disruption and non-disruption scenarios have been modelled and the results of which are presented in the Noise Impact Assessment (Appendix J). The assessment has assumed that noise mitigation is in place around the site boundary as shown on the General Arrangement Plan (drawing ref: 419419-MMD-01-MO-SK-C-0028). This consists of a combination of bunds and timber reflective noise barriers including a combination of 5m barriers, a 4.5m barrier, and 2m bunds with a 3m barrier on top. The assessment

concluded that the temporary daytime and night-time noise increases in road traffic noise as a result of the scheme and noise from the site would not be significant in both the disruption and non-disruption scenarios. In addition, noise levels at both the NIAs would increase as a result of the additional lorry movements due to the scheme. However, the increases in noise at the NIAs are not considered to be significant. Further details are detailed in the Noise Impact Assessment (Appendix J).

Overall, the operational Noise Impact Assessment (Appendix J) shows that any effects are considered to be temporary and are not predicted to cause any significant effects. However, the OMP will details a procedure to handle noise complaints alongside other measures which may help to alleviate complaints. Measures would include engagement with the local authority, a straightforward complaints handling procedure, and noise monitoring on the site boundary. These measures are included in the REAC (NV5) in Appendix C to be incorporated into the OMP to be adhered to and implemented by the Principal Operator.

Reinstatement: The reinstatement of the scheme is not anticipated to result in any new or materially worse effects than the construction of the scheme. However, there is the potential for a temporary, adverse effect on nearby sensitive receptors as a result of noise arising from the works associated with the reinstatement activities, such as the dismantling of infrastructure. However, this is not anticipated to consist of any high noise and vibration inducing activities. As such, given the small-scale nature of the works (as the hardstanding of the development plots would remain) and temporary nature of disturbance, no significant effects are anticipated. Nonetheless, best practice measures would include that works comply with the recommendations for practical measures to minimise noise and the maximum permissible noise limits set out in BS5228-1 and follow best practice guidelines. These measures are outlined in the REAC (NV2) in Appendix C which would be carried forward into the Reinstatement Plan to be adhered to and implemented by the Reinstatement Contractor. The baseline noise environment would then return to pre-construction conditions upon reinstatement.

### 3.9 Population and Human Health

*DMRB LA 112*<sup>26</sup> has provided the assessment framework for population and human health. In line with *DMRB LA 112*, effects on land-use and accessibility (including private property and housing, community land and assets, development land and businesses, agricultural land holdings, and walkers, cyclists and horse-riders (WCH)) and human health have been considered.

In line with *LA 112*, the extents of the study area have been limited to 500m from the site boundary to capture the community effects of the scheme.

For information relating to the baseline and significance of effects to human health in relation to air quality and noise, refer to Sections 3.2 and 3.8 respectively, as well as the accompanying detailed assessments within Appendix D (Air Quality Impact Assessment) and Appendix J (Noise Assessment) respectively.

There is a total of 18 WCH facilities within 500m of the site. The details of which are outlined in Table 3.1. There are no cycle routes located within 500m of the site.

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<sup>26</sup> Highways England (2020) *DMRB Sustainability and Environment Appraisal LA 112 Population and human health*. Available at: <https://standardsforhighways.co.uk/dmrb/search/1e13d6ac-755e-4d60-9735-f976bf64580a>

**Table 3.1: WCH amenities within the study area**

WCH Facility	Description	Location
Public footpath AE639	Runs west to east from Church Road to Highfield Lane for a length of 509m	Within the site footprint
Public footpath AE338	Runs north east connecting to public footpath AE337A for a length of 188m	Within the site footprint
Public footpath AE337A	Runs north connecting to public footpath AE639 for a length of 114m	Within the site footprint
Public footpath AE363	Runs west to east from Highfield Lane to Blind Lane (within the scheme footprint) and continues adjacent south of Kingsford Street for a total of 970m	Within the site footprint
Public footpath AE340	Runs north and south of public footpath AE639 for a total of 272m	Adjacent west of the site
Public footpath AE342B	Runs along the A2070 northbound for a total of 153m	Adjacent to the south west corner of the site
Public footpath AE344	Runs east to west from the south of Cheeseman's Lane and Highfield to join with public footpath AE364 for a total of 622m	Adjacent south of the site
Public footpath AE364	Runs east of adjoining public footpath AE344 to Blind Lane for a total of 274m and then heads north east to join with the eastern end of public footpath AE363 for a total of 741m	Adjacent south east of the site
Public footpath AE342A	Runs along the A2070 southbound for a total of 204m	50m west of the south west corner of the site. Adjacent west of public footpath AE324B.
Restricted byway AE350	Runs west to east south of the scheme and then heads south west for a total of 655m	90m south of the site
Public footpath AE342	Runs east to west for a total of 282m south of Ashford Business Park	280m south west of the site
Public footpath AE175	Runs north to south for a total 1.3km north of the M20 Junction 10a	300m north of the site
Public footpath AE357	Runs north to south for a total of 820m north of the M20	340m north east of the site
Public footpath AU53A	Runs north west to south east adjacent to the M20 Junction 10 for a total of 277m	355m north west of the site
Public footpath AU65A	Runs north of adjoining public footpath AU53A for a total of 109m	355m north west of the site
Public footpath AE349	Runs east to west for a total of 720m south of the HS1 line	360m south of the site

WCH Facility	Description	Location
Public footpath AE339	Runs east to west for a total 368m north of Ashford Business Park	375m west of the site
Public footpath AU103	Runs west to east for a total of 530m south of the M20 Junction 10	420m north west of the site

Milbourn Equine is located adjacent west of the western side of the site. Ransley Kennels is located adjacent north of the south eastern side of the site. There are also several businesses within 500m of the site including:

- TK Maxx 100m west
- B&M 140m west
- Smyths Toys Superstores 145m south-west
- Argos 195m west
- Wickes 270m west
- Willesborough Garden Centre 315m north
- Latter's Recycling 410m south-east
- Barretts Land Rover Ashford 450m south-west

The site boundary is designated as Employment Development Land in the Ashford Local Plan. The site does not have any current agricultural land holdings.

There are no areas of Registered Common Land, Village Greens, Millennium Greens or areas of open space within 500m of the site. There are no education or healthcare facilities within 500m of the site. However, the Church of St Mary is located adjacent to the site.

There are no areas of private property within the site boundary. The closest residential receptors are located along Church Road adjacent south of the site and Highfield Lane 35m east of the southern side of the site and 36m east of the northern side of the site.

Construction: PROWs A337A, AE338, AE363 and AE639 would be temporarily closed during construction to facilitate the works. A temporary diversion would be implemented during construction using the existing AE364 and AE344. All other PROWs would remain unaffected during construction. Although this diversion would add to the distance travelled by WCHs, the diversion would be temporary lasting a maximum of six months. No community facilities would be directly affected as a result of the works. There may be some slight disturbance for the community from the presence of construction activities on-site. However, the visual impacts on the community are considered in Section 3.4 above. There would be no demolition of property, or land take from private property, community facilities, businesses or agricultural land holdings, and access to community facilities and businesses would not be affected, including the Church of St Mary. As such no effects on private property and housing, community assets and land and businesses are anticipated as a result of construction of the scheme. The effects on human health have been considered within the air quality and noise and assessments which are summarised in Sections 0 and 3.8 and have concluded no significant effects are anticipated. By ensuring the local community are informed about the works and all PROW diversions are clearly sign posted would help to alleviate any adverse effects. These measures are outlined in the REAC (PH1) in Appendix C and would be incorporated into the CMP to be adhered to and implemented by the Principal Contractor.

Operation: The PROW AE639 would be temporarily diverted during the operation of the scheme as shown in the General Arrangement Plan (drawing ref: 419419-MMD-01-MO-SK-C-0028). This is not anticipated to significantly increase the distance WCH have to travel. In addition, the diversion would be upgraded to a bridleway throughout the duration of the diversion which would be of benefit to equestrians and cyclists. In addition, PROWs A337A and A338 would be extinguished, however part of these routes has already been extinguished due to the construction of the M20 Junction 10a. As such, these routes do not provide connections to other PROW routes. As a result, no significant adverse effects are anticipated on WCH during the operation of the scheme especially due to the temporary nature of the scheme and diversion (maximum of five years). It is not expected that any long-term employment opportunities would be generated as the scheme would only be operational for five years. However, during the operation, substantial employment opportunities are expected through the employment of site security and marshalling personnel which would result in some beneficial effects for the local population. Since these benefits are only expected for the five-year period of operation, they are not considered to be significant, it is assumed that there would be a temporary impact to the designated employment development land coming forward for up to five years. However, the reinstatement for the site allows for the retention of the development plot areas and as such allows future development to be brought forward in those plot areas in future to fulfil Ashford Borough Council's employment development allocation (see below). There is not anticipated to be any impacts upon businesses, private property, or severance of land, community land, or agricultural land holdings during the operation of the scheme. The effects on human health have been considered within the air quality and noise which are summarised in Sections 0 and 3.8 and have concluded that no significant long-term effects are anticipated. Therefore, due to the duration of the scheme (maximum operation of five years), there are not anticipated to be any significant effects on population and human health.

Reinstatement: The reinstatement of the scheme is not anticipated to result in any new or materially different effects than the construction of the scheme. No further PROW closures would be anticipated during reinstatement of the scheme, and no direct or indirect impacts, through access restrictions, are anticipated on private property, community facilities, businesses or agricultural land holdings. There may be some slight disturbance for the community from the presence of the reinstatement works to remove the infrastructure on site. However, as the hardstanding of the plot areas would remain, effects from the removal of buildings and associated infrastructure are anticipated to be minimal. Best practice measures to reduce effects on the community, such as ensuring the local community are informed of the works and the PROW diversions are appropriately signposted are outlined within the REAC (PH1) (Appendix C). This would be integrated within the Reinstatement Plan, which would be adhered to and implemented by the Reinstatement Contractor.

Upon reinstatement of the scheme, PROW AE639 is anticipated to be reinstated across the central section of the site from west to east to re-join PROW AE363. Additionally, in order to ensure a positive long-term legacy for the local community, further enhancements to the site would also be implemented at this stage. Outline proposals are documented in the Long-Term Enhancement Plan (419419-MMD-01-MMD-01-MO-DR-L-3032). which would be further developed and detailed within the Reinstatement Plan for the scheme. The proposed enhancement measures within the Long-Term Enhancement Plan (419419-MMD-01-MMD-01-MO-DR-L-3032) comprise of the creation of footpaths and walkways for public use, creation of informal open space and the addition of information boards highlighting the heritage assets and biodiversity value around the site. They are included in the REAC (LVE6) in Appendix C to be implemented by the Reinstatement Contractor. This is likely to lead to long-term beneficial effects on the community. The reinstatement proposals for the site also allow for the plots where the hardstanding would remain, to be brought forward for commercial development to ensure

the Employment Land Allocation within Ashford Borough Council's Local Plan can still be achieved.

### 3.10 Road Drainage and the Water Environment

DMRB LA 113<sup>27</sup> has provided the assessment framework for road drainage and the water environment. A Flood Risk Assessment (FRA) and Drainage Strategy has been produced which supports this assessment (Appendix K).

The study area for this environmental discipline is dependent on connected downstream waterbodies and therefore, there is no set distance.

There are no surface watercourses within the scheme boundary. A main river (Old Mill Stream) is located approximately 100m north of the scheme. Kent Greensand Eastern Water Framework Directive (WFD) groundwater bodies underlies the whole of the site. The scheme is located approximately 100m north of East Stour WFD surface water body (GB107040019640), approximately 200m south of Aylesford Stream WFD surface water body (GB107040019650), and approximately 5km south of Great Stour between Ashford and Wye WFD surface water body (GB107040019741).

The scheme is not located within a Source Protection Zone (SPZ) or any Drinking Water Protected Area or Safeguard Zone for surface water or groundwater. The nearest SPZ is located approximately 1.5km north-west of the site. The entire scheme is located within a surface water Nitrate Vulnerable Zone (NVZ) (ID: 515 – R. Great Stour) and a groundwater NVZ (ID: 64 – Maidstone). There are no underlying superficial aquifers, however, there is a bedrock aquifer in the Hythe Formation, which is designated as a principal aquifer. This is listed as high for groundwater vulnerability.

The proposed site is located within Flood Zone 1 and is approximately 200m south of an area of Flood Zones 2 and 3. There are two ponds within approximately 500m of the scheme.

Construction: There is potential for adverse effects upon the water environment within the vicinity of the scheme the potential for polluted run-off from construction works. Careful management is required to prevent contaminated materials or pollutants from entering the sensitive and vulnerable groundwater beneath the site. Soils sourced from the site have been analysed and found not to contain elevated concentrations of contaminants therefore risks from this material are very low. Refer to the Geotechnical Desk Study in Appendix G for further details on contamination risk. The risks to the water environment during construction would be managed through the use of CIRIA (2001) *Control of water pollution from construction-sites. Guidance for consultants and contractors* which includes measures to brief construction workers on the use of spill kits, stockpiled materials to be stored within enclosed areas, plant and machinery to be maintained in a good condition and to undertake any required maintenance in a safe area, produce pollution prevention and spill response procedures, and dust suppression measures as described in Section 3.2. These measures are outlined in the REAC (RDWE1) in Appendix C, which would be incorporated into the CMP to be adhered to by the Principal Contractor. With these measures in place and due to the short duration of construction (maximum of six months), it is anticipated that there would not be any significant effects on the road drainage and the water environment during construction.

Operation: There is potential for adverse effects to the water environment through routine run-off from vehicles using the scheme (for example, petrochemicals or contaminated sediments)

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<sup>27</sup> Highways England (2020) *DMRB Sustainability and Environment Appraisal LA 113 Road drainage and the water environment*. Available at: <https://standardsforhighways.co.uk/dmrb/search/d6388f5f-2694-4986-ac46-b17b62c21727>

and from any accidental spillages from HGVs. The proposed surface water run-off is proposed to discharge to Old Mill (Aylesford) Stream in the north and to two culverts that run beneath the HS1 railway line in the south which are tributaries to the East Stour River. The discharge would be controlled to a greenfield run-off rate of 4 l/s/ha, as specified in the Ashford Borough Council Sustainable Drainage Supplementary Planning Document (SPD). The whole drainage system is designed to attenuate and impede discharge. The SuDS features would provide sufficient treatment to the run-off and several penstock values are integrated within the drainage design at key locations to be used in the event of a spillage onsite. In addition, refuelling of HGVs would be prohibited on-site to reduce the risk of spillage incidents and spill kits would be provided through the site. The OMP would include procedures to deal with pollution incidents through the incorporation of a pollution prevention plan, de-icing and fire management which would be produced in collaboration with the Environment Agency. Spill kits would also be located across the site to be used in the event of a spill. The inclusion of these mitigation measures would reduce the risk of contamination or pollution of the water environment during the operation of the scheme. These measures are included in the REAC (RDWE2) in Appendix C to be incorporated into the OMP which would be adhered to and implemented on-site by the Principal Operator. Overall, with these measures in place alongside the drainage system for the site, it is not anticipated that there would be any significant effects on surface water quality during operation. In addition, no impacts are anticipated to groundwater bodies during operation as the scheme has been designed to allow no infiltration and the SuDS does not allow soakaways. As such, the water would be managed through the surface water drainage system and therefore no significant effects are anticipated on groundwater bodies.

The Environment Agency surface water flood maps show that the site is at very low risk of surface water flooding (0.1% to 1% AEP (Annual Exceedance Probability)). The Environment Agency flood maps also indicate that the site is not in an area that would be affected by reservoir flooding. As such, the risk of flooding from artificial sources is negligible and can therefore be discounted. In addition, the historical flooding maps do not indicate that there has been any groundwater flooding in the vicinity, and as such the risk from groundwater flooding is very low and therefore can be discounted. The FRA and Drainage Strategy concluded that there is a low risk of flooding during the lifetime of the scheme. It also concluded that the scheme would not increase the risk of flooding to a person or property in adjacent sites. Further details are presented in Appendix K.

The foul water is proposed to outfall to a Southern Water pumping station to the north-east of the site. Foul water in excess of the pumping stations capacity shall be attenuated on-site and discharged during off-peak times to the pumping station or tankered away where required. This is outlined in the Drainage Strategy in Appendix K. These proposals have been subject to ongoing conversations with Southern Water.

From Day 200 Defra BCP would be present on the site. As such, inspections of HGVs containing plant produce and animals would be undertaken on-site. As outlined in the Drainage Strategy in Appendix K, the foul water from areas used by animals, plant and produce, shall be drained by an isolated system to tanks and disposed of with tankers. These proposals have been subject to ongoing conversations with Southern Water. Provided appropriate measures are incorporated in the drainage strategy and agreed with Southern Water there are no anticipated to be any significant effects on the water environment during the Post-Day 200 Operation. The potential effects from an increase in nutrient loading on the downstream Stodmarsh SAC, SPA and Ramsar have been considered in the HRA (document ref: 419419-MMD-SV-RP-BD-0001). As a result of nutrient rich run-off produced from activities within the scheme having the potential to result in significant effects on the Stodmarsh SPA, SAC and Ramsar, a Stage 2 Appropriate Assessment was completed. The Appropriate Assessment

concluded that as a result of measures included within the drainage design for the scheme, there would be no significant effect, alone or in-combination, on the integrity of Stodmarsh SAC, SPA or Ramsar or any dependent features during operation.

Overall, there is not anticipated to be any significant effects on the water environment during operation of the scheme.

Reinstatement: The reinstatement of the scheme is not anticipated to result in any new or materially different effects than the construction of the scheme, especially given the drainage system would remain in situ. As such, this would provide treatment for any polluted run-off during the reinstatement activities. Nonetheless, the manage any potential risk to the water environment during these works, best practice guidance such as briefs on the use of spill kits, plant and machinery to be maintained in a good condition, pollution prevention and spill response procedures to be development by the Reinstatement Contractor and spill kits and clean-up equipment maintained on-site. These measures are outlined in the REAC (RDWE1) in Appendix C, which would be incorporated into the Reinstatement Plan to be adhered to by the Reinstatement Contractor. Therefore, no significant effects are anticipated on road drainage and the water environment during reinstatement. All building and facilities would be removed from the site, and as such there would no longer be any foul waste produced and requiring treatment off-site. Upon reinstatement, the SuDS ponds and drainage system would remain in situ. As such, this is likely to result in some longer-term beneficial effects to the water environment through the continuation of attenuation and treatment of surface water run-off from the site.

### 3.11 Climate

DMRB LA 114<sup>28</sup> has provided the assessment framework for climate alongside *WebTAG Unit A3*<sup>29</sup> for the operational assessment.

In line with LA114 the study area differs between the two assessed perspectives as well as construction and operation for the effects of the scheme on climate change. The study area for resilience of the scheme to climate change is the site boundary. For the effects of the scheme upon climate change there is not a defined study area. Instead the assessment for construction considers the emissions associated with the products and materials used in construction and the transport of materials to site, and for operation the study area is the ARN as defined within LA114 and the operational energy use for lighting on the site.

Climate is assessed from two perspectives:

- The effects of the scheme upon climate change – the impact from releasing additional greenhouse gas (GHG) emissions as a result of the scheme on climate change, and
- The resilience of the scheme to climate change impacts.

Construction: The construction of the scheme would increase GHG emissions through the emissions from plant used, transport of materials to site and the embodied carbon in the materials used. The scheme design considered principles of sustainable design which resulted in a number of the elements being modular with the intention of be reused following decommission. Further details on the carbon assessment and the approach to reducing carbon emissions are contained within the Carbon Assessment and Reduction Report (Appendix L).

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<sup>28</sup> DMRB (2019) LA 114 *Climate*. Available at: <https://standardsforhighways.co.uk/dmrb/search/87f12e4f-70f8-4eed-8aed-9e9a42e24183>

<sup>29</sup> DfT (2018) TAG UNIT A3 Environmental Impact Appraisal. Available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/825064/tag-unit-a3-environmental-impact-appraisal.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/825064/tag-unit-a3-environmental-impact-appraisal.pdf)

An assessment of the estimated carbon emissions associated with the construction materials was completed based upon the available design information and the use of the Mott MacDonald Moata Carbon Portal. Due to the modular nature of much of the design, the timescales associated with the scheme and in the absence of a completed detailed design the materials and quantities were estimated from the General Arrangement Drawing, design drawings, the Defra EUX Sites HMRC Buildings Performance Specification<sup>30</sup> and the Defra EUX Inland Sites DfT Performance Specification<sup>31</sup> with assumptions from relevant discipline professionals. Further details are within the Carbon Assessment and Reduction Report (Appendix L). This assessment estimated emissions of 33,094 tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e) for lifecycle stages A1-3 (products and materials), A4 (transport of materials to works site) and A5 (construction plant). Through the implementation of the carbon reduction principles, such as designing for reuse and recycling of the buildings, detailed in Appendix L, the emissions have been minimised as far as possible. In addition, the carbon sequestration of the planting as detailed within the landscape design has been estimated to reduced emission by 8 tCO<sub>2</sub>e. The quantity of emissions is relatively small equating to 0.0013% of the UK 3<sup>rd</sup> Carbon Budget. Due to the quantity of emissions and the carbon reduction measures through design, it is not considered that the carbon emissions would have a significant effect. Nonetheless, best practice measures such as transporting materials to site via low carbon-modes, the use of low-carbon construction materials, plant and materials, effective segregation of waste to enable them to be effectively managed using the waste hierarchy, within the REAC (C1) in Appendix C would be implemented to further reduce the impact upon climate change.

The scheme may be vulnerable to extreme weather as a result of climate change during construction, however, due to the short construction period this is not anticipated to be significant.

Operation: There is the potential for effects on the climate, due to the change in GHG emissions due to the increased number of HGVs travelling to site during operation of the scheme and the impacts of this upon regional traffic flows. In line with *LA 114* the Affected Road Network (ARN) was determined and the assessment was completed in line with the *WebTAG* methodology of the road links within the ARN. Further details on the carbon assessment and the approach to reducing carbon emissions are contained within the Carbon Assessment and Reduction Report (Appendix L).

The impact on traffic flows (lifecycle stage B9 user utilisation of the scheme) due to the use of the facility would result in an estimated increase of 3,069tCO<sub>2</sub>e over the five years of operation. In addition, the lighting (lifecycle stage B6 operational energy use) through the operation of the scheme is estimated to result in 239tCO<sub>2</sub>e over the five years. The quantity of emissions is relatively small equating to approximately 0.00017% of the UK 4<sup>th</sup> Carbon Budget<sup>32</sup> and through the implementation of the carbon reduction principles, detailed in Appendix L, the emissions have been minimised as far as possible. Therefore, it is not considered that the carbon emissions would have a significant effect. Nonetheless, best practice measures such as enabling waste to be effectively segregated during operation to enable materials to be managed using the waste hierarchy, where possible, measures would be put in place to limit profligate energy use by unintended user behaviours, within the REAC (C2) in Appendix C would be implemented to further reduce the impact upon climate change.

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<sup>30</sup> Mott MacDonald (2020) Defra EUX Sites HMRC Buildings Performance Specification 420236-MM-SP-001 A. September 2020

<sup>31</sup> Mott MacDonald (2020) Defra EUX Sites HMRC Buildings Performance Specification 420236-MM-SP-002 B. September 2020

<sup>32</sup> A negligible amount of negative emissions are reported for the 3<sup>rd</sup> Carbon Budget so total operation emissions are compared to the 4<sup>th</sup> Carbon Budget (2023-2027).

The scheme may be vulnerable to extreme weather as a result of climate change during operation. In addition, as the drainage infrastructure would remain in situ following the 5 year consent, the drainage has been designed in accordance with the *Design and Construction Guidance (2020)* for the 1 in 100-year storm event plus a 40% allowance for climate change (refer to Appendix L for further details). As such, no significant effects on the scheme as a result of climate change are anticipated.

Reinstatement: The reinstatement of the scheme is not anticipated to result in any new or materially different effects than the construction. The design of the buildings has been undertaken with re-use in mind as such, these elements of the design would be deconstructed to allow for reuse or recycling elsewhere. These principles of carbon reduction would be carried forward into reinstatement further reducing the impact upon climate change. These measures include exploring the potential to maximise resource efficiency through the reuse of assets following the end of operation. Where reuse is not possible, then recycling would be the next priority. These are outlined in the REAC (C1 and C3) in Appendix C and would be included within the Reinstatement Plan and adhered to by the Reinstatement Contractor. Therefore, no significant effects are anticipated upon climate during reinstatement. Upon reinstatement carbon emissions would likely revert back to baseline conditions as HGVs would no longer use the site and the buildings and lighting would be removed. However, the blue-green infrastructure would remain on-site and as such is likely to provide some longer-term benefits with regards to carbon sequestration.

### 3.12 Cumulative Effects

In addition to *DMRB LA 104*<sup>33</sup>, the assessment of cumulative effects has also been guided by the *Planning Inspectorate Advice note seventeen (Cumulative effects assessment)*<sup>34</sup> and the *EIA Regulations 2017* in relation to determining the types of developments to be considered as part of the cumulative effects assessment.

A maximum Zone of Influence (ZOI) has been established to provide a study area for the scheme, drawing on the study areas identified for each environmental discipline described in Section 3.2 and 3.10 above. The largest study area identified is for biodiversity. Although a study area of 30km for European sites designated for bats is included within biodiversity assessment, as this is not relevant for this scheme, the largest relevant study area is 2km. This therefore represents the greatest ZOI for identifying the baseline. Additionally, cumulative effects must also consider the ZOI from other developments within the vicinity of the scheme. Therefore, assuming that the maximum study area of other developments within the vicinity of the scheme is also 2km, the scheme considers a maximum study area of 4km. This would account for the potential 2km overlap from other developments.

Cumulative effects would be considered alongside other developments within the vicinity that are also likely to result in cumulative effects and are confirmed for delivery over a similar time frame. This would include road projects and developments listed in Schedule 1 and those deemed as 'EIA Development' in Schedule 2 of the *EIA Regulations*.

In addition, although not deemed to be EIA development, the Waterbrook Ashford IBF has also been included within the assessment in Table 3.3. This is due to the similar nature of the

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<sup>33</sup> Highways England (2020) *DMRB Sustainability and Environment Appraisal LA 104 Environmental assessment and monitoring*. Available at: <https://standardsforhighways.co.uk/dmrb/search/0f6e0b6a-d08e-4673-8691-cab564d4a60a>

<sup>34</sup> The Planning Inspectorate (2019) *Advice note seventeen: Cumulative effects assessment relevant to nationally significant infrastructure projects*. Available at: <https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/2015/12/Advice-note-17V4.pdf>

developments, close proximity and as both the scheme and the Waterbrook Ashford IBF would encompass the same government organisations (DfT and HMRC) operations within the site.

Developments within the vicinity of the scheme are shown in Cumulative Effects Development Plan (Appendix M).

Where possible, the dates for the construction and operation start and finish dates of these developments were obtained from publicly available documents submitted to the relevant local authority. However, not all dates were available. In this instance, a review of aerial imagery was undertaken to indicate whether construction of the development had begun.

Table 3.2 below outlines the relevant ZOI for each environmental discipline assessed within this report.

**Table 3.2: ZOI for each environmental discipline assessed in relation to cumulative effects**

Environmental discipline	DMRB topic	ZOI
Population and human health	Air Quality LA 105	<b>Construction and Operation: 200m</b>
	Noise and Vibration LA 111	<b>Construction and Operation: 600m</b>
	Population and human health LA 112	<b>Construction and Operation: 500m</b>
Biodiversity	Biodiversity LA 108	<b>Construction and Operation: 2km</b>
Land, soil, water, air and climate	Geology and soils LA 109	<b>Construction and Operation: 250m</b>
	Climate LA 114	<b>Construction and Operation: Site boundary and affected road network</b>
	Road drainage and the water environment LA 113	<b>Construction and Operation: 500m</b>
Material assets and waste, cultural heritage, and landscape and visual effects	Cultural Heritage LA 106	<b>Construction and Operation: 300m</b>
	Landscape and visual effects LA 107	<b>Construction and Operation: 2km</b>
	Materials assets and waste LA 110	<b>Construction and Operation: N/A</b>
Heat and radiation and Major accidents and disasters	Environmental assessment and monitoring LA 104	<b>Construction and operation: N/A</b>

### 3.12.1 Relevant Developments

There are 10 developments that meet the criteria outlined above and that are located within 4km of the scheme, as detailed in Table 3.3 and shown in the Cumulative Effects Plan (Appendix M). The developments that were identified following the criteria within the study area have been confirmed with Ashford Borough Council. Although the criteria specify that EIA development are included within the cumulative assessment, Waterbrook Inland Border Facility has also been included in this list. Despite not being an EIA development, it was considered within the assessment due to the similar uses of the site and its use by the same Government organisations.

**Table 3.3 EIA developments within 4km of the scheme**

Name	Planning Reference	Address	Distance from scheme	Description	Status	Construction / Operation Dates
Waterbrook Development	18/00098/AS	Zone A, Waterbrook Park, Waterbrook Avenue, Sevington, Kent	Approximately 180m east of the scheme.	Construction and operation of a 600-space truck stop, a service building providing ancillary truck stop service facilities and offices. Provision of buildings for small and medium enterprises; associated access, parking and landscaping, including highway infrastructure works to Waterbrook Avenue, and for 8.9 hectares ha of employment uses comprising uses falling within offices, industrial and storage or distribution, a superstore, drive-through restaurants, a petrol filling station and ancillary convenience store, and car showrooms. Construction of up to 400 residential dwellings, with neighbourhood retail uses, associated drainage, parking, landscaping and infrastructure.	Permission granted	The construction period is anticipated to be approximately 10 years to complete the development in its entirety. Construction started in 2018.
Waterbrook Ashford Inland Border Facility (not EIA development. Refer to Section 3.12 above)	N/A	Waterbrook Avenue, Sevington, Kent	Approximately 180m east of the scheme.	Development and use of the site as an inland border facility.	No planning permission currently. Consent to be granted under a Special Development Order in Autumn 2020.	Construction commenced on this site under Waterbrook Development (18/00098/AS) consent (see above). Construction would then continue once SDO consent in place. Aspirations to be operational from 1 <sup>st</sup> January 2021.
Cheeseman's Green	16/00125/AS	Land south of Captains Wood, Land at Cheeseman's Green, Cheeseman's Green Lane, Kingsnorth, Kent	Approximately 900m south west of the scheme.	Construction of 326 new dwellings with associated access, parking, landscaped areas including a neighbourhood play area, internal roads for the development, and surface water drainage measures.	Permission granted	Although information is not available relating to the duration of the construction period, a review of aerial imagery captured in July 2018, indicates that the development is still under construction and is not fully operational.
Newtown Works	19/01476/AS	Newtown Railway Works, Newtown Road, Ashford, Kent, TN24 0PN	Approximately 1.5km north west of the scheme.	Mixed-use development comprising of film / TV Studios with associated post-production offices and associated workshop and media village. Construction of a 120-bedroom hotel,	Pending decision	The construction period is anticipated to be approximately two years to complete the development in its entirety.

Name	Planning Reference	Address	Distance from scheme	Description	Status	Construction / Operation Dates
				including reception/ancillary space and food and beverage space, restaurant, leisure facilities and event / conference space. Construction of 62 serviced apartments, 303 dwellings, and a 336-space multi-storey carpark. Change of use, internal and external alterations of the Paint Shop building, Acetylene Store and Clock Tower listed buildings to provide ancillary uses to the film/TV studios; plus associated infrastructure including open space, landscape and public realm provision, external parking, servicing, pedestrian and vehicular access and associated engineering, utilities and infrastructure works.		Construction was programmed to begin mid-2020, however this is likely to be delayed due to the decision still pending.
Park Farm	18/00625/AS	Land south of Park Farm East, Hamstreet Bypass, Kingsnorth, Kent	Approximately 2.6km south west.	Construction of 353 dwellings. On-site highway works together with associated parking, infrastructure, drainage, open space, landscaping and earthworks.	Permission granted	The construction period is anticipated to be approximately 30 months, to complete the development in its entirety. Construction has been delayed due to the Covid-19 outbreak but is anticipated to be finished in January 2023.
Beaver Road	19/01597/AS	Home Plus, Beaver Road, Ashford Kent	Approximately 2.7km north west of the scheme.	Demolition of the existing buildings on the site and the erection of 223 dwellings and commercial floorspace comprising three commercial units and roof top restaurant, with associated access and landscaping.	Pending decision	Information for construction is not available. The development was assessed with an opening year of 2024.
Conningbrook Park	19/00025/AS	Land between railway line and Willesborough Road, Kennington, Kent	Approximately 3.15km north of the scheme.	Construction of 437 dwellings, formal and informal space incorporating SuDS and associated services, infrastructure and groundworks.  Construction of 288 dwellings, the creation of service plot of land to facilitate the delivery of a two-form entry primary school with associated outdoor space and vehicle parking, a new bowls centre including a club house, ancillary building and a bowling green, a local centre to provide retail and leisure space,	Pending decision	The construction period is anticipated to be approximately 10 years to complete the development in its entirety.

Name	Planning Reference	Address	Distance from scheme	Description	Status	Construction / Operation Dates
				open space incorporating SuDS, vehicle parking, and associated services, structural landscaping, infrastructure and groundworks.		
Pentland Homes and Jarvis Homes	15/00856/AS	Land at Pound Lane, Maggie Hall Road, Bond Lane and, Ashford Road, Kingsnorth, Kent	Approximately 3.4km south west of the scheme.	Construction of 550 dwellings. Provision of local recycling facilities. Provision of areas of formal and informal open space. Installation of utilities and infrastructure to serve the development. Transport infrastructure including highway improvements in the vicinity and an internal network of roads and junctions, footpaths and cycle routes. New planting and landscaping both within the proposed development and on its boundaries as well as ecological enhancement works. Associated groundworks also required.	Pending decision	The construction period is anticipated to be approximately five years, to complete the development in its entirety. Construction start dates are unknown.
Court Lodge	18/01822/AS	Land at Court Lodge, Pound Lane, Kingsnorth	Approximately 3.7km west of the scheme.	Construction of up to 1000 dwellings, local centre comprising retail uses, office, and community facilities including a primary school, a combined community hall and site management suite. Highway works and new pedestrian and cycle routes, including allotment gardens and areas of ecological habitats. Drainage infrastructure, earthworks and ancillary infrastructure.	Pending decision	The construction period is anticipated to be approximately 10 years to complete the development in its entirety. Construction is anticipated to commence 2020/2021.
Stour Park Development	14/0906/AS	Land north of Highfield Lane, Sevington	Within site boundary	Development to provide an employment led mixed use scheme, to include site clearance, the alteration of highways, engineering works and construction of new buildings and structures of up to 15.7 hectares, together with ancillary and associated development including utilities and transport infrastructure, car parking and landscaping.	Permission granted	This development would not come forward whilst the scheme is constructed and operational, and the scheme is located on the same land as this development. As such, the development may come forward after the consent for the scheme has expired.

An assessment has been undertaken to determine whether there would be any likely significant environmental effects that would arise from the scheme in combination with the other relevant developments. The assessment is present in Table 3.4 below.

The assessment concludes that there would not be any likely significant cumulative environment effects as a result of the scheme in combination with those developments identified in Table 3.3 above. Therefore, no mitigation, further to that outlined within the environmental discipline sections in this report and captured within the REAC (Appendix C), is required.

The small scope of decommission and reinstatement is anticipated to result in no new or materially different effects than the construction stage. As such, it is not considered likely that there would be any cumulative effects with other developments during this phase of development, and this has subsequently been excluded from Table 3.4 below.

**Table 3.4 Assessment of Likely Significant Cumulative Effects**

Development	Phase	
	Construction	Operation
Waterbrook Development (18/00098/AS)	<p>The construction of the scheme is likely to overlap with the remaining construction of the truck stop element of the Waterbrook Development, which is currently near complete. As such there is likely to be cumulative effects for nearby residential receptors in particular as a result of construction noise and the presence of construction machinery for both sites. However, the truck stop has mostly been built out already, with few remaining elements left to construct, including the acoustic barriers. No other phases of this development are anticipated to be constructed within the timeframe, as detailed permission has not been granted consent yet. The remaining works are small in scale and would be short in duration for the truck stop, with only a small element overlapping with the six-month construction duration for the scheme. Additionally, construction works for the truck stop are being managed in accordance with a CMP, as indeed the construction works for the scheme would be, thus ensuring that construction impacts are reduced to acceptable levels for both sites. As such, due to the small-scale of the remaining works for the construction of the truck stop element of, and with the implementation of the respective CMPs, the cumulative effect as a result of the construction of the remaining elements of the truck stop with the construction of the scheme would not result in any additional effects greater than those reported in the preceding sections of this report where there would be overlapping ZOIs (Sections 3.2 to 3.11). Cumulative effects would therefore not be significant.</p>	<p>The operation of the truck stop element of the part of the Waterbrook Development is considered within the Waterbrook Ashford Inland Border Facility (see below), whereby consent has been granted for the site to be used as an Inland Border Facility. However, there is potential for the construction of the remaining elements of the Waterbrook Development to overlap with the operation of the scheme due to the length of the construction period being 10 years. Due to the distance from the scheme, the ZOI overlaps for air quality, noise and vibration, population and human health, landscape and visual effects, biodiversity, cultural heritage, geology and soils, and the road drainage and the water environment, as such there is the potential for cumulative effects. However, the Environmental Statement that supported the development concluded that it would not result in any significant effects during construction given the implementation of an appropriate CMP. As such, given that the respective CMP is adhered to by the Principal Contractor for the Waterbrook Development and the environmental design is implemented and the OMP adhered to by the Principal Operator for this scheme, any cumulative effects are unlikely to be significant.</p>
Waterbrook Ashford Inland Border Facility	<p>The construction phase of the scheme and this development would overlap. Whilst cumulative effects may occur during this period as a result of construction noise and the presence of construction machinery for both sites, both of these schemes would be constructed in accordance with a CMP which would ensure that construction impacts</p>	<p>The Waterbrook IBF and the Sevington IBF would not operate at the same time (fully or partially). It is the intention of the Government agencies that only one of these facilities would be required to be operational at one time. Waterbrook IBF provides a backup facility for the Sevington IBF should the scheme not be ready to operate in time or should the</p>

Development	Phase	
	Construction	Operation
	<p>are reduced to acceptable levels for both sites. Additionally, construction activities would only be for a maximum duration of 3 months for the Waterbrook Ashford Inland Border Facility, with the same construction start dates as for the scheme. Therefore, no significant cumulative effects are anticipated due to the small-scale and duration (maximum 3 months) where cumulative effects could arise, and with the implementation of construction mitigation as detailed within the respective CMPs.</p>	<p>scheme experience a major accident (such as a fire or spill) which would require closure. The presence of the lighting on the Waterbrook Ashford Inland Border Facility would however remain present on-site even if the site was not in use, although these would not be used during hours of darkness when the scheme is not operational. The presence of these lighting columns could impact the same visual receptors along Church Road which would be affected by the scheme, thus resulting in cumulative effects. However, due to the intervening infrastructure, such as HS1 and the railway sidings, the effect on these receptors is anticipated to be no worse than those reported in Section 3.4. As such, no significant cumulative effects are anticipated.</p>
Cheeseman's Green (16/00125/AS)	<p>The construction phase of the scheme and this development would overlap. However, the overlapping construction periods would be for a maximum length of six months due to the small-scale construction works required for the scheme. Whilst cumulative effects may occur during this period, permitting that the respective CMPs are adhered to by the Principal Contractors working on the development and the scheme, such effects are not anticipated to be significant.</p>	<p>Operation of the scheme has the potential to overlap with the construction period of Cheeseman's Green. Due to the distance between the scheme and Cheeseman's Green (930m) only landscape and visual effects, noise and vibration, and biodiversity environmental disciplines have an overlapping ZOI and the potential for cumulative effects. The Cheeseman's Green Environment Statement considered that the increase in road traffic noise would not result in significant effects, with measures such as vehicle rerouting and the timing of works deemed appropriate to mitigate noise impacts. Whilst the Environment Statement did outline that there would be a detrimental impact on landscape quality as a result of the development, it is not anticipated that the scheme would exacerbate this, due to the intervening infrastructure between the sites, and consequently there would not be significant cumulative effects. Furthermore, the scheme would not result in any significant effects on biodiversity, and there is minimal habitat connectivity between the scheme and the development, due to the presence of intervening infrastructure. Therefore, no significant cumulative effects are anticipated to occur in relation to biodiversity.</p>

Development	Phase	
	Construction	Operation
Newtown Works (19/01476/AS)	The development has not yet been granted consent. The construction period for the scheme would be for a maximum period of six months, with operation commencing in January 2021, and therefore, it is considered unlikely that the construction periods would overlap. Therefore, no significant cumulative effects are anticipated.	Operation of the scheme has the potential to overlap with the construction and operation period of Newtown Works. Due to the distance between the scheme and Newtown Works (1.5km) only landscape and biodiversity environmental disciplines have an overlapping ZOI and the potential for cumulative effects. Due to the presence of existing and proposed infrastructure, most notably the urban area of Ashford, it is unlikely that significant landscape effects would occur. Furthermore, the scheme would not result in any significant effects on biodiversity, and there is no habitat connectivity between the scheme and the development, therefore no significant cumulative effects are anticipated to occur in relation to biodiversity.
Park Farm (18/00652/AS)	The construction phase of the scheme and this development would overlap. Due to the distance between the scheme and Park Farm (2.6km) only landscape and biodiversity environmental disciplines have an overlapping ZOI and therefore the potential for cumulative effects. Significant adverse effects are reported for Park Farm due to the loss of habitats, severance of a site of natural conservation importance, and visual impacts. However, due to the distance from this scheme, the lack of connecting habitat as a result of HS1 and the A2070 in between the two sites, and the loss of habitat widely available in the local area, this scheme would not result in any significant effects on habitats. As such no cumulative significant effects worse than those reported for Park Farm are anticipated. In addition, the same visual receptors would not be affected for Park Farm and the scheme due to the distance between the scheme and the presence of existing and proposed infrastructure. Therefore, no significant cumulative effects are anticipated.	Operation of the scheme has the potential to overlap with the construction period of Park Farm. Due to the distance between the scheme and Park Farm (2.6km) only landscape and biodiversity environmental disciplines have an overlapping ZOI and therefore the potential for cumulative effects. However, once the scheme is operational, it is expected that there would be some slight beneficial effects to habitats during operation following the implementation of the environmental design. As such, combined with the distance between the development and the scheme, and the implementation of the environmental design, then no significant cumulative effects would be anticipated for biodiversity. Due to the presence of existing and proposed infrastructure, most notably the Waterbrook Development, Ashford Waterbrook Inland Border Facility, and transport infrastructure, it is unlikely that cumulative landscape effects would occur. Overall, no significant cumulative effects are anticipated during operation.
Beaver Road (19/01597/AS)	The development has not yet been granted consent. The construction period for the scheme would be for a maximum period of six months with operation commencing in January	Operation of the scheme has the potential to overlap with the construction period for the Beaver Road. Due to the distance between the development and the scheme (2.7 km)

Development	Phase	
	Construction	Operation
	2021, and therefore, it is considered unlikely that the construction periods would overlap. Therefore, no significant cumulative effects are anticipated.	only landscape and biodiversity environmental disciplines have an overlapping ZOI and therefore the potential for cumulative effects. However, due to the presence of existing and proposed infrastructure, most notably the urban area of Ashford, it is unlikely that cumulative landscape effects would occur. Furthermore, there is no habitat connectivity between the scheme and the development, therefore no significant cumulative effects are anticipated to occur in relation to biodiversity.
Conningbrook Park (19/00025/AS)	The development has not yet been granted consent. The construction period for the scheme would be for a maximum period of six months with operation commencing in January 2021, and therefore, it is considered unlikely that the construction periods would overlap. Therefore, no significant cumulative effects are anticipated.	Operation of the scheme has the potential to overlap with the construction period of Conningbrook Park. Due to the distance between the development and the scheme (3.15km) only landscape and biodiversity environmental disciplines have an overlapping ZOI and therefore potential for cumulative effects. Due to the presence of existing and proposed infrastructure, most notably the suburb of Willesborough, it is unlikely that cumulative landscape effects would occur. Furthermore, there is no habitat connectivity between the scheme and the development, therefore no cumulative effects are anticipated to occur in relation to biodiversity.
Petland Homes and Jarvis Homes (15/00856/AS)	The development has not yet been granted consent. The construction period for the scheme would be for a maximum period of six months with operation commencing in January 2021, and therefore, it is considered unlikely that the construction periods would overlap.	Operation of the scheme has the potential to overlap with the construction period of Pentland Homes and Jarvis Homes Kingsnorth Green. Due to the distance (3.4km) between the scheme and Pentland Homes and Jarvis Homes Kingsnorth Green only landscape and biodiversity cumulative effects are considered, as the other environmental disciplines are outside of the ZOI. However, due to the presence of existing and proposed infrastructure, most notably residential properties, it is unlikely that cumulative landscape effects would occur. Furthermore, there is no habitat connectivity between the scheme and the development, therefore no cumulative effects are anticipated to occur in relation to biodiversity.

Development	Phase	
	Construction	Operation
Court Lodge (18/01822/AS)	The development has not yet been granted consent. The construction period for the scheme would be for a maximum period of six months with operation commencing in January 2021, and therefore, it is considered unlikely that the construction periods would overlap. Therefore, no significant cumulative effects are anticipated.	Operation of the scheme has the potential to overlap with the construction period of Court Lodge. Due to the distance of the development from the scheme (3.7km) only landscape and biodiversity environmental disciplines have an overlapping ZOI and therefore the potential for cumulative effects. Due to the presence of existing and proposed infrastructure, most notably residential properties, it is unlikely that cumulative landscape effects would occur. Furthermore, there is no habitat connectivity between the scheme and the development, therefore no significant cumulative effects are anticipated to occur in relation to biodiversity.
Stour Park Development (14/0906/AS)	As outlined in Section 2.2 the construction of Phase 1A of this development has commenced on the site. However, the construction for the scheme would continue following the construction works which have commenced for Phase 1A, and as such the construction works for Stour Park Development and the scheme would not overlap. As outlined in Section 3.1.1, although the construction for Phase 1A has commenced on site, the assessment under taken within this report has assumed the baseline prior to the implementation of the Phase 1A works to enable the worse-case scenario with regards to the amount of change, and captures all of the environmental effects associated with all elements of the scheme. As such, the construction assessment presented within this report, essentially considers the cumulative effects of construction of the Phase 1A works of the Stour Park Development with the construction of the remaining elements for the scheme as a whole.	This development would not come forward whilst the scheme is operational, as the scheme is located on the same land as this development. The development may come forward after the consent for the scheme has expired. As such, no cumulative operational effects are anticipated.

### 3.13 Heat and Radiation

The scheme would not result in any increases in heat and radiation due to the type of development as an IBF. Therefore, no significant effects are anticipated during construction, operation or reinstatement of the scheme. As such, no residual effects are anticipated.

### 3.14 Major Accidents and Disasters

The scheme would not likely be affected by natural hazards due to its location. However, there is potential for anthropogenic hazards to occur on-site, either deliberately or accidentally, for instance a fire or terrorist attack. Due to the scope of the scheme as a temporary IBF, it is not considered that the site would be highly vulnerable to a major accident during construction, operation or reinstatement. Likely potential environmental receptors that could be directly affected as a result of a major accident or disaster occurring at this site would be population and human health (specifically the staff or HGV drivers), soil on and surrounding the site, and watercourses downstream of the site.

Measures would be incorporated through the design and OMP to manage health and safety risks on-site. This includes the presence of security on-site, fire extinguisher points, and the inclusion of a Fire Risk Management Plan within the OMP. The risk of pollution to soils and watercourses has been addressed within Sections 3.5 and 3.10. Therefore, it is not considered that the scheme would result in significant effects due to the risk of major accidents or disasters.

### 3.15 Odour

The Institute of Air Quality Management (IAQM) guidance<sup>35</sup> is regarded as a practical tool for assessing the possible impact of potentially odorous processes. Adverse odour impact can develop because of intermittent but regular exposure to odours at a level that the receiving environment considers offensive. The factors that contribute to odour are generally summarised as:

- Frequency of exposure
- Intensity or strength of exposure (odour concentration)
- Duration of exposure
- Offensiveness of the odour
- Location sensitivity

The study area for an odour assessment is the surrounding area which is at risk of odour impact as a result of odour emissions for the scheme. Receptors are the users of the adjacent land, which may vary in their sensitivity to odour. Table 2 within the IAQM guidance lists high, medium and low sensitivity receptors. The site and surrounding land are considered to be a low sensitivity receptor where:

- *'the enjoyment of amenity would not reasonably be expected; or*
- *There is transient exposure, where the people would reasonably be expected to be present only for limited periods of time as part of the normal pattern of use of the land.*

*Examples may include industrial use, farms, footpaths and roads.'*

As there are no odorous activities involved in the construction of the scheme, there is not likely to be any significant releases of odour and therefore construction odour has been scoped out of this assessment. The potential odour impacts of the scheme during operation were assessed by

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<sup>35</sup> IAQM (2018) *Guidance on the assessment of odour for planning*. Available at: <http://iaqm.co.uk/text/guidance/odour-guidance-2014.pdf>

identifying the elements of the scheme that have the potential to generate odorous emissions. During the Post-Day 200 phase of operation, the addition of the Defra buildings containing live animals has been considered as a source of odour during operation. As the site would serve Eurotunnel trains (as outlined in Section 2.3.2.1), the animals expected on-site are in line with Eurotunnel guidance from their website<sup>36</sup> that summarises the animals accepted on passenger shuttles:

- Dogs, cats and ferrets (pets or for commercial purposes)
- Rodents, rabbits, birds, invertebrates, amphibians and reptiles
- Domestic equidae (horses, ponies, donkeys and mules)

The daily check numbers for live animals on-site within the Defra BCP is anticipated to be less than 10 HGVs per day carrying live animals from the list above during operation. Due to the scope of the scheme as a temporary IBF, the fact that no animals would be livestock i.e. odorous animals considered to be highly or moderately offensive in line with the H4 benchmark criteria in the IAQM guidance, and small numbers of HGVs carrying live animals are expected per day, it is not considered that the site would be highly vulnerable to significant odour effects during operation. Additionally, the Defra BCP would have a ventilation system designed to efficiently control and when required remove humidity from within the buildings. In addition, waste and wastewater from the Defra BCP would be captured within a contained tank. It is generally considered that a low sensitivity receptor subject to a small odour exposure will experience a negligible effect as stated within Section 3.2 and within Table 3 of the IAQM guidance.

Therefore, considering the above measures and the relatively low odour emissions associated with the animals expected on-site, the risk of odour impact during operation is considered to be not significant, especially given the temporary nature of operation (maximum of five years).

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<sup>36</sup> Eurotunnel (2020) *Carriage of animals*. Available at: <https://www.eurotunnel.com/uk/legal/carriage-of-animals/>

## 4 Summary

This analysis of likely environmental effects report has been prepared for the proposed temporary use of land and associated works, for a maximum of five years, for an Inland Border facility (IBF) at Sevington in Kent.

This report sets out the potential for likely significant environmental effects (adverse or beneficial) as a result of the scheme, and where relevant, outlines the measures incorporated in the scheme design and delivery method to avoid, eliminate or reduce what might otherwise have been significant adverse effects on the environment. The objective is to determine if the temporary use of land and associated works is considered to be EIA development or otherwise in accordance with Schedule 3 of the EIA Regulations. The overall conclusions on whether the development constitutes EIA are set out below.

The scheme, as described in Chapter 2 of this report, is likely to comprise development listed under Schedule 2 of the EIA Regulations, in view of the extent of land to be used for the IBF and associated buildings and works. As such, screening for EIA is required to determine if there would be any likely significant effects on the environment in line with the selection criteria for screening Schedule 2 development outlined within Schedule 3 of the EIA Regulations.

Chapter 2 of this report describes the characteristics of the development and location of the scheme. Chapter 3 of this report describes the types and characteristics of potential impact as a result of the scheme, as informed by the identification of the environmental baseline, environmental constraints, sensitivity of environmental receptors and an analysis of the potential environmental effects. The analysis has considered the wider criteria outlined in Schedule 3 of the EIA Regulations and as detailed in Table 1.1 in Chapter 1.

The assessment presented in the preceding chapters is summarised in Table 4.1 below. These conclusions are informed by the duration and design of the scheme as a temporary IBF on a site that already has consent for the Stour Park Development (14/00906). Development on-site has already commenced under the Stour Park consent, and as such, the former land use of this site as an arable field has already been changed to that of a partially built out development. However, this analysis of likely environmental effects has assumed a baseline of prior to the implementation of the Stour Park Development planning permission. This enables the assessment presented within this report to consider the worst-case scenario with regards to the amount of change, and captures all environmental effects associated with all elements of the Scheme.

No part of the scheme would be carried out in a sensitive environmental area, as defined under Part 1 of the EIA Regulations. The assessment presented within this report considers the temporary nature of the development, and the reversibility of effects for the site, factoring in its subsequent reinstatement after the five-year use as an IBF. The intensity of the use would also substantially reduce at or before Day 200, when the parking areas in the north-west and the south of the site would be suspended, along with the removal of the parking areas in the viewing corridor, thus limiting the use of the IBF from a capacity of 1,272 HGV spaces to 651 after six months. This strategy has principally been implemented to ensure that there would not be any significant effects for the Grade 1 Listed Church of St Mary, since the most harmful activities would be for a maximum period of six months.

An Environmental Masterplan has been developed for the scheme for both Day 1 and Day 200 (drawing ref: 419419-MMD-01-MO-DR-L-3030 and 419419-MMD-01-MO-DR-L-3031), which

encompasses specific mitigation measures to prevent and reduce significant adverse environmental effects, principally for the Church of St Mary and for visual receptors adjacent to the site, as well as to provide replacement and new habitats. It has been developed to broadly complement the landscaping strategy that has been submitted and approved for the Stour Park Development. For Day 200, the Environmental Masterplan builds upon the bunding and planting included in the Day 1 Environmental Masterplan, with the addition of soft landscaping within the viewing corridor in the centre of the site where the parking infrastructure would be removed at Day 200. The landscape works would be carried out at the earliest possible opportunity so as to deliver the mitigation in the early phases of operation and allow the maximum time for establishment of soft landscaping over the lifetime of the development.

After five years, all of the infrastructure associated with the scheme would be removed from site, leaving only areas of hardstanding in the once operational plots of the site, along with the drainage infrastructure, the SuDS ponds and the permanent site access. The retention of these plots areas, which closely mirror those of the Stour Park Development, do provide the opportunity to bring forward a mixed-use employment development following the ceasing of the scheme, and therefore, the scheme would not impede on the potential future use of the land for employment. Additionally, the green-blue infrastructure and all landscape bunds would be retained and managed on-site following the five-year consent. In time, it is expected that the retention of this green-blue infrastructure would provide long-term benefits for landscape character and visual receptors within close proximity of the site and secure a net gain for biodiversity. In addition, further enhancements would also be implemented, such as the provision of footpaths and information boards. The retention of the green-blue infrastructure and potential further enhancement measures are not required to prevent or reduce significant effects, but would ensure a positive long-term legacy for the local community. Indicative proposals are outlined on the Long-Term Enhancement Plan (drawing ref: 419419-MMD-01-MO-DR-L-3032), which would be further developed and detailed through engagement with key stakeholders, and would be captured within the Reinstatement Plan required under Schedule 2 (Conditions) (Part 4 Reinstatement) of the SDO.

**Table 4.1 Summary of impacts, mitigation measures and significance of effect for each environmental discipline**

Environmental discipline	Summary of impacts	Mitigation measures*	Overall significance of effect
Air quality	<ul style="list-style-type: none"> <li>Construction traffic movements would not meet the assessment threshold, emission associated with construction traffic are not anticipated to cause a significant air quality effect.</li> <li>Potential for construction dust cause to cause nuisance to nearby residential properties.</li> <li>At all modelled human health receptors, the resultant concentrations during operation would be either below the relevant air quality objective or the difference in concentration is less than 1% of the relevant air quality objective.</li> <li>No new exceedances of the critical level or a change in nitrogen deposition greater than 1% of the relevant minimum critical load for ecological receptors during operation.</li> </ul>	<ul style="list-style-type: none"> <li>Best practice measures to limit and control dust emissions.</li> </ul>	No likely significant effects

Environmental discipline	Summary of impacts	Mitigation measures*	Overall significance of effect
Cultural heritage	<ul style="list-style-type: none"> <li>• There would be no direct impacts on any heritage assets.</li> <li>• Likely that there would be visual changes caused by construction plant, machinery and construction activities on the site resulting in temporary changes to the setting of nearby heritage assets, including the Grade I listed Church of St Mary adjacent to the site.</li> <li>• Temporary change in setting to heritage assets, including the Grade I listed Church of St Mary through the introduction of the built infrastructure.</li> <li>• The context of the existing M20 and the commercial and light industrial units on the edge of Ashford, HS1 and the A2070 Bad Munstereifel road reduces the magnitude of impact during both construction and operation.</li> <li>• Construction would result in the removal or truncation of buried archaeology within the footprint of the scheme.</li> </ul>	<ul style="list-style-type: none"> <li>• Archaeological investigations in accordance with an agreed Written Scheme of Investigation.</li> <li>• Implementation of the environmental design included in the Environmental Masterplan (419419-MMD-01-MO-DR-L-3030 and 419419-MMD-01-MO-DR-L-3031) and Long-Term Enhancement Plan (419419-MMD-01-MO-DR-L-3032).</li> </ul>	No likely significant effects
Landscape and visual effects	<ul style="list-style-type: none"> <li>• The immediate area of the LCA2 Mersham Farmlands affected by the works is likely to see substantial alteration in the localised area during both construction and operation. The presence of detracting features in the north west corner of the LCA and limited impacts on the wider context of the LCA reduces the severity of the impact to minor in both instances.</li> <li>• Long term, there would be some benefits to LCA2 as a result of the retention of the planting included in the landscape design following the 5-year consent along with the incorporation of environmental enhancements in line with proposals included in the Long-Term Enhancement Plan.</li> <li>• Slight visual disruption for a number of nearby receptors including near distance views for properties neighbouring the scheme during construction. During operation, visual disruption would be moderate for five out of 18 visual receptors, but for the majority of receptors, the presence of existing intervening vegetation, and early implementation of the landscape mitigation, would screen views to the operational aspects of the scheme. The more adverse impacts would be progressively softened during operation as landscape planting matures and with the reduction in capacity at Day 200. The removal of infrastructure at Year 5 would see a further reduction in</li> </ul>	<ul style="list-style-type: none"> <li>• Best practice measures to reduce visual effects of stockpiling such as seeding and keeping height to 2m.</li> <li>• Phase implementation of landscape design in accordance with the Environmental Masterplan (419419-MMD-01-MO-DR-L-3030 and 419419-MMD-01-MO-DR-L-3031) to enable screening.</li> <li>• Implementation of long-term measures as indicated in the Long-Term Enhancement Plan (419419-MMD-01-MO-DR-L-3032).</li> </ul>	No likely significant effects

Environmental discipline	Summary of impacts	Mitigation measures*	Overall significance of effect
	impact, and there would be no adverse impact in the long-term.		
Geology and soils	<ul style="list-style-type: none"> <li>Site investigation and laboratory analysis of soils on-site has not identified any elevated levels of contaminants above generic screening criteria, indicating that the soils are clean, natural material. No impacts with regard to deterioration of the quality of soils as a result of leaching, nor any risks to construction workers from contact with contaminated soils, leachates or ground gases.</li> <li>Loss of Grade 2, Grade 3a and Grade 3b agricultural soils.</li> </ul>	<ul style="list-style-type: none"> <li>Valuable topsoils and subsoils would be stripped, segregated and stockpiled appropriately for re-use across the site within the landscaping bunds.</li> <li>Best practice measures to manage soil and groundwater contamination risks.</li> </ul>	No likely significant effects
Biodiversity	<ul style="list-style-type: none"> <li>Temporary minor indirect effects Ashford Green Corridor LNR from dust deposition and noise pollution.</li> <li>Loss of a hedgerow and hedgerow, scrub and scattered trees.</li> <li>Closure of one badger sett and removal of dormouse and reptile habitat.</li> <li>No new exceedances of the critical level or a change in nitrogen deposition greater than 1% of the relevant minimum critical load for ecological receptors during operation.</li> <li>Stage 2 Appropriate Assessment completed and concluded there would be no adverse effect, alone or in-combination, on the integrity of Stodmarsh SAC, SPA or Ramsar or its dependant features during construction and operation.</li> <li>Long term positive biodiversity net gain of 9.7 units which has been calculated using the Biodiversity Metric 2.0</li> </ul>	<ul style="list-style-type: none"> <li>Best practice measures to reduce dust, noise and pollution to biodiversity features.</li> <li>Specific measures for reptiles, dormouse and badgers on-site, including Natural England licences.</li> <li>Vegetation clearance to be undertaken outside of the bird nesting season.</li> <li>Implementation of the environmental design included in the Environmental Masterplan (419419-MMD-01-MO-DR-L-3030 and 419419-MMD-01-MO-DR-L-3031) and Long-Term Enhancement Plan (419419-MMD-01-MO-DR-L-3032).</li> <li>Drainage design for the scheme</li> </ul>	No likely significant effects
Material assets and waste	<ul style="list-style-type: none"> <li>Material resources to be used in construction, thus resulting in a reduction in the availability of material resources and the potential depletion of natural resources.</li> <li>Waste from construction activities generated - surplus site-won materials, vegetation clearance, surplus construction materials.</li> <li>Small quantities of concrete, aggregate, bitumen and other materials, may be required for the maintenance of the proposed scheme during operation.</li> </ul>	<ul style="list-style-type: none"> <li>Best practice measures to ensure appropriate waste management and that the principals of the waste hierarchy are adhered to.</li> </ul>	No likely significant effects
Noise and vibration	<ul style="list-style-type: none"> <li>Increase in noise level for noise sensitive receptors during both construction and operation, from both site activities and changes to traffic flows.</li> </ul>	<ul style="list-style-type: none"> <li>Best practice measures to limit noise emissions, including limiting vehicle idling where possible and preventing noisy works from occurring during unsociable hours.</li> </ul>	No likely significant effects

Environmental discipline	Summary of impacts	Mitigation measures*	Overall significance of effect
		<ul style="list-style-type: none"> <li>Implementation of the noise barriers included in the General Arrangement Plan (419419-MMD-01-MO-SK-C-0028).</li> </ul>	
Population and human health	<ul style="list-style-type: none"> <li>Temporary closure of PROWs A337A, AE338, AE363 and AE639.</li> <li>Some limited, temporary employment opportunities are expected through the employment of site security and marshalling personnel.</li> <li>Long term benefits for the local community to be explored through the implementation of the Reinstatement Plan.</li> </ul>	<ul style="list-style-type: none"> <li>Best practice measures to reduce effects on the local community, such as ensuring that the community is kept informed on the proposals.</li> <li>Temporary diversions of PROW are put in place.</li> <li>Implementation of long-term measures as indicated in the Long-Term Enhancement Plan (419419-MMD-01-MO-DR-L-3032) to ensure a long-term legacy for the local community.</li> </ul>	No likely significant effects
Road drainage and the water environment	<ul style="list-style-type: none"> <li>Potential for polluted run-off from construction works and from routine run-off from vehicles using the scheme (for example, petrochemicals or contaminated sediments) and from any accidental spillages from HGVs.</li> </ul>	<ul style="list-style-type: none"> <li>Best practice measures to reduce potential adverse effects on the water environment, such as pollution prevention and spill response procedures. Implementation of the drainage design.</li> </ul>	No likely significant effects
Climate	<ul style="list-style-type: none"> <li>GHG emissions through the emissions from plant used, transport of materials to site and the embodied carbon in the materials used, as well as HGV emissions</li> </ul>	<ul style="list-style-type: none"> <li>Best practice measures for carbon reduction.</li> </ul>	No likely significant effects
Cumulative effects	<ul style="list-style-type: none"> <li>Some overlap of construction and operational activities with other developments that meet the threshold for consideration in combination with the scheme.</li> </ul>	<ul style="list-style-type: none"> <li>No specific mitigation measures beyond those already identified within this report.</li> </ul>	No likely significant effects
Heat and radiation	<ul style="list-style-type: none"> <li>The scheme would not result in any increases in heat and radiation due to the type of development as an Inland Border Facility.</li> </ul>	<ul style="list-style-type: none"> <li>No specific mitigation measures</li> </ul>	No likely significant effects
Major accidents and disasters	<ul style="list-style-type: none"> <li>Potential for anthropogenic hazards to occur on-site, either deliberately or accidentally, for instance a fire or terrorist attack.</li> </ul>	<ul style="list-style-type: none"> <li>Measures would be incorporated through the design and OMP to manage health and safety risks on-site.</li> </ul>	No likely significant effects
Odour	<ul style="list-style-type: none"> <li>No impacts anticipated</li> </ul>	<ul style="list-style-type: none"> <li>Non required</li> </ul>	No likely significant effects

\*Best practice mitigation is not required to prevent what would otherwise have been a significant effect, but is required to ensure legislative compliance and that the scheme is developed in an environmentally sustainable manner

The assessment considers the cumulation of the impact with other existing and/or approved development, for which no likely significant effects have been identified. Potentially significant effects have been avoided, eliminated or reduced through the provision of a robust environmental design and mitigation measures. The full extent of these measures is captured and identified within the REAC within Appendix C. All of these measures have either been

embedded in the scheme design or would be secured through the CMP, OMP and Reinstatement Plan for the scheme, as required under Schedule 2 of the *Town and Country Planning (Border Facilities and Infrastructure) (EU Exit) (England) Special Development Order 2020*.

The overall conclusions give consideration to the full range of environmental factors considered within the analysis of likely environmental effects. During construction, some slight impacts are expected as a result of the presence of construction plant, construction traffic, the removal of some vegetation and temporary closure of PRoW. Due to the temporary nature of the works and magnitude of the impact, overall effects are not considered to be significant during this period. During operation, 5 out of 18 visual receptors would experience a moderate impact for the five years of operation only. These moderate impacts would reduce in line with the establishment and maturity of the landscape mitigation works, proposed to be in place by then end of the first planting season. For the remaining receptors across all environmental factors, operational impacts are expected to be slight at worst, with some beneficial impacts also anticipated for the local population through the creation of employment opportunities. This means that as a whole, effects are not considered to be significant during operation. Furthermore, it is expected that in time, the scheme would result in environmental benefits as a result of the retention of the green-blue infrastructure and the implementation of enhancement measures on the site as proposed in the Long-Term Enhancement Plan (drawing ref: 419419-MMD-01-MO-DR-L-3032).

Overall, with the measures identified as part of this assessment secured through the consent for the scheme, this analysis of environmental effects concludes that there would not be an overall significant adverse effect on the environment during construction, operation or reinstatement. This is due to:

- The temporary nature of the scheme being limited in duration to five years
- The reduction in intensity of use of the scheme after Day 200, including the limitation and suspension of parking areas for HGVs
- The reversibility of the development
- The extent, quality and early delivery of landscape mitigation measures
- The proposed parameters limiting the amount and extent of buildings and hardstanding
- The extensive embedded mitigation into the design of the scheme and through the measures identified in the REAC within Appendix C

Therefore, this assessment considers that the scheme would not comprise EIA development in accordance with Schedule 3 of the EIA Regulations.

## A. Environmental Constraints Plan

## B. Transport Assessment

## C. Record of Environmental Actions and Commitments

### C.1 Purpose of the Record of Environmental Actions and Commitments

This REAC has been produced to support an Analysis of the Likely Environmental Effects of the Development Report for the scheme.

The REAC contained in Table C.4.2 identified the environmental commitments included within the Analysis of the Likely Environmental Effects of the Development Report to address the potential environmental effects of the scheme. This is the main vehicle for passing essential environmental information to the Client and crucially to the body responsible for construction, future maintenance and operation, and reinstatement of the asset.

**Table C.4.2 Record of Environmental Actions and Commitments**

Ref.	Objective	Phase of Development	Action (including specific location and any monitoring required)	Required to mitigation what would otherwise be a significant effect (Y/N)	Achievement criteria and reporting requirements (if applicable)	Responsible person(s)
<b>Traffic and Transport (TT)</b>						
TT1	Support the operation of the site and minimise disruption on the road network	Operation	The following plans would be produced with relevant mitigation measures implemented to minimise the impacts on traffic in the local area: <ul style="list-style-type: none"> <li>• Traffic Management Plan</li> <li>• Signage Strategy and Staff Travel Plan</li> </ul>	No	Incorporation within the OMP	Principal Operator
<b>Air Quality (AQ)</b>						
AQ1	To limit and control dust emissions	Construction and Reinstatement	Works would be carried out in accordance with Best Practicable Means, as described in Section 79 (9) of the Environmental Protection Act 1990, to reduce the creation of dust on-site. This would include: <ul style="list-style-type: none"> <li>• Minimise height of stockpiles and profile to minimise wind-blown dust emissions and risk of pile collapse.</li> <li>• Locate stockpiles out of the wind (or cover, seed or fence) to minimise the potential for dust generation.</li> <li>• Ensure that all vehicles with open loads of potential dusty materials are securely sheeted or enclosed.</li> <li>• Enforce a maximum speed limit of 15mph on surfaced roads and a 10mph speed limit on unsurfaced haul roads and work areas, to prevent the generation of dust by fast moving vehicles.</li> <li>• Damp down surfaces in dry conditions.</li> <li>• All vehicle engines and plant motors shall be switched off when not in use.</li> </ul>	No	To be included in the CMP	Principal Contractor Reinstatement Contractor
<b>Cultural Heritage (CH)</b>						
CH1	To reduce impacts on the	Construction	<ul style="list-style-type: none"> <li>• Archaeological investigation in line with the Stour Park Development Written Schemes of Investigation, including:</li> </ul>	Yes	To be included in the CMP and	Principal Contractor

Ref.	Objective	Phase of Development	Action (including specific location and any monitoring required)	Required to mitigation what would otherwise be a significant effect (Y/N)	Achievement criteria and reporting requirements (if applicable)	Responsible person(s)
	historic environment		<ul style="list-style-type: none"> <li>- Strip, map and sample of areas west of Highfield Lane which were identified by the previous development application.</li> <li>- Trial trenching of the area south of Highfield Lane.</li> </ul>		adherence to the Written Scheme of Investigation	
CH2	To reduce the impacts on the heritage assets during operation	Construction and Operation	<ul style="list-style-type: none"> <li>• Implementation of the design measures and landscaping planting included in the Environmental Masterplan Day 1 (drawing ref: 419491-MMD-01-MO-DR-L-3030) and Environmental Masterplan Day 200 (drawing ref: 419491-MMD-01-MO-DR-L-3031)</li> </ul>	Yes	Incorporated in the environmental design	Principal Contractor
CH3	To provide longer-term benefits to heritage assets	Reinstatement	<ul style="list-style-type: none"> <li>• Integration of enhancements measures in line with the Long-Term Enhancement Strategy (419419-MMD-01-MO-DR-L-3032), including measures such as:                             <ul style="list-style-type: none"> <li>- Creation of footpaths and walkways for public use</li> <li>- Addition of information boards, with potential interactive elements, regarding the Church of St Mary and the Royal Observer Corps Post</li> </ul> </li> </ul>	No	Incorporated in Restatement Plan	Reinstatement Contractor
<b>Landscape and Visual Effects (LVE)</b>						
LVE1	To aid visual screening and limit visual impacts	Construction	<ul style="list-style-type: none"> <li>• Prioritise their creation early in the construction period to aid screening of lower level activity</li> <li>• Seeded as priority to 'green up' earthworks.</li> <li>• Implementation of planting in the first planting season to aid the integration of the scheme with the surrounding landscape.</li> </ul>	Yes	To be incorporated in the CMP	Principal Contractor
LVE2	To aid visual screening and limit visual impacts of the temporary stockpiles	Construction	<ul style="list-style-type: none"> <li>• Kept to a maximum 2m in height.</li> <li>• Located as far away as possible from properties on Kingsford Street.</li> <li>• The 'active' side of the stockpile should be restricted to the western edge, adjacent to Highfield Lane which would aid screening of any soil and plant movements.</li> </ul>	Yes	To be incorporated in the CMP	Principal Contractor

Ref.	Objective	Phase of Development	Action (including specific location and any monitoring required)	Required to mitigation what would otherwise be a significant effect (Y/N)	Achievement criteria and reporting requirements (if applicable)	Responsible person(s)
			<ul style="list-style-type: none"> <li>Stockpile should be seeded as a priority. The remaining faces of the stockpiles should be left inactive to limit visual intrusion upon neighbouring residential receptors.</li> </ul>			
LVE3	To limit visual impacts from site lighting	Construction and Reinstatement	<ul style="list-style-type: none"> <li>Site task lighting should be kept to a minimum, be directional and use for the minimum time required.</li> <li>Explore the use of infrared initiated security lighting to minimise night-time lighting.</li> </ul>	No	To be included in the CMP and Reinstatement Plan	Principal Contractor and Reinstatement Contractor
LVE4	To limit visual intrusion and impacts upon landscape character	Construction and Reinstatement	<ul style="list-style-type: none"> <li>Keep a well-managed and tidy site, with construction materials delivered on an as and when needed basis to reduce material stockpiles on-site</li> </ul>	No	To be included in the CMP and Reinstatement Plan	Principal Contractor and Reinstatement Contractor
LVE5	To limit visual intrusion and impacts upon landscape character during operation and reinstatement	Construction and Operation	<ul style="list-style-type: none"> <li>Implementation of the design measures and landscaping planting included in the Environmental Masterplan Day 1 (drawing ref: 419491-MMD-01-MO-DR-L-3030) and Environmental Masterplan Day 200 (drawing ref: 419491-MMD-01-MO-DR-L-3031)</li> </ul>	Yes	Incorporated in the environmental design	Principal Contractor
LVE6	To provide longer-term enhancements and create a long-term positive legacy on the site	Reinstatement	<ul style="list-style-type: none"> <li>Integration of enhancements measures in line with the Long-Term Enhancement Strategy (419419-MMD-01-MO-DR-L-3032), including measures such as:                             <ul style="list-style-type: none"> <li>Creation of footpaths and walkways for public use</li> <li>Creation of informal open space</li> <li>Addition of information boards highlighting the heritage assets and biodiversity value around the site</li> </ul> </li> </ul>	No	To be incorporated in Reinstatement Plan	Reinstatement Contractor
<b>Geology and Soils (GS)</b>						
GS1	To ensure quality of	Construction	<ul style="list-style-type: none"> <li>The stockpile should be managed in line with the Defra <i>Construction Code of Practice for the Sustainable Use of Soils on Construction-sites</i>.</li> </ul>	Yes	To be incorporated in CMP	Principal Contractor

Ref.	Objective	Phase of Development	Action (including specific location and any monitoring required)	Required to mitigation what would otherwise be a significant effect (Y/N)	Achievement criteria and reporting requirements (if applicable)	Responsible person(s)
	stockpiled soil is maintained		<ul style="list-style-type: none"> <li>The stockpile must be removed after 12 months.</li> <li>The stockpile should be seeded to maintain quality of soil.</li> </ul>			
GS2	The management of soil contamination risks	Construction and Reinstatement	<ul style="list-style-type: none"> <li>Should any hazardous materials be encountered during construction, all materials would be dealt with in accordance with appropriate guidance.</li> <li>Any fuels, oils or hazardous materials used during the works would be appropriately stored and kept in bunded areas to prevent pollution of surface and ground waters. Spill kits shall be provided on-site for the duration of the works and construction staff trained in their correct application.</li> </ul>	No	To be incorporated in CMP and Reinstatement Plan	Principal Contractor and Reinstatement Contractor
<b>Biodiversity (B)</b>						
B1	To limit disturbance to habitats and protected species	Construction	<ul style="list-style-type: none"> <li>Best practice measures would be employed on-site to minimise impacts due to construction noise, dust and water pollution as far as possible in line with AQ1, NV2 and RDWE1</li> <li>Ensure lighting is minimised to avoid light spill on habitats for dormice in the habitat surrounding the construction area</li> <li>Careful siting of haul routes, materials storage areas, compounds, lighting and generators away from sensitive habitats</li> <li>Night-time working would not be allowed during the months when bats are actively foraging (April to October inclusive) to prevent lighting disturbance to foraging bats</li> </ul>	No	To be incorporated in the CMP	Principal Contractor / Ecological Clerk of Works
B2	To reduce habitat loss and degradation	Construction and Reinstatement	<ul style="list-style-type: none"> <li>Existing trees and vegetation to be retained (including hedgerows) would be protected during the construction phase with protective fencing.</li> <li>Protective barriers should be installed in accordance with BS5837:2012 around all of the trees and groups that are due to be retained, at the distances dictated by the RPA dimensions stated in Table 3.4 of the Stour Park Pre-Development Arboricultural Survey (Report No: RT-MME-120243-08) to protect these trees.</li> </ul>	No	To be incorporated in the CMP	Principal Contractor/Ecological Clerk of Works

Ref.	Objective	Phase of Development	Action (including specific location and any monitoring required)	Required to mitigation what would otherwise be a significant effect (Y/N)	Achievement criteria and reporting requirements (if applicable)	Responsible person(s)
			<ul style="list-style-type: none"> <li>• An Arboriculturalist should attend site prior to commencement of the works to confirm the final positioning of the protective barrier.</li> <li>• For the location and alignment of the temporary protective barriers required for the additional trees and groups that have been removed or retained as part of the Sevington IBF works, refer to the Tree Protection Plans (418703-MMD-XX-SV-VS-YB-0001-04). For the location and alignment of the temporary protective barriers required for trees and groups that have not changed, refer to the Stour Park West AIA.</li> <li>• The area within the protective barriers i.e. tree side, would be a 'Construction Exclusion Zone' (CEZ) for the duration of the works.</li> <li>• All weather notices should be erected on the barrier with words such as: "Tree Protection Area — Keep out".</li> <li>• The following prohibitions shall also apply within the area enclosed by the temporary protective barriers:                             <ul style="list-style-type: none"> <li>– No mechanical digging or scraping</li> <li>– No storage of plant, equipment or materials</li> <li>– No vehicular or plant access</li> <li>– No fire lighting within 10m of tree canopies</li> <li>– No handling, discharge or spillage of any chemical substance, including cement washings and vehicle washings within 10m</li> <li>– No action likely to cause localised waterlogging</li> <li>– No alteration of ground levels</li> <li>– No construction of hard surfaces</li> <li>– No attachment of boards, hoarding, cables or notices or fencing to trees</li> <li>– No storage of excavated materials</li> </ul> </li> <li>• Special care is to be taken on sloping ground where spillages could run towards the trees. A collecting channel dug along the outer line of the protective fencing would be one method of avoiding such damage.</li> </ul>			

Ref.	Objective	Phase of Development	Action (including specific location and any monitoring required)	Required to mitigation what would otherwise be a significant effect (Y/N)	Achievement criteria and reporting requirements (if applicable)	Responsible person(s)
			<ul style="list-style-type: none"> <li>If excavators are to be used during construction, at no time is the excavating arm to encroach over the position of the tree protection barriers.</li> <li>All construction compounds, storage facilities and deliveries must aim to make use of existing hard surfaces to avoid unnecessary compaction within RPAs. If compounds require siting within RPAs, appropriate footings or ground cover must be used to avoid root damage or compaction of the soil and siting must ensure that any damage to aerial parts of retained trees is avoided.</li> </ul>			
B3	To protect reptile populations on-site	Construction	<ul style="list-style-type: none"> <li>A Reptile Mitigation Strategy would be implemented in order to protect the reptile populations during construction. The following methodologies and techniques would be used prior to construction commencing:                             <ul style="list-style-type: none"> <li>Receptor site review;</li> <li>Habitat manipulation;</li> <li>Trapping and translocation;</li> <li>Supervised soil strip;</li> <li>Sensitive timing of works;</li> <li>Worker awareness and sympathetic working practice.</li> </ul> </li> </ul>	Yes	To be incorporated in the CMP	Principal Contractor / Ecological Clerk of Works
B4	To protect badger populations	Construction	<ul style="list-style-type: none"> <li>Closure of badger outlier sett under a Natural England Licence</li> </ul>	Yes	Natural England Licence compliance	Principal Contractor / Ecological Clerk of Works
B5	To protect dormice populations	Construction	<ul style="list-style-type: none"> <li>Removal of dormouse habitat under a Natural England licence and ensure sensitive method of vegetation clearance, in accordance with best practice</li> </ul>	Yes	Natural England Licence compliance	Principal Contractor / Ecological Clerk of Works
B6	To prevent disturbance to breeding and wintering birds	Construction	<ul style="list-style-type: none"> <li>Vegetation clearance would be programmed to avoid the nesting bird season (March – August inclusive) if possible</li> <li>Where this is not possible a breeding bird survey would be carried out by an ecologist 48 hours in advance of proposed clearance works to check for bird nesting activity.</li> </ul>	Yes	Incorporated in the CMP	Principal Contractor / Ecological Clerk of Works

Ref.	Objective	Phase of Development	Action (including specific location and any monitoring required)	Required to mitigation what would otherwise be a significant effect (Y/N)	Achievement criteria and reporting requirements (if applicable)	Responsible person(s)
			<ul style="list-style-type: none"> <li>If active nests are found a buffer of vegetation shall be retained until all young have fledged and the nest is deemed inactive by an ecologist.</li> </ul>			
B7	To provide new habitats on-site	Construction and Operation	Implementation of the design measures and landscaping planting included in the Environmental Masterplan Day 1 (drawing ref: 419491-MMD-01-MO-DR-L-3030) and Environmental Masterplan Day 200 (drawing ref: 419491-MMD-01-MO-DR-L-3031), including the erection of 10 bird, 10 bat and 6 dormouse boxes.	Yes	Incorporated in the environmental design	Principal Contractor
B8	Management of newly created habitats	Construction, Operation and Reinstatement	A five-year aftercare to follow completion of the works. Maintenance activities to be undertaken to ensure the successful establishment of planting and provision of new function habitats. This would include the replacement of defective plants.	Yes	Incorporated in the LEMP	Principal Operator
B9	To provide longer-term enhancements and ensuring biodiversity net gain	Reinstatement	<ul style="list-style-type: none"> <li>Integration of enhancements measures in line with the Long-Term Enhancement Strategy (419419-MMD-01-MO-DR-L-3032), including measures such as:                             <ul style="list-style-type: none"> <li>Creation of footpaths and walkways for public use</li> <li>Creation of informal open space</li> <li>Addition of information boards highlighting the biodiversity value around the site</li> </ul> </li> </ul>	No	To be incorporated in Restatement Plan	Reinstatement Contractor
B10	Monitoring programme during operation	Operation	<ul style="list-style-type: none"> <li>Dormouse: Monitoring as part of the Natural England dormouse licence requirements – twice a year up to three years (May and September), with a visit each winter (December – February) to clean out boxes.</li> <li>Reptiles: Monitoring of the translocation receptor site to be undertaken every two years up to four years after completion of the scheme, carrying out surveys to assess the status of the reptile population. This would be carried out during the active season May-October following standard reptile guidelines set out in Froglife Advice Sheet 10.</li> <li>Habitats: Habitat surveys to be combined with landscape monitoring and associated recommendations, in order to prevent the loss of proposed and retained habitats on-site.</li> <li>Bats: Monitoring would be undertaken to determine if the level of bat activity at the site has been maintained once the scheme is operational. Monitoring would be composed of spring, summer and autumn activity</li> </ul>	Yes	Incorporated in the LEMP	Principal Operator

Ref.	Objective	Phase of Development	Action (including specific location and any monitoring required)	Required to mitigation what would otherwise be a significant effect (Y/N)	Achievement criteria and reporting requirements (if applicable)	Responsible person(s)
			<p>transects which would be undertaken in years 3 and 5 in accordance with Collins (2016).</p> <ul style="list-style-type: none"> <li>Breeding Birds: Monitoring would be undertaken to determine if the level of breeding bird activity at the site has been maintained once the scheme is operational. Monitoring would be undertaken in years 3 and 5 in accordance with the Common Bird Census methodology (Gilbert et al, 1998).</li> </ul>			
<b>Materials (M)</b>						
M1	To reduce impact on material resources	Construction	<ul style="list-style-type: none"> <li>Re-use site won materials where possible</li> <li>Use locally sources materials</li> <li>Ensure materials are delivered on an as and when basis to avoid damage or contamination</li> <li>Use pre-cast elements where possible</li> </ul>	No	To be incorporated in CMP	Principal Contractor
M2	To reduce waste generation	Construction and Reinstatement	<ul style="list-style-type: none"> <li>Where possible, ensure that the waste hierarchy is followed when dealing with waste on-site: prevention, reuse and preparation for re-use, recycle, recovery, and disposal. Opportunities include:                             <ul style="list-style-type: none"> <li>Re-use of excavated soils on-site</li> <li>Chipping green waste for use in the landscaping</li> <li>Re-use of surplus excavated materials on other nearby schemes or for uses with benefits to the environment, such as in the restoration of nearby quarries or other excavation-sites.</li> </ul> </li> </ul>	No	To be incorporated in CMP and Restatement Plan	Principal Contractor and Reinstatement Contractor
M3	Re-use of material in landscaping bunds	Construction	Production of a Materials Management Plan for the re-use of excavated material on-site	No	To be incorporated in CMP	Principal Contractor
M4	Ensure appropriate waste management	Operation	<ul style="list-style-type: none"> <li>Ensure waste bins are appropriately sized and placed throughout the operational area.</li> <li>Ensure principles of waste hierarchy are adhered.</li> </ul>	No	To be incorporated in OMP.	Principal Operator
<b>Noise and Vibration (NV)</b>						

Ref.	Objective	Phase of Development	Action (including specific location and any monitoring required)	Required to mitigation what would otherwise be a significant effect (Y/N)	Achievement criteria and reporting requirements (if applicable)	Responsible person(s)
NV1	Hours of working	Construction and Reinstatement	All noisy operations would be completed between 08:00 and 18:00 on weekdays, and 08:00 to 13:00 hours on Saturdays, switching off noise-emitting equipment when not in use and the use of temporary noise barriers where appropriate. Where out of hours working is required, prior agreement would be sought with Ashford Borough Council.	No	To be incorporated in CMP and Restatement Plan	Principal Contractor Reinstatement Contractor
NV2	Limit noise emissions	Construction and Reinstatement	Implement the following noise mitigation measures during construction: <ul style="list-style-type: none"> <li>• Ensure equipment is maintained, in good working order, and is used in accordance with the manufacturer's instructions.</li> <li>• Fit equipment with silencers or mufflers.</li> <li>• Manage deliveries to prevent queuing of site traffic.</li> <li>• Do not leave plant running unnecessarily.</li> <li>• Careful orientation of plant with directional features.</li> <li>• Materials to be lowered instead of dropped from height.</li> <li>• Use of adjustable or directional audible vehicle-reversing alarms or use of alternative warning systems (for example, white noise alarms).</li> <li>• Train and advise members of the construction team during toolbox talk briefings on quiet working methods.</li> <li>• Erect temporary barriers to fully obscure the construction works from nearby receptors.</li> </ul>	No	To be incorporated in CMP and Restatement Plan	Principal Contractor Reinstatement Contractor
NV3	Mitigate effects of stockpiling activity	Construction	<ul style="list-style-type: none"> <li>• Position stockpiled material closest to the residential receptors first to ensure a bund between the works and the receptors is formed.</li> </ul>	No	To be incorporated in the CMP	Principal Contractor
NV4	Reduce noise effects at nearby residential receptors	Operation	<ul style="list-style-type: none"> <li>• Ensure that vehicle idling does not occur during operation.</li> <li>• Any refrigerated HGVs that are not able to hook-up to an electricity supply to power their generators should be located within the northern most plot on the site away from the closest residential receptors</li> </ul>	Yes	To be incorporated in the OMP	Principal Operator

Ref.	Objective	Phase of Development	Action (including specific location and any monitoring required)	Required to mitigation what would otherwise be a significant effect (Y/N)	Achievement criteria and reporting requirements (if applicable)	Responsible person(s)
NV5	To help alleviate potential noise complaints	Operation	<ul style="list-style-type: none"> <li>Engagement with the local authority.</li> <li>A straightforward complaints handling procedure.</li> <li>Noise monitoring on the site boundary.</li> </ul>	No	To be incorporated in OMP	Principal Operator
NV6	Reduce noise effects at nearby residential receptors	Operation	<ul style="list-style-type: none"> <li>Implementation of noise barriers in line with the Environmental Masterplan</li> </ul>	Yes	Incorporated in design	Principal Contractor
Population and Health (PH)						
PH1	To reduce effects on local community	Construction and Reinstatement	<ul style="list-style-type: none"> <li>Ensure local community are informed of the proposals.</li> <li>Ensure PROW diversions are appropriately posted</li> </ul>	No	To be incorporated in the CMP and Reinstatement Plan	Principal Contractor and Reinstatement Contractor
Road Drainage and the Water Environment (RDWE)						
RDWE1	To mitigate potential adverse effects upon RDWE	Construction and Reinstatement	<p>Activities must be managed in accordance with CIRIA Guidelines. Guidance on best practice in relation to pollution prevention and water management is set out in the following documents:</p> <ul style="list-style-type: none"> <li>CIRIA's <i>Environmental good practice on-site</i><sup>37</sup>.</li> <li>Environment Agency's <i>Protect groundwater and prevent groundwater pollution</i><sup>38</sup>.</li> </ul> <p>Measures to be implemented to limit the impact of construction activities on the water environment include:</p> <ul style="list-style-type: none"> <li>All construction workers to be briefed on the use of spill kits as part of the site induction.</li> </ul>	No	To be incorporated in the CMP and Reinstatement Plan	Principal Contractor Reinstatement Contractor

<sup>37</sup> CIRIA (2015) *Environmental good practice on-site guide*. ISBN: 978-0-86017-746-3.

<sup>38</sup> Environment Agency (2017) *Protect groundwater and prevent groundwater pollution*. Available at: <https://www.gov.uk/government/publications/protect-groundwater-and-prevent-groundwater-pollution/protect-groundwater-and-prevent-groundwater-pollution>

Ref.	Objective	Phase of Development	Action (including specific location and any monitoring required)	Required to mitigation what would otherwise be a significant effect (Y/N)	Achievement criteria and reporting requirements (if applicable)	Responsible person(s)
			<ul style="list-style-type: none"> <li>Any stockpiled materials to be stored within enclosed areas to enable the runoff to be stored and treated where required.</li> <li>All plant and machinery to be maintained in a good condition and any maintenance required would be undertaken within safe areas.</li> <li>Pollution prevention and spill response procedures to be developed by the contractor and a spill kit and clean up equipment maintained on-site.</li> <li>Dust suppression measures as described in AQ1 of this REAC.</li> </ul>			
RDWE2	To mitigate potential adverse effects upon RDWE	Operation	<ul style="list-style-type: none"> <li>Inclusion of a pollution prevention plan in the Operational Management Plan.</li> <li>Spill kits to be located across the site to be used in the event of a spill.</li> </ul>	No	To be incorporated in the OMP	Principal Operator
Climate (C)						
C1	To reduce carbon emissions associated with the scheme	Construction and Reinstatement	<p>The carbon reduction principles as detailed within Section 3 of the Carbon Assessment and Reduction Report, Appendix L, would be considered including the following:</p> <ul style="list-style-type: none"> <li>Transportation of materials to site would prioritise low-carbon modes where possible</li> <li>Where possible, low-carbon construction materials and products would be preferred</li> <li>Where possible low-carbon construction plant and equipment would be used</li> <li>Provision would be made to enable waste to be effectively segregated during construction, enabling materials to be effectively managed using the waste hierarchy, prioritising re-used and recycling over disposal.</li> </ul> <p>Circular economy principles, such as Modern Methods of Construction, would be implemented, where possible.</p>	No	To be incorporated in the CMP and Reinstatement Plan	Principal Contractor Reinstatement Contractor

Ref.	Objective	Phase of Development	Action (including specific location and any monitoring required)	Required to mitigation what would otherwise be a significant effect (Y/N)	Achievement criteria and reporting requirements (if applicable)	Responsible person(s)
C2	To reduce carbon emissions associated with the scheme	Operation	<p>The carbon reduction principles as detailed within Section 3 of the Carbon Assessment and Reduction Report, Appendix L, would be considered including the following:</p> <ul style="list-style-type: none"> <li>• Provision would be made to enable waste to be effectively segregated during operation, enabling materials to be effectively managed using the waste hierarchy, prioritising re-used and recycled over disposal.</li> <li>• Where possible, measures would be put in place to limit profligate energy use by unintended user behaviours e.g. using motion sensors to control lights</li> </ul> <p>Where possible, measures would be put in place to limit profligate water use by unintended user behaviours e.g. using aerated taps.</p>	No	To be incorporated in the OMP	Principal Operator
C3	To reduce carbon emissions associated with the scheme	Reinstatement	Resource efficiency would be maximised through decommission and reinstatement. Opportunities for the reuse of assets following the end of operation would be explored as a priority. If reuse is not possible then recycling would be maximised.	No	To be incorporated in the Reinstatement Plan	Reinstatement Contractor

## D. Air Quality Impact Assessment

## E. Cultural Heritage Assessment

## **F. Landscape and Visual Impact Assessment**

## G. Geotechnical Desk Study

## H. Biodiversity Assessment

# I. Arboricultural Report

## J. Noise Impact Assessment

## **K. Drainage Strategy and Flood Risk Assessment**

## L. Carbon Assessment

## M. Cumulative Effects Plan

