

Operation Stack: Initial Environmental / Policy Baseline Summary

Air Quality & Greenhouse Gas

National & Highways England policy

National Planning Policy Framework (NPPF)

Compliance with EU limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas (AQMAs) and the cumulative impacts on air quality from individual sites in local areas is a requirement (Paragraph 124), whilst developments which contribute to, being put at an unacceptable risk from or being adversely affected by unacceptable levels of air pollution, should be prevented (Paragraph 109).

National Policy Statement for National Networks (NPSNN)

Where (after considering mitigation) a project would lead to a significant air quality impact in relation to EIA and/or lead to deterioration in air quality in a zone/agglomeration substantial air quality considerations should be given (Paragraph 5.12). The Secretary of State (SoS) should refuse permission where, after taking into account mitigation, the air quality impacts of a Scheme will either result in a zone or agglomeration which is currently reported as being compliant with the Air Quality Directive becoming non-compliant, or affect the ability to achieve compliance within most recent timescales reported by the European Commission as the time of the decision (Paragraph 5.13).

Physical Environment

- There are no AQMAs within the Study Area. The nearest AQMA is further than 10km from the proposed Scheme;
- Based on 2015 roadside NO₂ projections by the Defra Pollution Climate Mapping (PCM) model no links exceeding 40ug/m³ are present within 10km of the Scheme. The concentration which has been measured within the Scheme extents are 15µg/m³ for NO₂ and 18µg/m³ for PM₁₀ respectively (well below relevant air quality objectives);
- Approximately 13 residential properties and four farms have been identified within 200m of the proposed Scheme extents; and,
- No Natura 2000 sites have been identified within 200m of the proposed Scheme. However, one national ecological designation, Gibbin's Brook SSSI, is located approximately 70m west of the proposed Scheme and is designated for two ecosystem types listed in Table F1 of Design Manual for Roads and Bridges (DMRB) Volume 11 Section 3 Part 1, specifically grassland and tall forb habitats (moist and wet oligotrophic grasslands) and mire, bog and fen habitats (raised and blanket bogs).

Cultural Heritage

National & Highways England policy

NPPF

Paragraphs 128 and 129 require an applicant to describe, identify and assess the significance of any heritage assets affected, including any contribution made to their setting. Significant weight should be given to the conservation of the asset (Paragraph 132) and where development will lead to less than substantial harm to the significance of a designated heritage asset, the harm should be weighed against the public benefits of the proposal (Paragraph 134). Refusal of consent is required when a Scheme would result in the substantial harm or total loss of significance of a designated heritage asset (Paragraph 133), unless substantial public benefits outweigh that harm or loss. The

significance of non-designated heritage assets should be considered, and a balanced judgement would have to be made with regard to the scale of any harm or loss and the significance of the heritage asset (Paragraph 135).

NPSNN

The SoS should identify and assess the particular significance of any heritage asset that may be affected by a development (Paragraph 5.128), whilst the significance of the heritage asset and value they hold now and in the future should also be considered (Paragraph 5.129). Great weight should be given to the assets conservation; substantial harm to a Grade II Listed Building or a Grade II Registered Park or Garden should be exceptional, whilst substantial harm to or loss of designated assets of the highest significance including World Heritage Sites (WHS), Scheduled Ancient Monuments (SAM), Grade I and II* Listed Buildings, Registered Battlefields, and Grade I and II* Registered Parks and Gardens should be wholly exceptional. (Paragraph 5.131). Where a proposed development would lead to the substantial harm or total loss of significance of a heritage asset, the SoS should refuse consent unless it can be demonstrated that substantial public benefits outweigh the loss or harm.

Physical Environment

- One SAM is located within 1km of the Scheme, namely Westenhanger Castle SAM, which is located approximately 40m south of the proposed Scheme;
- Two Grade I and two Listed Buildings are located within 300m of the proposed Scheme (the closest of which is Gibbins Brook Farmhouse Shalom Grade II Listed Building situated 115m north of the proposed Scheme). A further 12 Grade II Listed Buildings are located within 1km of the Scheme;
- No WHS's, Registered Parks and Gardens, Conservation Areas or Registered Battlefields have been identified within the vicinity of the Scheme; and,
- The area within the local vicinity of the Scheme holds a rich collection of known archaeological finds with approximately 21 archaeological discoveries within 1km of the Scheme comprising Mesolithic, Iron Age, Bronze Age, Roman, Saxon, Medieval and WW2 finds. No known archaeological finds have previously been uncovered within the proposed Scheme extents.

Landscape

National & Highways England policy

NPPF

The planning system should contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes, geological conservation interest and soils (Paragraph 109), whilst decisions should encourage the effective use of land by re-using land which has been previously developed (Paragraph 111). Great weight should be given to conserving landscape and scenic beauty in The Broads, Areas of Outstanding Natural Beauty (AONB) and National Parks (Paragraph 115). Whilst preparing local plans, local planning authorities should set out environmental criteria against which planning applications will be assessed to ensure permitted operations do not have unacceptable adverse impacts on visual intrusion (Paragraph 143).

NPSNN

Where a development is subject to an EIA, an assessment of any likely

significant landscape and visual impacts should be undertaken by the applicant within the EIA and described within the ES (Paragraph 5.144). The Applicant's assessment should consider any relevant national and local development policy, significant effects during construction and operation, and visibility and conspicuousness (Paragraphs 5.146-148). Compliance with the respective duties in section 11A of the National Parks and Access to Countryside Act 1949 and section 85 of the Countryside and Rights of Way Act 2000 is required. Local designations should be given consideration in decision making by the SoS (Paragraph 5.156), but not be used in themselves to refuse consent. The SoS will judge whether visual effects on sensitive receptors outweigh the benefits of the development (Paragraph 5.158).

Physical Environment

- Kent Downs Area of Outstanding Natural Beauty (AONB) is located approximately 540m to the north of the proposed Scheme;
- No National Parks are located within the vicinity of the Scheme;
- Numerous visual receptors (such as residential properties and Public Rights of Way (PRoW)) are located within the likely Zone of Theoretical Visibility (ZTV) which would be identified at PCF Stage 1;
- Generally, the local landscape appears to be fairly open, with views extending to the wider area. Infrastructure including pylons and telegraph lines are notable features in the gently undulating local landscape, along with large fields bound by shrubbery and trees. The M20 road is also a noticeable landscape feature (to the west extents of the Scheme) that is fairly poorly screened in places; and,
- The proposed Scheme would be located within National Character Area 120 Wealden Greensand, in this area, located to the eastern extremities of Kent the landscape is relatively more open with mixed farming, and is characterised by folded and undulating chalk, greensand and ragstone escarpments. The AONB landscape also comprises a network of tiny lanes and ancient woodlands; the Kent Downs is one of Britain's heavily wooded landscapes.

Nature
Conservation /
Biodiversity

National & Highways England policy

NPPF

Paragraph 117 promotes the preservation, restoration and recreation of priority habitats, ecological networks and protection and recovery of priority species. Paragraph 118 states that if significant harm (to biodiversity) cannot be avoided, adequately mitigated, or (as a last resort) compensated then consent should be refused. Consent should also be refused if irreplaceable habitats such as ancient woodland and/or veteran trees are lost or deteriorate in quality as a result of the Scheme, unless the need for and benefits of the development clearly outweigh the loss. Additionally, where a project would be likely to adversely affect a Site of Special Scientific Interest (SSSI) the development would not normally be permitted, unless the benefits of the development clearly outweigh impacts on the features of the qualifying features of the SSSI and/ or broader impacts on the national network of SSSI's. Projects on land within or outside an ecological designation, but are likely to have an adverse effect upon the site (distinction between the hierarchy of international, national and local designations should be measured) are not favoured.

NPSNN

The applicant should show how the project has taken advantage of

opportunities to conserve and enhance biodiversity conservation interests (Paragraph 5.23) including appropriate mitigation measures (Paragraph 5.36). Prior to granting Development Consent, the SoS must, under the Habitats Regulations, consider whether the project would be likely to have a significant effect on the objectives of a European site, or on any site to which the same protection (Paragraphs 4.22/23). Sufficient information is required within applications for development consent to enable the SoS to carry out an Appropriate Assessment if required.

Physical Environment

- Two SSSIs are located within 1km of the Scheme, namely Gibbin's Brook SSSI located approximately 70m west of the proposed Scheme and Otterpool Quarry located 890m to the south of the proposed Scheme. Gibbin's Brook SSSI is designated primarily for the marshy grassland and acidic valley bog features this site holds, as well as its invertebrates, particularly moths;
- No Natura 2000 sites (i.e. Special Areas of Conservation (SAC), Special Protection Areas (SPA's) or Ramsar sites) have been identified within 2km of the Scheme, no SAC's designated for their bat populations have been identified within 30km of the Scheme, whilst no National Nature Reserves (NNR), Local Nature Reserves or RSPB reserves have been identified within 1km of the proposed Scheme;
- The proposed Scheme would cross over a drain which connects to the East Stour River, this main river waterbody eventually flows into the Great Stour River; several Natura 2000 sites are located downstream of this waterbody including for example, Wye and Curndale Downs SAC;
- One Site of Nature Conservation Interest (SNCI) is located within 1km of the Scheme, which covers the same spatial extents as Gibbin's Brook SSSI;
- Four separate Ancient and Semi Natural Woodland pockets are located within 1km of the proposed Scheme, the closest located 780m east of the proposed Scheme;
- Additional Biodiversity Action Plan (BAP) priority habitats located within 1km of the Scheme include: deciduous woodland located adjacent to the west of the Scheme, no main habitat but additional habitat exists located adjacent to the Scheme, lowland fens located approximately 70m west, lowland dry acid grassland located approximately 300m north, traditional orchard located 925m south. Additionally, hedgerows (another BAP habitat) are situated within the Scheme footprint;
- Previous records of bats are located within 10km of the site, although the surrounding naturalised and rural landscape is likely to be used for roosting and foraging bats;
- Approximately two waterbodies: one attenuation pond and one amenity lake have been identified within 500m of the site (which could potentially provide breeding habitat for this species). The terrestrial habitat appears from aerial photography to be potentially suitable for great crested newts (GCN), with naturalised habitats such as grassland, woodland and hedges present within the Scheme extents which would provide forage, refuge and hibernation opportunities;
- The field margins, water courses, hedges and woodlands could all be suitable for reptiles to bask and forage, and use for hibernation;

	<ul style="list-style-type: none"> • Both badgers, bats and breeding birds may utilise woodland, scrub and grassland habitats for refuge and foraging. • The species rich hedgerow to the south is considered suitable for dormice; and, • Also located to the south is a stream with good riparian habitat, which is considered suitable for both water vole and otter.
<p>Noise & Vibration</p>	<p><i>National & Highways England policy</i></p> <p>NPPF</p> <p>Paragraph 123 requires projects to avoid noise giving rise to significant adverse impacts on health and quality of life, to mitigate and reduce to a minimum other adverse impacts on health and quality of life arising from noise, and to identify and protect areas of tranquillity which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason. Developments which contribute to unacceptable levels or place unacceptable risk of adverse effects from noise pollution should be prevented. (Paragraph 109).</p> <p>NPSNN</p> <p>Where a development is subject to an EIA and significant noise impacts are likely to arise from the propose development, the applicant should produce a noise assessment, which includes Noise and Vibration baseline, sensitive receptors, predictions of changing in baseline with the proposed development and mitigation measures (Paragraph 5.189). Paragraph 5.193 requires developments to be undertaken in accordance with the statutory requirements for noise. Whilst, applicants should ensure that the development avoid significant adverse noise impacts on health and quality of life, mitigate and minimise other adverse impacts on health and quality of life from noise, and contribute to improvements to health and quality of life through effective management and control of noise (Paragraph 5.195). For most national network projects, the relevant Noise Insulation Regulations will apply (Paragraph 5.199).</p> <p><i>Physical Environment</i></p> <ul style="list-style-type: none"> • One Noise Important Area (NIA) is located approximately 633m west of the proposed Scheme; and, • Approximately 200 residential properties, of which several are farms, are located within 500m of the Scheme.
<p>Road Drainage & the Water Environment</p>	<p><i>National & Highways England policy</i></p> <p>NPPF</p> <p>Paragraph 100 requires that inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk, but where development is necessary, making it safe without increasing flood risk elsewhere (Paragraph 103) and a Flood Risk Assessment (FRA) should support the proposal. The planning system should contribute to and enhance the natural and local environment by preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of water pollution (Paragraph 109). Through preparing local plans, local planning authorities should set out environmental planning criteria against which planning applications will be assessed to ensure permitted operations do not have unacceptable adverse impacts on increased flood risk and impacts on the flow and quantity of surface and groundwater (Paragraph 143).</p>

NPSNN

Applications for schemes in the following locations should be accompanied by a FRA: Flood Zones 2 and 3, medium and high probability of river and sea Flooding, and Flood Zone 1 (low probability of river and sea flooding) for projects of 1Ha or greater; projects which may be subject to other sources of flooding (local watercourses, surface water, groundwater or reservoirs), or where the Environment Agency has notified the local planning authority that there are critical drainage problems. For projects which may be affected by, or may add to flood risk, sufficiently early pre-application discussions should be sought between the applicant and the Environment Agency, and, where relevant, other flood risk management bodies such as lead local flood authorities, Internal Drainage Boards, sewerage undertakers, highways authorities and reservoir owners and operators (Paragraph 5.96). Surface water flood issues also need to be understood and then taken account of (Paragraph 5.97).

Physical Environment

- One Water Framework surface watercourse is located within 500m of the proposed Scheme, then East Stour River (EA WB ID:GB107040019640);
- Two tertiary rivers (ordinary watercourses), which are both culverted underneath the M20, would be located within the Scheme footprint. These watercourses both flow into the East Stour River, which runs approximately 100m to the west of the proposed Scheme;
- Approximately 10 ponds have been identified within 500m, additionally one amenity lake waterbody (DRN ID: eaew1000000726270) would be located within the proposed Scheme extents;
- One attenuation pond has been identified within the vicinity of the proposed Scheme, approximately 10m west (Asset reference TR1137_7264a on the HADDMS site);
- The proposed overbridge would pass over Flood Zone 2 and 3 areas, which are both located to the south-western extremities of the Scheme. The remaining Scheme area is located in a Flood Zone 1 area. Several pockets of land situated within the proposed Scheme area would also be at risk from surface water flooding; and,
- The proposed Scheme would not be located within a groundwater source protection zone; however the entirety of the Scheme would be located within a surface water nitrate vulnerable zone.

People & Communities

National & Highways England policy

NPPF

The government is committed to ensuring that the planning system does everything it can to support sustainable economic growth (Paragraph 19). Planning decisions should guard against the unnecessary loss of valued facilities and services, particularly where this would reduce the community's ability to meet its day-to-day needs (Paragraph 70), whilst protection and enhancement of Public Rights of Way (PRoW) and access and seeking opportunities to provide better facilities for users, for example by adding links to existing rights of way networks should be sought by the applicant (Paragraph 75).

NPSNN

For the development of the national road networks to be sustainable they should be designed to minimise social and environmental impacts to improve quality of life (Paragraphs 3.2/3). The Government expects

applicants to avoid and mitigate environmental and social impacts in line with the principles set out in the NPPF and the Government's planning guidance. Evidence should be provided by applicants, demonstrating that reasonable opportunities have been considered to deliver environmental and social benefits as part of schemes. Existing open space should not be developed unless the land is surplus to requirements or the loss would be replaced by equivalent or better provision in terms of quantity and quality in a suitable location. PRoWs, National Trails, and other rights of access to land (e.g. open access land) are important recreational facilities for walkers, cyclists and equestrians (Paragraph 1.84). Applicants should consider appropriate mitigation measures to address adverse effects on coastal access, National Trails, other PRoWs and open access land and, where appropriate, to consider what opportunities there may be to improve access.

Physical Environment

- Gibbins Brook Registered Common Land is located 70m to the west of the proposed Scheme;
- Local communities comprising Limpne, Westenhanger, Stanford, Sellindge, Moorstock and Barrowhill are present within the vicinity of the proposed Scheme;
- Approximately 200 residential properties, which includes several farms are located within 500m of the Scheme;
- Six PRoWs have been identified within the Scheme extents through the Kent County Council website, which comprise five footpaths (HE269, HE270, HE272, HE273, HE357) and one bridleway (HE271);
- No cycle ways are located within the Scheme extents; and,
- The primary land use which is exercised within the Scheme footprint and surrounding area is as arable land used for agricultural purposes, although the presence of the M20 and channel tunnel rail link to the southern extents of the proposed Scheme are notable.

Geology, Soils & Materials

National & Highways England policy

NPPF

The planning system should contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes, geological conservation interest and soils (Paragraph 109), whilst local planning authorities should consider the benefits (such as economic) of the best and most versatile land (Paragraph 112). Where significant development is demonstrated to be necessary, local planning authorities should seek to use areas of poorer quality land in preference to that of higher quality. Through preparing local plans, local planning authorities should set out environmental planning criteria against which planning applications will be assessed to ensure permitted operations do not have unacceptable adverse impacts on differential settlement of quarry backfill, mining subsidence and migration of contamination from the site (Paragraph 143).

NPSNN

Where necessary, land stability should be considered in respect of new development, as set out in the NPPF and supporting planning guidance (Paragraph 5.117). Specifically, proposals should be appropriate for the location, including preventing unacceptable risks from land instability. The decision maker should take into account the economic and other benefits of the best and most versatile agricultural land (Paragraph

	5.176).
	<p><i>Physical Environment</i></p> <ul style="list-style-type: none"> • No previous pollution incidents have been identified within the Scheme extents; • No Regionally Important Geological Sites or Geological SSSIs are located within the vicinity of the Scheme; and, • No historic or authorised landfills are located within the Scheme extents; the closest historic landfill is located approximately 280m north of the proposed Scheme.

Preliminary Risk Assessment

A Red, Amber Green rating system has been applied for this Scheme to determine the nature and severity of likely environmental risks. The rating takes into account potential delays to the programme.

RAG rating	Description
Red	Policy conflicts and environmental constraints that cannot be addressed using established and readily deliverable design solutions or mitigation thereby posing a threat to scheme delivery.
Amber	Policy conflicts and environmental constraints that, whilst potentially significant, can likely be resolved / mitigated with potential implications for program and budget.
Green	Policy compliant and environmental constraints that can likely be resolved / mitigated within program and budget.

	Environmental risks / opportunities	RAG rating
<i>Air Quality</i>	<p><i>Physical Environment</i></p> <p>AQMA's, international designated ecological sites and PCM Model links for NO₂ and particulates exceeding 40µg/m³ are not located within the vicinity of the Scheme which would pose a low risk to national policy during the construction and operation phases. There is potential for the Scheme to produce construction dust, which could subsequently lead to the deterioration and/ or loss of vegetation and habitat which make up the qualifying features of Gibbin's Brook SSSI and for local communities. To mitigate this, the strict implementation of a Construction Environmental Management Plan (CEMP) during works would minimise the likelihood of worsening air quality and producing excessive amounts of dust for sensitive receptors situated within 200m of the Scheme during the construction period.</p> <p>Once in operation, there is potential for the proposed Scheme to permanently alter air quality at each sensitive receptor (both residential and Gibbins Brook SSSI) as a result of new traffic flows brought closer to receptors. However, at this stage, it is still not clear whether the</p>	Amber

	Environmental risks / opportunities	RAG rating
	<p>parking area for HGV's (the Scheme) would be used regularly, and consequently, DMRB criteria may not be applicable for this proposed Scheme, if the Scheme is subject to only occasional use. On balance, the Scheme presents a moderate risk to the Scheme programme and budget, with the potential requirement for appropriate mitigation measures.</p> <p><i>Opportunities/ Enhancements</i></p> <ul style="list-style-type: none"> Operational monitoring of local air quality. <p><i>Risks/ Requirements</i></p> <ul style="list-style-type: none"> Further information regarding traffic data would be required if the DMRB screening criteria is applicable to determine the impact of the proposed Scheme and access road on nearby sensitive receptors; and, 	Amber
Cultural Heritage	<p>Physical Environment</p> <p>There is a low risk for above ground heritage assets (SAMs, Listed Buildings etc.) to be directly harmed by the proposed Scheme. However, there is potential for the setting of above ground heritage assets (including one SAM and two Grade I Listed Buildings which both cover the same spatial expanse, and numerous Grade II Listed Buildings) to be temporarily and permanently altered by the proposed Scheme, particularly after consideration is given to the varied topography of the local area. This would conflict with national policy. For instance, there is a risk of the Scheme detrimentally affecting the setting of Westenhanger Castle SAM; although in this case additional consideration would be given to the context of the local area, with the existing channel tunnel rail link, M20 and associated infrastructure all present.</p> <p>A wide compilation of known archaeological finds have been uncovered within the vicinity of the Scheme which cover the past 7000 years, from a Mesolithic unretouched blade or flake found in Westenhanger to numerous second world war pillboxes and a battery. Subsequently there is a moderate risk of extensive, high quality archaeological finds being uncovered by the proposed Scheme, and the implementation of trial pits prior to works as well as an archaeological watching brief would be required to ensure that risks associated with archaeological remains (such as damage) are minimised. The moderate risk of below ground archaeological remnants being uncovered has potential to have implications for the programme and Scheme budget.</p> <p><i>Opportunities/ Enhancements</i></p> <ul style="list-style-type: none"> Trial pits/ archaeological excavations to be completed outside of the Scheme extents; and, Improving the setting of above ground heritage receptors within the vicinity of the Scheme, through the provision of new screening. <p><i>Risks/ Requirements</i></p> <ul style="list-style-type: none"> Programme risks from archaeology due to the likelihood 	Amber

	Environmental risks / opportunities	RAG rating
	<p>of finding an array of archaeological remains on the site. We would commence archaeological surveys immediately in order to understand any programme risks from archaeological investigations.</p> <ul style="list-style-type: none"> • There will need to be evaluation (trial trenching and geophysics) undertaken as part of the EIA (or planning application). This may be undertaken during the determination period of the application; • Archaeological excavation in advance of and/or during construction. This process will need to be started immediately and will need to be carefully managed; • Possible setting issues with Westenhanger Castle SAM, (risk of planning refusal). A carefully considered landscape design would reduce the risk of any Scheme implications to the setting of nearby SAM's and Listed Buildings; and, • Desk-based assessment in conjunction with aerial photographic assessment and geophysical survey to understand the archaeological baseline. 	
Landscape	<p><i>Physical Environment</i></p> <p>The proposed Scheme is likely to be visible from Kent Downs AONB and as such, there is a risk of the Scheme resulting in temporary and permanent changes to key views and landscape character. There is also a risk of other historical features which complement the local historic landscape, such as Westenhanger Castle SAM and numerous Listed Buildings (comprising several farms and cottages which together contribute to the rural character locally) to be temporarily and permanently affected in terms of visual amenity and landscape character. Temporary and long term changes to views from visual receptors (such as PRow's and residential properties) also present a risk to the Scheme. During construction, changes can be mitigated and minimised on some level through the application of replanting, visual screens and the implementation of an integrated engineering and environmental design solution. However, the permanent removal of vegetation (including trees and hedgerows) and permanent presence of above ground infrastructure (which would include lighting and a new overbridge over the M20), along with the transformation in use of land from agricultural to pavement has the potential to detrimentally alter the landscape character. Overall given the sensitivity of the local landscape within the vicinity of the Scheme and the likelihood for a thorough landscaping strategy to be required, there is a moderate risk to the Scheme budget.</p> <p><i>Opportunities/ Enhancements</i></p> <ul style="list-style-type: none"> • Provision of new screening for residential receptors; and, • Replanting of landscape receptors (i.e. hedgerows and trees) on a net gain basis and outside of the Scheme extents. <p><i>Risks/ Requirements</i></p>	Amber

	Environmental risks / opportunities	RAG rating
	<ul style="list-style-type: none"> • Retain areas of woodland and hedgerows to maintain the landscape character and ensure that once the 'parking' is removed that the landscape structure remains intact; • Review the possibility of using temporary plastic interlocking surfacing to avoid the removal of topsoil and reduce the visual impact when the parking areas are empty; • Avoid areas of steeper topography so that earthworks are avoided and drainage is maintained; • Break up the parking areas to reduce the overall visual intrusion and utilise the existing woodland blocks to screen the areas from the AONB; • Access to PRowS in the vicinity of the site to conduct the site survey. Ideally this would be done in winter. However, given the likely time constraints summer surveys can be done to progress the reporting and winter photography captured later in the programme – the photomontages again would ideally be captured under winter conditions if the programme allows; • Early discussions with the AONB and Planning Officers to define the most sensitive viewpoints; • Define requirement for any photomontages with the AONB and Planning Officers – will be required to illustrate the effects of the scheme especially in the AONB; • If photomontages are required then the team will need a 3D CAD layout of the proposed site/works in reasonable time period to develop and render the photomontages; and, • 	
<p><i>Nature Conservation</i></p>	<p><i>Physical Environment</i></p> <p>No Natura 2000 sites are located within 2km of the Scheme, although two national ecological designations and one SNCI are located within 1km of the proposed Scheme. The proposed Scheme would require habitat removal and also be likely to require works within an amenity lake and ordinary watercourse; these Scheme outputs would result in temporary disturbances to protected species, of which dormice, bats, badgers, reptiles, GCN, birds, otters, and water voles, may be present based upon existing records, aerial photographs and habitat suitability.</p> <p>Therefore, protected species surveys would be required and if confirmed, there is a potential risk of delays to the programme and the requirement for works to progress under a derogation licence from Natural England, with appropriate mitigation measures in place. Protected species surveys would be progressed at the earliest opportunity, so that the presence of specific species and the associated mitigation requirements can be fully integrated into the Scheme design and can be adequately managed in terms of budget and programme. However, season constraints</p>	<p>Amber</p>

	Environmental risks / opportunities	RAG rating
	<p>could result in a lack of survey data which presents a risk of Natural England rejecting the protected species license (s) required.</p> <p>Maintaining important habitats corridors and enhancement would also be necessary to minimise the risk of an offence with respect to each individual protected species and habitat present and to ensure that the Scheme results in a net biodiversity gain; which would be in line with Highways England’s new biodiversity plan (Highways England, 2015). Careful consideration of the existing habitat which would be affected and early discussion with Planning Officers is a priority task. Given that the habitat is suitable for numerous protected species and the close proximity of the Scheme to a national ecological designation, there is a moderate risk of the Scheme budget and programme being affected</p> <p><i>Opportunities/ Enhancements</i></p> <ul style="list-style-type: none"> • Creation of new BAP habitats (including large scale woodland habitat) suitable for protected species, within and outside the Scheme extents; • Operational monitoring for protected species; and, • Improving protected species habitats outside of the Scheme area and providing nesting boxes for birds, bats etc. <p><i>Risks/ Requirements</i></p> <ul style="list-style-type: none"> • Should dormice be found to be present removal of dormouse habitat would need to take place under Natural England Licence during May or September. Where a large area of dormouse habitat has to be removed in a single season, translocation of the resident population is the only option, but a suitable recipient site must be identified in advance. Releasing translocated dormice into sites with existing populations is unlikely to be acceptable to the licensing authorities; • To determine the use of the site by bats, activity surveys and roost emergence re-entry surveys should be carried out in line with best practice guidelines. Emergence/ re-entry surveys of any trees with features suitable for roosting bats should be carried out (including rot holes, fissures, woodpecker holes and flaking bark), and activity surveys should be carried out focussing on potential commuting and foraging areas within the proposed development site; • The individual trees situated within the Scheme extents would need to be assessed for bat roost suitability and climbed to further investigate potential with an endoscope by a licenced ecologist. Up to 3 surveys may then be required on trees with bat roost potential to be carried out between May and September inclusive. Removal of any trees with a confirmed bat roost would have to take place under licence from Natural England; • To determine the use of the site by great crested newts one survey visit is required to assess ponds for potential 	

	Environmental risks / opportunities	RAG rating
	<p>to support breeding GCN. Four surveys will then be required of suitable ponds between mid-March and mid-June. If presence is confirmed, a further two visits will be required before mid-June to carry out a population class estimate. Should GCN be found on site a suitable receptor site would have to be located and a translocation under Natural England licence with an effort of up to 90 days would be required to ensure all GCN in the site had been removed prior to construction. Like for like habitat replacement would be required and any replacement habitat may need time to establish before moving any GCN into the receptor site;</p> <ul style="list-style-type: none"> • Should reptiles be found on site a suitable receptor site would have to be located and a translocation under licence with an effort of up to 90 days would be required to ensure all reptiles in the site had been removed prior to construction. Like for like habitat replacement would be required and any replacement habitat may need time to establish before moving any reptiles into the receptor site; • Sett closures/ exclusion for 21 days are only permitted in between July and November inclusive and a closure of a main sett under Natural England Licence would be predicated on the provision of a new setts; and • 	Yellow
Noise and Vibration	<p><i>Physical Environment</i></p> <p>Although the predominant source of noise locally is traffic using the M20, there are sensitive receptors located within close proximity of the proposed Scheme, and it is likely that noise, and possibly vibration associated with construction of the Scheme would be perceptible. This would be controlled by adherence to the Construction Environmental Management Plan (CEMP) which would include measures to minimise noise and vibration during construction, such as the timing of works, careful choice of plant and temporary screening of works (through the application of temporary acoustic barriers) where necessary. In addition, noise and vibration monitoring during construction would ensure levels are kept to within those to be specified in Appendix 1/9 of the Contract Document “Control of Noise and Vibration”. Provided that these measures are put in place, then there is a low risk of construction noise and vibration affecting the delivery of the Scheme.</p> <p>In operational terms, there is a low risk of traffic flows on the M20 changing considerably enough as a result of the Scheme for noise levels to noticeably change. However, there is a risk of noticeable changes in noise levels at residential receptors directly adjacent to the Scheme itself and it is therefore likely that mitigation would need to be incorporated into the Scheme design which could be costly. This may take the form of acoustic barriers at discrete sections of the scheme boundary. Operational noise</p>	Green

	Environmental risks / opportunities	RAG rating
	<p>monitoring may also form part of the mitigation measures given the fact that the nature, duration and times of use may change. However, noise constraints pose a low risk to the Scheme delivery, programme and budget; provided that suitable assessment is undertaken and appropriate mitigation measures are put in place.</p> <p><i>Opportunities/ Enhancements</i></p> <ul style="list-style-type: none"> • Construction and operational noise monitoring. <p><i>Risks/ Requirements</i></p> <ul style="list-style-type: none"> • Baseline monitoring should be set up at the earliest opportunity. 	<p style="background-color: green; color: white; text-align: center;">Green</p>
<p>Road Drainage and Water Environment</p>	<p><i>Physical Environment</i></p> <p>Numerous Watercourses and bodies are located within the vicinity of the proposed Scheme, including one amenity lake and two ordinary watercourses within the Scheme footprint and therefore there is a moderate risk of the water environment being affected by resultant pollution pathways. The production of a CEMP would minimise risks during construction which would ensure best practice and EA Pollution Prevention Guidelines are followed. Flood zones 2 and 3 are not present within the potential Scheme along with no WFD watercourses being located within 500m of the Scheme. However, the Scheme would greatly increase the impermeable area, due a large area of pavement, which would poses a moderate risk of flooding locally and therefore compensatory flood storage areas may be required to manage and minimise this risk.</p> <p>The entirety of the proposed Scheme would be located within a surface water nitrate vulnerable zone. However, there is a low risk of pollution to these below surface designations being affected by excavations during construction or the operational Scheme.</p> <p>The proposed Scheme would require a new drainage system which could alter baseline local water and drainage environment conditions, through an increase in the concentration of pollutants entering the water environment as a result of the large number of HGVs and therefore suitable mitigation such as balancing ponds and the use of Suds (where possible) would be required to manage this potential issue. Given potential flood and contamination risks associated with the Scheme, an overall moderate risk to the water and drainage environment is anticipated with potential delays to the programme and further work required.</p> <p><i>Opportunities/ Enhancements</i></p> <ul style="list-style-type: none"> • Installation of new attenuation ponds to manage flood risk and improve water quality locally; and, • SUDs incorporated within the Scheme design. <p><i>Risks/ Requirements</i></p> <ul style="list-style-type: none"> • Potential increase in flood risk if surface water is not adequately attenuated. A FRA would be required for this 	<p style="background-color: yellow; color: black; text-align: center;">Amber</p>

	Environmental risks / opportunities	RAG rating
	<p>Scheme;</p> <ul style="list-style-type: none"> Potential risks to the WFD status of the East Stour River (which currently holds a moderate status). A WFD assessment would be required to fully assess any implications of the Scheme on the East Stour River. 	
<p><i>People and Communities</i></p>	<p><i>Physical Environment</i></p> <p>The proposed Scheme would require both the temporary and permanent acquisition of agricultural land and the installation of the Scheme on top of an amenity lake, which would pose a risk to the Scheme budget due to compensatory mitigation, although early engagement with landowners would minimise these risks. No community facilities are likely to be severed by the proposed Scheme. There is potential for numerous PRoWs to be permanently stopped by the Scheme. However, the incorporation of new PRoWs, crossings and potentially cycleways into the Scheme design would minimise these risks and would potentially improve access to/ from the wider area. Temporary disruption for people and local communities during construction would be managed through a Traffic Management Plan and Communication Strategy. The proposed Scheme would greatly improve disruption to the wider area resulting from the parking of HGV's on the M20. Therefore, on balance there is a low risk of people and communities constraints affecting the Scheme's programme and delivery.</p> <p><i>Opportunities/ Enhancements</i></p> <ul style="list-style-type: none"> Creation of new PRoWs, cycleways, NMU crossings (perhaps new pedestrian bridges over the M20); Incorporation of new community services into the Scheme design; and, Creation of new 'green spaces' or trails <p><i>Risks/ Requirements</i></p> <ul style="list-style-type: none"> Liaison with stakeholders (including affected landowners) at the earliest possible opportunity. 	<p>Green</p>
<p><i>Geology and Soils</i></p>	<p><i>Physical Environment</i></p> <p>The proposed Scheme would result in the loss of a portion of agricultural land, which has potential to be the Best and Most Versatile (BMV), Grade II agricultural land classification, according to provisional MAFF maps (1976). There is a risk of the Scheme compromising the viability of farms within the proposed Scheme footprint. However, this risk could be managed through the Compulsory Purchase Order (CPO) process or through the provision of an alternative pocket of land, subject to discussions with relevant landowners. There is a low risk of contaminated land being present within the proposed Scheme extents, with no previous pollution incidents records identified within the Scheme footprint. However, the Scheme would require the movement and disposal of a reasonably large amount of soil and subsequently, the strict implementation of a CEMP would be required to control potential contamination pathways and ensure any contamination risks (such as</p>	<p>Amber</p>

	Environmental risks / opportunities	RAG rating
	<p>health and safety, pollution of watercourses present within the Scheme footprint and subsurface aquifers) are appropriately managed and minimised. Soil removal should conform with the waste hierarchy and a reduction in waste should be considered. Given the scale of soil disturbance required, there is a moderate risk of soils affecting the Scheme programme and budget.</p> <p><i>Opportunities/ Enhancements</i></p> <ul style="list-style-type: none"> • Remediation of Land during and post works. 	