M3 Junction 9 Improvement

Scheme Number: TR010055

7.3 First Iteration Environmental Management Plan (Rev 5) Clean

APFP Regulation 5(2)(q)

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7.3 FIRST ITERATION ENVIRONMENTAL MANAGEMENT PLAN

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Rev 3	17 July 2023	Deadline 3 Submission

Rev 4	18 August 2023	Deadline 4 Submission
Rev 5	22 September 2023	Deadline 5 Submission

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1 Introduction and background

1.1 Purpose of this report

1.1.1 This document is the design stage or first iteration Environmental Management Plan (fiEMP) for the M3 Junction 9 Improvement Scheme (hereafter referred to as the 'Scheme'). Powers to construct, operate and maintain the Scheme are being sought by National Highways through an application for a Development Consent Order (DCO). A **draft DCO** is available as part of the application **(Document Reference 3.1)**.

1.1.2 An Environmental Impact Assessment (EIA) has been undertaken for the Scheme and an **Environmental Statement (ES) (Document Reference 6.1)** has been prepared in accordance with the *Infrastructure Planning (Environmental Impact Assessment) Regulations 2017* (the 'EIA Regulations'). In accordance with the requirements of the EIA Regulations, the **ES (Document Reference 6.1)** contains an assessment of the likely significant effects on the environment that may be caused during construction, operation and maintenance of the Scheme and describes proposed mitigation measures.

1.1.3 This fiEMP is based on the Scheme at the design stage. It has been prepared in accordance with the National Highway's Design Manual for Roads and Bridges (DMRB), *DMRB LA 120 Environmental Management Plans* (Highways England, 2020). In accordance with *DMRB LA 104 Environmental Assessment and Monitoring* (Highways England, 2020), the results of monitoring will be used to update the EMP during construction and handover stages.

1.1.4 This fiEMP has been produced at an appropriate and proportionate level of detail for the design stage. The fiEMP will be developed into the second iteration EMP (siEMP), a more detailed EMP by the Principal Contractor once the Scheme detailed design has been finalised, subject to the DCO being granted and will be submitted to the Secretary of State (SoS) to discharge Requirement 3 within the **draft DCO (Document Reference 3.1)**. The siEMP will be used on site to manage environmental measures and commitments. Prior to construction being completed the siEMP will be developed into a third iteration of the EMP (tiEMP) to support future management and operation of the Scheme. The Scheme will then be operated and maintained in accordance with the tiEMP issued at the end of construction. **Table 1.1** provides a summary.

Table 1.1: Summary of stages of the Environmental Management Plan

Project Stage	Iteration	Produced / refined
Design	The fiEMP (previously called the Outline EMP) is produced during the design stage of the Scheme.	Produced

Project Stage	Iteration	Produced / refined
Construction (refined for the consented Scheme)	The siEMP (previously called the construction EMP) is refined during the construction stage for the consented Scheme in advance of construction and submitted to discharge DCO Requirement 3.	Refined
End of construction	The tiEMP (previously called the handover EMP or HEMP) is based on the siEMP and prepared at the end of the construction stage to support the future management and operation of the Scheme.	Refined

1.1.5 The predicted environmental effects of the Scheme are identified in the **ES (Document Reference 6.1)**, and the related actions and mitigation measures are listed in **Section 3 (Register of Environmental Actions and Commitments) (REAC)** and contained in and **Table 3.2** of this document; these have formed the basis of this fiEMP.

1.1.6 This fiEMP provides details of how the environmental effects of the Scheme will be managed during construction and operation by:

- Ensuring all identified actions and mitigation measures identified in the **ES (Document Reference 6.1)** contained in the REAC are implemented
- Ensuring relevant DCO Requirements are adhered to
- Ensuring compliance with environmental legislation
- Ensuring good practice measures are implemented
- Measures within this fiEMP include design, pre-construction, construction and operational mitigation. Required monitoring and enhancement opportunities are also captured within this fiEMP.

1.1.7 Measures within this fiEMP include design, pre-construction, construction and operational mitigation. Required monitoring and enhancement opportunities are also captured within this fiEMP.

1.2 Scheme location and description

Scheme location

1.2.1 The Scheme is located within the planning authority boundaries of Winchester City Council and Hampshire County Council. It also lies partially within the South

Downs National Park Authority. The Application Boundary and surrounding area are shown on **Appendix A** of this report.

1.2.2 The existing M3 Junction 9 is a grade separated, partially signalised gyratory roundabout connecting multiple nationally and locally significant routes. The M3 is joined with the A34 towards Newbury and Salisbury, A272 towards Petersfield and southern Winchester, and Easton Lane towards Winnall and northern Winchester. Approximately 1 kilometre (km) north of the roundabout, the A33 from Basingstoke connects with the A34, and approximately 1km south of the roundabout the A31 from Alton connects to the A272.

1.2.3 The surrounding area is primarily urban to the west of the M3 and primarily rural to the east. There are large concentrations of residential receptors close to the A34 to the north of the Application Boundary (in Headbourne Worthy, Kings Worthy and Abbots Worthy) and close to the M3 to the south of the Application Boundary (on the eastern fringe of Winchester). A small number of isolated farm holdings or rural dwellings lie to the east and south-east of the Application Boundary. There are a small number of schools and education facilities, including St Swithun's School north of the B3404 and east of the M3, Winnall primary school and Stepping Stones pre-school to the south-west of the Junction.

1.2.4 Immediately west of the Application Boundary, there is an area of commercial development. This includes Sun Valley Business Park, Tesco, Winnall Industrial Estate and Scylla Industrial Estate. Wykeham Trade Park and National Highway's maintenance depot are located to the north-west of Junction 9.

1.2.5 The South Downs National Park is a nationally designated area within and adjacent to the Application Boundary to the north, east, south and in some areas, the west. The special qualities of the South Downs National Park include diverse, inspirational and breath-taking views; a rich variety of wildlife and habitats including rare and internationally important species; tranquil and unspoilt places; and environment shaped by centuries of farming and embracing new enterprise; great opportunities for recreational activities and learning experiences; well-conserved historical features and a rich cultural heritage; and distinctive towns and villages, and communities with real pride in their area. The western extent of the wider South Downs National Park boundary is shown on **Appendix A** of this report.

1.2.6 The River Itchen Special Area of Conservation (SAC), a European designated site, is located (in part) beneath the existing alignment of the existing A34, the A33 and the M3. The River Itchen SAC is designated for its riverine habitats and species which it supports including southern damselfly, *Coenagrion mercurial*, bullhead *Cottus gobio*, white-clawed crayfish *Austropotamobius pallipes*, brook lamprey *Lampetra planeri*, Atlantic salmon *Salmo salar*, and otter *Lutra lutra*.

1.2.7 The River Itchen is also a Site of Special Scientific Interest (SSSI), a nationally designated site, primarily due to the complex mosaic of habitats found within the riparian zone including the chalk stream and associated fen meadow, flood pasture and swamp habitats which support species such as otter, water vole

Arvicola amphibius, and white-clawed crayfish. Unlike the SAC, the SSSI designation also includes some of the habitats adjacent to the river channel.

1.2.8 St Catherine's Hill SSSI is located approximately 500m south of the Application Boundary. This SSSI is designated for chalk grassland and associated habitats. Cheesefoot Head SSSI is located approximately 2km east of the Application Boundary. This SSSI is designated for chalk grassland and a colony of the Duke of Burgundy *Hamearis lucina* butterfly. The statutory designated sites are shown on **Appendix A** of this report.

1.2.9 The Winnall Moors Nature Reserve is located to the west of the Scheme, and west of the Winnall Industrial Estate. At its northern extent, the reserve boundary lies parallel to the Application Boundary along the existing alignment of the A34, however the Nature Reserve boundary does not interact with the Application Boundary.

1.2.10 Two Groundwater Source Protection Zones (SPZ) lie within the northern extent of land within the Application Boundary. They are classified as Groundwater SPZ 1 (inner zone) and SPZ 2 (outer zone).

Scheme description

1.2.11 The improvements proposed as part of the Scheme both maintain existing connectivity on the road network, whilst providing enhanced capacity, simplifying routing, improved facilities for walkers, cyclists and horse-riders and landscaping enhancements. The Scheme would provide new free flow links between the M3 and A34, as well as a dedicated new A33 alignment. The Scheme elements are as follows:

- Widening of the M3 from a dual two-lane motorway (two-lane motorway with hard shoulders) to a four-lane motorway (with hard shoulders) between the proposed M3 Junction 9 gyratory north and south slip roads.
- A new smaller grade separated gyratory roundabout arrangement within the footprint of the existing roundabout, incorporating new connections over the M3 with improved walking, cycling and horse-riding routes.
- Connector roads from and to the new gyratory roundabout.
- Improved slip roads to/from the M3.
- New structures (in the form of gyratory bridges, underpasses, retaining walls, subway and a new cycle and footbridge over the River Itchen).
- A new surface water runoff system with associated drainage and infiltration features.
- New signage and gantries.
- Utility diversions.

- New lighting (subways, underpasses and gantries).
- Modifications to topography through cuttings and false cuttings as well as re-profiling of existing landform.
- New walking, cycling and horse-riding provision.
- Creation of new areas of chalk grassland, woodland, scrub planting and species rich grassland.

1.2.12 The Application Boundary covers an area of approximately 109 hectares (ha). This includes the proposed land required for gantries, signage, temporary construction compound areas, areas for environmental mitigation, areas for drainage requirements (some of which would be temporary) and traffic management.

1.2.13 The Scheme includes a package of environmental mitigation and enhancement measures to reduce the impacts from the Scheme to the environment where possible. Consideration has also been given to the enhancement of the South Downs National Park where reasonably practicable.

1.2.14 Bridleways, footpaths and cycleways have been designed to allow all gradients to be less than 1:20 to comply with Department for Transport's (DfT) inclusive mobility impaired users. Also, the walking, cycling and horse-riding routes are designed for cyclists, and therefore all horizontal radii are suited for cyclists. They are also considered acceptable for mobility impaired users. The range of opportunities and barriers to all forms of movements have been given due consideration in the design of the Scheme.

1.2.15 A number of new structures are required to be both constructed and demolished to facilitate the Scheme. Some of the main structures are as follows:

- The existing bridges at the M3 Junction 9 gyratory roundabout are proposed to be demolished and replaced by the two new bridge structures carrying the new gyratory.
- A new underpass is proposed to carry the A34 southbound under the new A33 link road and the existing M3. The A34 northbound underpass would carry the new A34 northbound over the new A33 link.
- The existing subways (Winnall Subway East and Winnall Subway West) located under the existing gyratory are proposed to be demolished to facilitate the construction of the reconfigured roundabout. New subways are proposed along the proposed footpath and cycle path route.
- A new bridge to accommodate the footpath and cycle path over the River Itchen is proposed between the existing Itchen Bridge, (which carries the A34 northbound carriageway), and the existing Kings Worthy Bridge would carry the A33 north and southbound carriageways and the A34 southbound carriageway, respectively.

1.2.16 The walking, cycling and horse-riding facilities around and within the Scheme are to be upgraded. This includes an improvement to the National Cycle Network (NCN) Route 23. An additional footpath, cyclepath and bridleway is proposed on the eastern side of the Scheme to link Easton Lane with Long Walk. Such a route would provide a circular leisure path for those using the South Downs National Park with a link to the other paths around Long Walk with their links to local villages. A new combined footpath and cyclepath for the western side of the Scheme is proposed to link the A33 / B3047 Junction to Winnall Industrial Estate situated on Easton Lane.

1.2.17 A detailed description of the Scheme and details of the embedded mitigation measures are provided in **Chapter 2 (The Scheme and its Surroundings)** of the **ES (Document Reference 6.1)**.

1.3 Programme

1.3.1 If the DCO is granted by the Secretary of State for Transport, construction is expected to start in late 2024 and the Scheme is expected to be open to traffic in winter 2027.

1.3.2 A detailed construction programme will be finalised by the contactor in advance of the works. The siEMP will include a detailed programme of the construction phase.

1.4 Background and need for the Scheme

1.4.1 Hampshire County Council identified in 2013 that infrastructure improvements were necessary to reduce congestion levels and assist with the strategic movement of traffic at Junction 9 of the M3, a key arterial intersection with the A34, to make sure that traffic congestion and increased journey times do not compromise the scale of potential future economic growth in the sub-region (Hampshire County Council, 2013).

1.4.2 To address this, the improvement to M3 Junction 9 was included in the Department for Transport's *Road Investment Strategy* (RIS). The improvement contributes to national transport objectives by:

- Providing additional capacity
- Enhancing journey time reliability
- Supporting the development of housing and the creation of jobs, as set out in the existing and emerging Local Plans

1.4.3 The Scheme is included in the *Solent to Midlands Route Strategy* (Highways England, 2017), which identifies the M3 Junction 9 improvement as a major improvement project as part of this route upgrade. Within this, Junction 9 of the M3 is specifically highlighted as being a location where there is a substantial barrier to connectivity in relation to the South Downs National Park and Walking, Cycling Horse-riding provision. Additionally, the Scheme is identified and

committed to under RIS 2 within the *Road Investment Strategy 2: 2020-2025*, Department for Transport (2020).

1.4.4 The latest available collision data combined with collision data outlined in the Scheme Assessment Report (Highways England, 2018) identified that of 82 accidents identified while the report was being drafted, approximately 50% of accidents were on or on the approach to the Junction 9 roundabout. The remaining 50% were on the M3 slip roads or on the main line of the M3 and the A34.

1.4.5 Upgrading Junction 9 of the M3 will help improve safety, improve the capacity of the road network in this location by reducing delays and congestion which in turn will improve journey time reliability. Combined, these elements will support local growth in the area as established through requirements of local policy. This will bring significant benefits for road users, local communities and local businesses.

1.4.6 As previously noted, the South Downs National Park is a sensitive landscape receptor within which the Scheme is partially located. In view of its special landscape character, there is a clear need to balance the economic, social and safety benefits of an improved junction against the potentially adverse environmental impacts. The sensitivity of the South Downs National Park, and consultation with the South Downs National Park Authority has been a key factor in the evolution of the Scheme, with particular regard to the profile design of the eastern section of land within the Application Boundary as it rises up the escarpment within the South Downs National Park. Further detail is provided in **Chapter 3 (Assessment of Alternatives)** of the **ES (Document Reference 6.1)**.

1.4.7 By providing an unconstrained link on the A34 – M3 southbound and M3 northbound to A34, vehicles will not be required to manoeuvre through a priority or signal-controlled junction. This seeks to reduce congestion and improve journey time reliability on the M3, A34 and local road network.

1.4.8 The design of the Scheme takes into account National Highway's 10 principles of good design, published in '*The Road to Good Design'* (Highways England, 2018) and *'People, places and processes: A guide to good design at National Highways'* (National Highways, 2022) to support its aspirations for a network that responds better to both people and places through improved design processes. These promote environmentally sustainable design that fits in context, whilst making roads safe, useful, and understandable.

1.4.9 The design also considers the ten design principles within *A Design-led Approach to Infrastructure* (Commission for Architecture and the Built Environment (CABE), 2012). CABE design principle 10 Visitor Centre has not been considered further as it is not relevant to this Scheme.

1.4.10 The development of the Scheme has considered the feedback received during both the 2019 and 2021 statutory consultation exercises and targeted

consultation in 2021, as well as ongoing assessment work to produce a design which has been used as the basis of the application for development consent.

1.5 Scheme objectives

1.5.1 The Scheme has five strategic objectives, supported by the *National Highways Delivery Plan 2015-2020* (Highways England, 2015):

- To reduce delays at M3 Junction 9 on all links M3, A33 and A34
- Smooth the flow of traffic by improving journey time reliability and reducing delays / time lost per vehicle per mile) at M3 Junction 9 and the exit and entry roads for the A33 and A34
- Improve the safety for all road users and reduce the annual collision frequency and severity ratio on the M3 Junction 9
- Support economic growth and ensure the Junction can accommodate additional traffic
- Improvements for walkers, cyclists including connecting the National Cycle Network (NCN) Route 23 which is severed by the current Junction layout

1.6 Environmental control plans

1.6.1 Environmental Control Plans (ECPs) are key documents which ensure that the construction-related mitigation measures and actions set out in the REAC are successfully implemented on site. ECPs inform the works and the development of associated task-specific Risk Assessments and Method Statements (these will be included at **Appendix N** of the siEMP). It is expected that some or all of the following ECPs will be prepared / finalised, as appropriate, for the Scheme as part of the siEMP:

- Landscape and Ecological Management Plan (LEMP) **(Appendix B)** – sets out how landscape and ecological mitigation will be implemented. An **Outline Landscape and Ecological Management Plan (OLEMP)** can be found at **Appendix 7.6** of the **ES (Document Reference 6.3)**
- Soil Management Plan **(Appendix C)** – sets out measures to ensure protection, conservation and reinstatement of soil material, its physical and chemical properties and functional capacity for agricultural use. A draft can be found at **Appendix C**
- Soil Resources Plan **(Appendix D)** – sets out the areas and type of soil to be stripped, haul routes, the methods to be used, and the location, type and management of each soil stockpile to help protect and enhance soil resources on site. This plan will be prepared by the Principal Contractor during the detailed design stage and included within the siEMP
- Site Waste Management Plan (SWMP) **(Appendix E)** – provides a structured approach to minimising waste on site and waste management

during the construction of the Scheme. A draft SWMP is provided in **Appendix E**

- Materials Management Plan **(Appendix F)** – sets out the relevant regulations and approach for dealing with excavated ground materials as a result of the Scheme. A draft Materials Management Plan is provided in **Appendix F**

- Invasive Species Management Plan **(Appendix G)** – sets out how invasive species will be managed on site. This will be prepared as part of the siEMP

- Emergency Spill Response Plan **(Appendix H)** – sets out the procedures for dealing with emergency situations involving loss of containment. This plan will be prepared by the Principal Contractor during the detailed design stage and included in the siEMP

- Erosion Prevention and Sediment Control Plan **(Appendix I)** – sets out how the quantity of sediment entrained in runoff and to prevent hydromorphological changes to surface water features. This will be prepared as part of the siEMP

- Temporary (Construction) Drainage Strategy **(Appendix J)** – details the temporary drainage strategy for the Scheme. The strategy is provided at **Appendix J**

- Reptile Mitigation Strategy **(Appendix K)** – this strategy will include how / where trapping and translocation of reptiles will be undertaken, as well details of proposed habitat manipulation and displacement of reptiles. This will be prepared as part of the siEMP

- Noise and Vibration Management Plan **(Appendix L)** – outlines how construction noise and vibration will be managed throughout the construction of the Scheme including any noise limits agreed with the Environmental Health officers (EHOs). This plan will be prepared by the Principal Contractor during the detailed design stage and included within the siEMP

- Foundation Works Risk Assessment (FWRA) **(Appendix M)** - focusing on the potential hazards of piling/excavation activities on local groundwater, and the methods that might mitigate the risk of those hazards having a detrimental impact. This risk assessment will be prepared by the Principal Contractor during the detailed design stage and included within the siEMP

1.6.2 As noted above all ECPs will be developed to their full detail for the siEMP during the detailed design and construction planning phase. ECPs are live documents that are subject to updating and refinement as required changing needs of the works during construction.

1.7 Liaison with Local Planning Authorities and Statutory Bodies

1.7.1 Liaison will be required with Winchester City Council, Hampshire County Council and the South Downs National Park Authority, together with statutory bodies to ensure that the Scheme proposals and recommended mitigation measures are acceptable to the authorities and statutory bodies.

1.8 Structure of this fiEMP

1.8.1 The structure of the fiEMP is as follows:

- **Section 2: Project team roles and responsibilities**. This section defines the roles which a Principal Contractor will identify within the EMP, to deliver the environmental commitments during construction
- **Section 3: Register of Environmental Actions and Commitments (REAC)**. This section identifies the environmental commitments and mitigation to reduce the and manage the environmental effects of the Scheme
- **Section 4: Consents and permissions**. This section provides a summary of anticipated consents/permissions required to deliver the EMP during construction
- **Section 5: Environmental asset data and as built drawings**. Provides a description of submission arrangements for providing as built drawings and environmental asset data to National Highways, and a list of species surveys obtained to date
- **Section 6: Details of maintenance activities and EMP monitoring activities**. Details of maintenance and EMP monitoring activities. This section provides procedures for monitoring and reviewing compliance with the EMP and procedures for rectification of breaching or failings of EMP measures
- **Section 7: Induction, training and briefing procedures for staff**. This section provides a description of construction staff training procedures
- **Section 8: References and glossary**

2 Project team roles and responsibilities

2.1 Project management organisation

2.1.1 National Highways is responsible for overseeing management of the Scheme. National Highways will delegate some roles and responsibilities to specialist consultants to supervise, monitor or check the Principal Contractor's method statements including sensitive activities where required. The key Scheme roles for National Highways and the Principal Contractor are listed in **Table 2.1**.

Table 2.1: General site roles

Role
National Highways Project Manager
Principal Contractor Site Manager
Principal Contractor DCO Manager
Principal Contractor Environmental Manager
Principal Contractor Environmental Specialist(s)
Principal Contractor Community Liaison

2.1.2 Contact details for the individuals undertaking these roles will need be confirmed by National Highways prior to the commencement of the construction phase.

2.2 Site roles and responsibilities

2.2.1 The site-based roles and responsibilities in relation to environmental management are summarised in **Table 2.2**. The responsibilities defined in the table include those relating directly to the development and implementation of the EMP and the wider environmental responsibilities. The Principal Contractor will be required to delegate responsibilities to experienced onsite personnel within the key areas of the site. The delegation of responsibilities will be clearly identified within relevant Scheme documents and site files.

2.2.2 Individual names and contact details will need to be confirmed and inserted where applicable by National Highways and the Principal Contractor prior to construction. The Principal Contractor will establish a management structure that includes an organisational chart encompassing all staff responsible for delivery of environmental mitigation measures and will include the organisational chart within the siEMP. The organisational chart will include all roles listed in **Tables 2.1** and **2.2**.

Table 2.2: Roles and responsibilities

Roles	Responsibilities
National Highways Project Manager	To ensure that the Principal Contractor and the statutory undertakers comply with all relevant legal requirements, commitments and targets agreed for the Scheme.
Principal Contractor Site Manager	Responsible for management of the construction phase of the Scheme. Has overall responsibility for the environmental performance of the Scheme. Regular communication with National Highways and the relevant statutory environmental bodies on all environmental matters (as they arise).
Principal Contractor DCO Manager	Responsible for overseeing and maintaining the commitments register. Reporting and liaison to the local authorities. Produce and agree a process for implementing the requirements of the DCO with the local authorities. Assessing requirements of changes to the design approved by the DCO. Act as the focal contact for all DCO related queries and requests for information. Provide training and briefings to relevant staff on the implementation of the DCO. Monitor compliance with the DCO requirements. Assist in the review of design and construction methodology changes. Monitor compliances with the DCO. Liaise with the Principal Contractor Planner to enable the efficient running of the construction programme. Work with the Principal Contractor Community Liaison Manager to respond to complaints, community liaison, and stakeholder consultations as outlined in DCO.
Principal Contractor Environmental Manager	Principal Contractor Environmental Manager or the delegate shall be responsible for overseeing and maintaining the environmental components and documentation of the Scheme. Develop and review the ECPs throughout the construction period. Obtain environmental permits, licenses, and consents, as required; ensure compliance with the requirements and conditions of all relevant permits, licenses and consents. Act as the focal point of contact for all environmental issues on site and identify key environmental concerns on site as the Scheme develops. Coordination with environmental

Roles	Responsibilities
	specialists and ensure the site environmental management compliance in line with the ECPs. Ensure compliance with environmental legislation, consents, objectives, targets and other environmental commitments, including those from the ES. Audit the Principal Contractor's Site Environmental Management System and Programmes (e.g. Waste Management Plan and activities associated with onsite waste management). Audit the Principal Contractor's Environmental Management System ISO 14001:2015. Monitor compliance with the environmental requirements of the Scheme. Assist in the review of method statements. Compile applications for unexpected authorisations with assistance of the Principal Contractor Ecological Clark of Works (ECoW) if necessary. Accompany statutory authorities on site visits (with the Principal Contractor ECoW if necessary). Investigate environmental incidents. Assist with the delivery of environmental training of the workforce. Assess and check survey results and update databases, ECPs, etc with new information. Identify cost saving and best practice activities. Liaise with site supervisors, site management team and general construction workers. Liaise with relevant bodies for the application, and implementation of required consents and permits. Liaise with relevant stakeholders. Monitor environmental commitments in the EMP for compliance.
Principal Contractor Ecological Clerk of Works	Support the project team in delivering the environmental component of the works during the construction phase. Record the progress of the environmental works. Identify key environmental concerns on site as the Scheme develops. Monitor and update the Principal Contractor Environmental Manager on the progress of pre-construction surveys. Input into the Health and Safety team lead site induction on environmental practices, conduct toolbox talks, specialist surveys and oversee monitoring activities as required.

Roles	Responsibilities
	Undertake day to day monitoring and supervision of construction activities in relation to environmental aspects. Monitor environmental compliance on site. Assist in monthly formal audits with the Principal Contractor Environmental Manager. Assess and check survey results and update databases, ECPs, etc with new information. Input and review site specific method statements. Monitor dust, noise and vibration. Monitor hours of working to meet accepted environmental noise and vibration in consultation with the relevant Environmental Health Officer. Develop and liaise with Principal Contractor Health and Safety Officer management plans, such as the Emergency Spill Response Plan **(Appendix H)** (draft for incidents on site). Immediate reporting of incidents to the Safety, Health and Environmental (SHE) department. Monitor all consents and permit requirements, including local Environment Agency consents and permits. Liaise with site supervisors, site management team and general construction workers. Provide daily updates to the Principal Contractor Environmental Manager on site progress, compliance, issues, problems, successes, etc. Accompany statutory authorities on site visits (with the Principal Contractors Environmental Manager if necessary). Identify cost saving and best practice activities.
Principal Contractor Environmental Specialist(s)	The Principal Contractor will be required to appoint suitably qualified environmental specialists, such as: Contamination and remediation specialist. Waste management specialist. Ecologist to supervise works which are potentially impacting on protected species or risk identified during works. Landscape Manager to supervise planting and aftercare. Noise and vibration and air quality specialists. Archaeologists. Agricultural specialist. Arboriculture specialist.

Roles	Responsibilities
	Others, as required.
Principal Contractor Community Liaison Officer	Key liaison with all of the above and National Highway's Public Liaison Officer: − Maintain and develop Community Relations Strategy − Maintain comment and enquiries log, disseminate identified comments for response and implementation of action.

2.3 Detailed principal contractor responsibilities

Pre-construction

2.3.1 The Principal Contractor is responsible for approving the appointment of the Environmental Manager and any environmental specialists prior to any work starting on site.

2.3.2 The Principal Contractor is responsible for the following prior to construction commencing:

- Developing the fiEMP into the siEMP
- Defining roles and responsibilities for their own and their key subcontractors' personnel relating to environmental issues
- Developing an environmental training plan covering all personnel
- Developing a programme of internal and subcontractor inspections/ monitoring
- Developing Scheme-specific emergency procedures for environmental incidents (these will be outlined within **Appendix O** of the siEMP)
- Finalising and implementing a programme for works to allow all preconstruction surveys to be arranged and completed within the required timeframe
- Agreeing a non-compliance reporting procedure with National Highways to manage any environmental incidents or non-compliance events for the Scheme
- Developing the required ECPs. These will be updated as required up to construction commencement to reflect any new, relevant information provided by National Highways or other statutory consultees (e.g., further consent conditions, landowner agreements) or through design development, construction planning, pre-construction surveys etc

Construction

2.3.3 The Principal Contractor is responsible on site for delivering the commitments in the REAC, as described within the Scheme design and controlled by the EMP.

2.3.4 The Principal Contractor will implement the procedures set out in the EMP with technical advice from competent environmental specialists. They are responsible for all their subcontractors on site and for ensuring these subcontractors comply with the requirements of the EMP.

2.3.5 The Principal Contractor (VolkerFitzpatrick Limited) is responsible for monitoring compliance with legislation and that good practice is followed throughout the duration of the construction.

2.3.6 The Principal Contractor must ensure that all onsite works are adequately monitored.

2.3.7 The Risk Assessments and Method Statements (RAMS) and ECPs will be used to ensure all environmental commitments are delivered on site. The success of implementing the requirements of the RAMS, ECPs and delivery of mitigation measures relating to the Scheme will be the responsibility of the Principal Contractor.

2.3.8 Any improvements or deviations relating to environmental matters required to the RAMS and/or ECPs shall be approved by the Principal Contractor Environmental Manager and will be subject to National Highways consent where required. The Principal Contractor will provide regular feedback and information to the National Highways Project Manager and Principal Contractor Environmental Manager on the progress and success in delivering all mitigation and commitments on site.

2.3.9 The REAC will be updated to demonstrate progress to date and for environmental auditing purposes, with updates periodically sent to the relevant National Highways management personnel.

2.3.10 All site personnel will have the responsibility and authority to halt works in any activity where environmental commitments are not being successfully delivered or to prevent legal requirements from being breached.

2.3.11 All site personnel will be encouraged to draw attention to any environmental risk or potential environmental risk arising on site (for example, refuelling being carried out too close to a watercourse or working outside the agreed limits of deviation for any aspect of the works). This approach will be promoted in all site inductions and training.

2.3.12 Any incidents or non-compliance with commitments will be recorded using the Principal Contractor management processes and will be required to contain the following information:

- How to classify incidents/hazards

- How to manage minor incidents
- How to manage major incidents

2.3.13 The Principal Contractor will also:

- Have sole responsibility for pollution prevention measures being successfully implemented
- Take all reasonable precautions and undertake all reasonable measures within their control to ensure that all legal requirements are complied with and that no unnecessary damage, disturbance or pollution results from undertaking the works
- Be available for environmental audits monthly

2.3.14 Immediately prior to construction, National Highway's Employer's Agent (or equivalent) and the Principal Contractors nominated person will undertake a site condition survey of each section of the Scheme. This survey will usually include a photographic record. This will be used to ensure effective reinstatement following completion of the works and provide a 'baseline' to assess any compensation claims with landowners.

2.3.15 The Principal Contractor is responsible for delivering the Scheme environmental training programme, including toolbox talks, throughout the construction works, ensuring all staff are trained adequately and to the agreed level prior to starting work on site.

2.3.16 The environmental aspects of the works shall be inspected on a regular basis in accordance with the Principal Contractors processes which cover the following aspects:

- How to plan and undertake contract targeted risk monitoring
- Targeted risk monitoring planner
- Risk based monitoring check sheet

Post-construction

2.3.17 The Principal Contractor is responsible for correcting defects (as defined under the main construction contract) for 12 months following contract completion. This is known as the 'defects period'. The defects period applies to relevant works following completion of the main construction works and completion of a subsequent five-year period where the Principal Contractor has responsibility for aftercare and management of environmental works.

2.4 Communications

2.4.1 The Principal Contractor will direct all queries regarding the EMP and actions within it through National Highways prior to initial contact with statutory

consultees (e.g. the Environment Agency, Natural England and Historic England). They will also typically then act as the primary contact with statutory consultees leading up to and during the construction phase.

2.4.2 The Principal Contractor will establish and maintain procedures for internal communications between the various levels and functions of the team during construction. Internal communications include:

- Advising of non-conformances to relevant managers
- Communicating environmental commitments to the construction team
- Communicating the environmental policy to the construction team
- Raising awareness of environmental issues to the construction team
- Reporting incidents to relevant managers

2.4.3 The Principal Contractor will maintain an ongoing liaison with the statutory/regulatory bodies during the construction phase.

Stakeholders

2.4.4 In meeting the requirements of this EMP there are several key stakeholders to be engaged prior to and during construction of the Scheme. These include:

- Hampshire County Council
- Winchester City Council
- Environment Agency
- Historic England
- Natural England
- South Downs National Park Authority
- Hampshire and Isle of Wight Wildlife Trust
- Local residents
- Local businesses
- Affected landowners

Complaints procedure

2.4.5 There will be a complaints procedure put in place in the siEMP to receive and act upon complaints. A complaints log will be maintained, and a monitoring system implemented throughout the works. This enables all complaints to be addressed and a satisfactory outcome reached for all parties involved.

2.5 Reviews

2.5.1 The EMP process will be subject to periodic review throughout the construction and handover periods. The timing of reviews will be agreed with the National Highway's Project Manager.

3 Register of environmental actions and commitments

3.1.1 The Register of Environmental Actions and Commitments (REAC) identifies the environmental commitments proposed to address the potential environmental effects of the preparatory and main works.

3.1.2 The REAC described in **Table 3.2** presents a register which has been developed using information presented in the ES and the Habitats Regulations Assessment (HRA). The REAC will be updated by the Principal Contractor when preparing the siEMP and then 'as required' as the Scheme progresses. Each EMP will be prepared in accordance with the principles of this EMP (design).

3.1.3 The REAC provided in **Table 3.2** includes:

- A clear and specific description of the action
- The objective of the action
- How the action is to be implemented/achieved
- The source of the action, including references for source documentation e.g. ES
- Naming of the person responsible for the action
- Achievement criteria and reporting requirements
- The project stage, date or implementation and achievement
- Details of any monitoring required and corrective action

3.1.4 **Table 3.1** provides a summary of the scope of each column within the REAC.

Table 3.1: Explanatory guide to REAC table columns

Column	Explanation
Reference (ref.)	A unique identifier defined within these REAC tables to enable simple reference to individual measures
Action / commitment	Clear and specific description of the action/commitment is defined, including the specific location. The location for the action is scheme wide, unless otherwise stated
Assumptions	The assumptions on which the action/commitment is based

Column	Explanation
Objective	The objective of the action/commitment, including alignment with Project Objectives in section 1.3 Reference to relevant legislation requirements
How the action/ commitment will be implemented/ secured	How the action is to be implemented/achieved, including details of risk management
Source reference (source ref.)	The source of the action (e.g. mitigation reference in the ES, habitat regulations assessment, equality impact assessment, traffic management plan) including confirmation of commitments agreed with stakeholders Where no source reference is given, the measure is normally one which is relevant across a range of technical areas and is a broader control measure (e.g. working hours)
Responsible person(s)	The person or body responsible for delivery of the action/commitment; this will often be the Principal Contractor
Achievement criteria and reporting requirement (if applicable)	The criteria which define the successful implementation of the action/commitment, such as a document approval which confirms the action has been undertaken. This will be populated by the Principal Contractor's Environmental Manager in the siEMP
Project stage	The anticipated project stage, date of implementation or achievement D = Design C = Construction O = Operation A = All This will be populated by the Principal Contractor's Environmental Manager in the siEMP
Monitoring requirements	Details of any monitoring that is required in relation to the action/commitment (including in relation to likely significant adverse effects). This will be populated by the Principal Contractor's Environmental Manager in the siEMP

Table 3.2: Record of environmental actions and commitments

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
	General Provisions							
G1	Appoint Environmental Manager and Ecological Clerk of Works (ECoW) to manage all environmental issues during construction.	To ensure environmental measures that have been committed are implemented. The assumption is that the Environmental Manager and ECoW will be appointed during the construction preparation phase.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	N/A	Principal Contractor	Environmental Manager and Ecological Clerk of Works appointed.		
G2	The Principal Contractor shall have an Environmental Management System (EMS) certified to BS EN ISO 14001. The Principal Contractor's EMS will define appropriate control measures and monitoring systems to be employed during the planning and construction of the works for all relevant topic areas. The Principal Contractor's EMS shall cover the activities of all their sub-contractors. The Principal Contractor will also be required to coordinate with other contractors and relevant parties that may affect their works. This will be documented in their EMS, as appropriate. As part of their EMS, the Principal Contractor shall commit to planning works in advance to ensure that, in so far as is reasonably practicable, measures to reduce environmental effects are integrated into the construction methods.	To ensure appropriate control measures and monitoring systems are employed during the planning and construction of relevant works. The assumption is that the second iteration Environmental Management Plan (siEMP) will be implemented throughout the construction of the Scheme.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	N/A	Principal Contractor	Project EMS certification to ISO 14001, maintained for duration of construction. National Highways approval of the siEMP. Determination of the EMS by the Secretary of State (SoS) in consultation with the relevant planning authority and local highway authority.		

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
G3	The Principal Contractor shall develop a scheme specific environmental policy, prior to the EMS, and to be included as part of the EMS. This policy will be developed in line with National Highways environmental policies and the Scheme objectives and will set out how the Principal Contractor will: ■ Adhere to the requirements of environmental legislation during the works ■ Commit to mitigating the impacts associated with the works ■ Commit to good practice in environmental performance throughout the phase of the works Identify opportunities to improve the scheme's whole life performance in terms of environmental and social implications	To ensure the EMP is appropriate to the Scheme phase and the scope of works delivered by the Principal Contractor. The assumption is that the siEMP will be implemented throughout the construction of the Scheme.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	N/A	Principal Contractor	Production of the environmental policy. National Highways approval of the policy. Determination of the EMS by the Secretary of State (SoS) in consultation with the relevant planning authorities.	D	None required
G4	The Principal Contractor's EMS and EMP shall include procedures to monitor compliance with the Scheme's environmental actions and requirements (as set out in this REAC table) together with provisions for any corrective actions required.	To ensure the EMP is appropriate to the Scheme phase and the scope of works delivered by the Principal Contractor. The assumption is that the siEMP will be implemented throughout the construction of the Scheme.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	EMP	Principal Contractor	Approval of EMS and EMP by the SoS in consultation with the relevant planning authorities	D	None required

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
G5	The Principal Contractor shall prepare a siEMP for the Scheme, in accordance with this fiEMP, prior to the commencement of construction. No part of the Scheme can start until this EMP has been reviewed and updated in substantial accordance with the certified iteration of this EMP, has been subject to consultation with the relevant planning authorities and has been approved by the SoS.	To ensure works are undertaken in accordance with the Schemes environmental actions and commitments. The assumption is that the siEMP will be implemented throughout the construction of the Scheme.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	N/A	Principal Contractor	SoS approval of siEMP in consultation with the relevant planning authorities	D (monitoring C)	Periodic site audits
G6	The third iteration EMP must be submitted to the Secretary of State for approval within 28 days of the opening of the authorised development for public use. On completion of construction the siEMP must be updated and converted to the third iteration EMP to reflect the latest information regarding the stage of the Scheme, the project team, known environmental constraints for operation and maintenance and has been approved by the SoS in consultation with the relevant planning authorities. The EMP at this stage will set out post construction maintenance and monitoring requirements, incorporate the latest evaluation of change register and all other sections refined as required.	To ensure works are undertaken in accordance with the Schemes environmental actions and commitments.	Requirement 3.3 of the **draft DCO** (**Document Reference 3.1**)	N/A	Principal Contractor	Approval of EMP (third iteration) by the SoS in consultation with the relevant planning authorities	C/O	None required
G7	No part of the Scheme can start until the following Management Plans are developed in detail, have been subject to stakeholder consultation	To manage construction (and where applicable, operational maintenance) activities so as to	Requirement 3 and 4 of the **draft DCO (Document Reference 3.1)**	**Environmental Statement (Document Reference 6.1)** and **Water Framework**	Principal Contractor	Production of Management Plans SoS approval of siEMP following consultation with the	D (monitoring C)	Periodic site audits

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
	and have been approved by the SoS: • Landscape and Ecological Management Plan will be prepared for the Scheme in accordance with **Appendix 7.6 (Outline Landscape and Ecological Management Plan (OLEMP))** of the **ES (Document Reference 6.3)**. The detailed OLEMP will be attached at **Appendix B** of the siEMP. • Invasive Species Management Plan, identifying relevant invasive non-native species within the area to ensure that all necessary precautions are taken to prevent their spread and attach at **Appendix G** of the siEMP. • Soil Management Plan for the Scheme in accordance with the Defra Construction Code of Practice (Department for Environment, Food and Rural Affairs, 2009) and with the draft Soil Management Plan, appended to this fiEMP as **Appendix C**. • Soil Resources Plan for the Scheme setting out the areas and type of soil to be stripped, haul routes, the methods to be used, and the location, type and management of each soil stockpile to help protect and enhance soil resources on site. This plan will be prepared by the Principal Contractor during the detailed design stage and included within **Appendix D** of the siEMP.	minimise impacts to the environment The assumption is that the siEMP will be implemented throughout the construction of the Scheme.		**Directive Assessment (Document Reference 7.7)**		relevant planning authorities		

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
	• Site Waste Management Plan for the Scheme in line with good practice and the draft Site Waste Management Plan appended to this fiEMP at **Appendix E.** • Materials Management Plan for the Scheme in accordance with the draft Materials Management Plan appended to this fiEMP at **Appendix F.** Erosion Prevention and Sediment Control Plan as required by the **Water Framework Directive Assessment (Document Reference 7.7)** and appended as **Appendix I** of the siEMP.							
G8	No part of the Scheme can start until a Traffic Management Plan is developed in detail in accordance with the **Outline Traffic Management Plan (Document Reference 7.8),** has been subject to consultation with the relevant planning authorities, the local highway authority and has been approved by the SoS. The TMP will include, but is not limited to, the following: • Details of proposed traffic management measures, including speed limits and route restrictions; • A plan identifying the roads to be used for deliveries of construction materials to site; • Proposed monitoring and reporting arrangements.	To ensure appropriate measures are implemented during construction so as to minimise impacts to the environment or local communities, businesses and road users from construction traffic. The assumption is that the detailed TMP will be approved and implemented throughout the construction of the Scheme	Requirement 11 and 4 of the **draft DCO (Document Reference 3.1).**	**Outline Traffic Management Plan (Document Reference 7.8)**	Principal Contractor	Approval of detailed Traffic Management Plan by the SoS following consultation with the relevant planning authorities and the local highway authority.	D	None required

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
G9	The Principal Contractor shall prepare Environmental Method Statements for environmental topic areas at the detailed design phase (for example site clearance) for construction and operation, as required (these will be at **Appendix N** of the siEMP).	To ensure the EMP is appropriate to the Scheme phase and the scope of works delivered by the Principal Contractor. The assumption is that the siEMP will be implemented throughout the construction of the Scheme.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Environmental Statement (Document Reference 6.1)**	Principal Contractor	Production of environmental method statements SoS approval of siEMP following consultation with the relevant planning authorities	D (monitoring C)	Periodic site audits
G10	Establish a Change Register to list and record all changes made to the EMP – this will be **Appendix P** of the siEMP.	To ensure the EMP is appropriate to the Scheme phase and the scope of works delivered by the Principal Contractor. The assumption is that the siEMP will be implemented throughout the construction of the Scheme.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	N/A	Principal Contractor	Production of the change register SoS approval of siEMP following consultation with the relevant planning authorities	D	None required
G11	All statutory consents, permits or licenses required for the construction (relevant to those that do not form part of the Development Consent Order (DCO)) should be obtained. Any conditions included in consents/licenses/permits should be documented in the siEMP and considered as part of the planning, design and construction process.	To ensure the EMP is appropriate to the Scheme phase and the scope of works delivered by the Principal Contractor. The assumption is that the siEMP will be implemented throughout the construction of the Scheme.	Requirement 3 and 4 of the **draft DCO (Document Reference 3.1)**	**Consents and Agreements Position Statement (Document Reference 3.3)**	Principal Contractor	Successful application of relevant licences Refine siEMP (where applicable SoS approval of siEMP following consultation with the relevant planning authorities	D	Periodic site audits

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
G12	A copy of all relevant environmental applications and consents / authorisations should be kept in the Project Environmental File and copies provided to National Highways of all applications and consents / authorisations as soon as practical after submission and receipt.	To ensure the EMP is appropriate to the Scheme phase and the scope of works delivered by the Principal Contractor. The assumption is that the siEMP will be implemented throughout the construction of the Scheme.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	N/A	Principal Contractor	Provision of application/consent details to National Highways	D and C	Periodic audits
G13	The Principal Contractor should identify best practices on a regular basis and submit to National Highways for consideration and wider circulation.	To ensure the EMP is appropriate to the Scheme phase and the scope of works delivered by the Principal Contractor. The assumption is that the siEMP will be implemented throughout the construction of the Scheme.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	N/A	Principal Contractor	Review of and submission of best practices to National Highways	D and C	None required
G14	Develop and implement a stakeholder communications plan that includes community engagement (in particular, at White Hill Cottage, Easton Lane) before work commences on site.	To ensure stakeholders are managed. The assumption is that the siEMP will be implemented throughout the construction of the Scheme.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	N/A	Principal Contractor	Production of Stakeholder Communications Plan in consultation with stakeholders	D	None required
G15	The Principal Contractor shall adhere to the core working hours for the Scheme. Working hours would be restricted to:	To minimise disturbance to neighbouring receptors The assumption is that there is the potential for	Requirement 3 and 14 of the **draft DCO (Document Reference 3.1)**	**Chapter 11 (Noise and Vibration)** of the	Principal Contractor	Adherence to core working hours of the Site agreed with	C	None required

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
	▪ 07.00 to 19.00 Monday to Friday ▪ 07.00 to 13.00 Saturday ▪ No Sunday working Works outside of the core working hours are likely to be required in certain circumstances and would be carried out following consultation with Winchester City Council. These works are currently envisaged to comprise: ▪ Lifting of gantry and large signs onto concrete bases due to the need for a larger working area to ensure the safety of the workforce and minimise disruption to traffic ▪ Works predominantly within the M3 and A34 corridors which would be similar to maintenance works e.g. planing, resurfacing, painting road markings ▪ Closing of gyratory slip roads to allow re-alignment works to take place ▪ Installation and removal of barriers to allow traffic management switches to take place There may also be circumstances where works would continue outside of core working to allow for efficiencies and engineering reasons. Examples of these would be to complete a concrete pour or to complete an excavation to a safe completion point. A Section 61 application under Control of Pollution Act 1974 for the works would be made (prior consent for work on construction sites) and	noise and vibration effects to nearby receptors		**ES (Document Reference 6.1)**		Winchester City Council SoS approval of written details of proposed noise mitigation, following consultation with the relevant planning authority.		

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
	agreed with Winchester City Council, and further controlled through the Noise and Vibration Management Plan.							
G16	The Principal Contractor shall sign up to and adhere to the Considerate Constructors Scheme (CCS)	To minimise disturbance from construction	Requirement 3 of the **draft DCO** (**Document Reference 3.1**)	N/A	Principal Contractor	Certification to CCS standard	C	None required
G17	Appropriate measures shall be implemented to ensure the resilience of the proposed construction mitigation measures during extreme weather events, so far as reasonably practicable. The siEMP will identify all measures deemed necessary and appropriate to manage extreme weather events and will cover training of personnel along with prevention and monitoring arrangements.	To ensure construction works are resilient to extreme weather events	Requirement 3 of the **draft DCO** (**Document Reference 3.1**)	N/A	Principal Contractor	SoS approval of siEMP following consultation with the relevant planning authorities	C	None required
G18	Not to undertake any of the operations permitted and described in the definition of “commence”, namely preconstruction ecology surveys, preconstruction ecological mitigation and works under mitigation licences, remedial work in respect to any contamination or other adverse ground conditions, prior to commencement of the authorised development unless they are non-intrusive or reversible and land is capable of being restored to its original condition.	To ensure works are undertaken in accordance with the DCO. The assumption is that the siEMP will be implemented throughout the construction of the Scheme.	Requirement 3 of the **draft DCO** (**Document Reference 3.1**)	N/A	Principal Contractor	No works undertaken prior to commencement of the authorised development unless they are non-intrusive or reversible and land is capable of being restored to its original condition. Approval of Method Statements by SoS following consultation with the relevant planning authorities	C	None required

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
G19	In relation to temporary and permanent land take requirements liaison with the landowner will be undertaken to agree commercial terms with affected parties in relation to associated losses.	To ensure landowners are consulted and compensated. Assumed landowners will be compensated accordingly.	Requirement 3 of the **draft DCO** (**Document Reference 3.1**)	**Chapter 9 (Geology and Soils)** of the **ES (Document Reference 6.1)**	Principal Contractor	Community Liaison Manager will be appointed	C	None required
	Air Quality							
AQ1	As part of general site inspections, the Environmental Manager is to monitor dust levels.	To reduce potential dust impacts during the construction works. It is assumed that dust may be generated by the Scheme.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 5 (Air Quality)** of the **ES (Document Reference 6.1)**	Principal Contractor	General site inspections undertaken Site inspection log book completed SoS approval of siEMP following consultation with the relevant planning authorities	C	Monitor dust levels
AQ2	Record all inspections of haul routes and any subsequent action in a site logbook.	To track which activities and events are generating most dust and actively manage the implementation of any additional mitigation measures. It is assumed that dust may be generated by the Scheme.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 5 (Air Quality)** of the **ES (Document Reference 6.1)**	Principal Contractor	Site inspections undertaken Site inspection log book completed SoS approval of siEMP following consultation with the relevant planning authorities	C	Daily site inspections
AQ3	Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken. Make	To ensure there is evidence commitments are being adhered to.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 5 (Air Quality)** of the **ES (Document Reference 6.1)**	Principal Contractor	Complaints log maintained Record of actions taken maintained	C	Monitor dust levels

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
	the complaints log available to the local authorities when asked.	It is assumed that dust, air pollution and exhaust emissions may be generated by the Scheme.						
AQ4	The Principal Contractor will develop a complaints procedure with a timeframe for which complaints will be responded to and there will be a nominated community liaison officer.	To ensure there is evidence commitments are being adhered to. On site activities have the potential to generate dust.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 5 (Air Quality)** of the **ES (Document Reference 6.1)**	Principal Contractor	Nominate a Community Liaison Manager Develop a complaints procedure Complaints log maintained Record of actions taken maintained	C	Monitor complaints in relation to dust emissions
AQ5	Undertake daily on-site and off-site inspections, where receptors are nearby, to monitor dust, record inspection results, and make the log available to the local authority etc. when asked. This will include regular dust soiling checks of surfaces such as street furniture, cars and windowsills within 100m of site boundary, with cleaning to be provided if necessary.	To reduce potential dust impacts. It is assumed that dust may be generated by the Scheme.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 5 (Air Quality)** of the **ES (Document Reference 6.1)**	Principal Contractor	General site inspections undertaken Site inspection log book completed Complaints log maintained Record of actions taken maintained	C	Daily site inspections
AQ6	Fully enclose site or specific operations where there is a high potential for dust production and the site is active for an extensive period.	To reduce potential dust impacts. On site activities have the potential to generate dust.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 5 (Air Quality)** of the **ES (Document Reference 6.1)**	Principal Contractor	Approval of siEMP (Soil Management Plan will form **Appendix C**) by SoS following consultation with relevant planning authorities – a draft copy of the Soil Management Plan is provided in **Appendix C** of this fiEMP	C	Daily site inspections

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
						Site inspections undertaken Site inspection log book completed		
AQ7	Keep site fencing, barriers and scaffolding clean using wet methods where there is the risk of dust accumulation.	To reduce potential dust impacts. On site activities have the potential to generate dust.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 5 (Air Quality)** of the **ES (Document Reference 6.1)**	Principal Contractor	No or low dust build up on barriers and scaffolding Approval of siEMP (Soil Management Plan will form an appendix) by SoS following consultation with relevant planning authorities – a draft copy of the Soil Management Plan is provided in **Appendix C** of this fiEMP Site inspections undertaken Site inspection log book completed	C	Daily site inspections
AQ8	Remove materials that have the potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site and are stockpiled, cover, seed or fence to prevent wind whipping.	To reduce the total surface area of exposed earth and material that could be mobilised to dust by weather and construction movements. On site activities have the potential to generate dust.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 5 (Air Quality)** of the **ES (Document Reference 6.1)**	Principal Contractor	No open stockpiles of dust generating materials. Approval of siEMP (Soil Management Plan will form **Appendix C**) by SoS following consultation with relevant planning authorities – a draft copy of the Soil Management Plan is provided in	C	Daily site inspections

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
						Appendix C of this fiEMP Site inspections undertaken Site inspection log book completed		
AQ9	Ensure all vehicles switch off engines when stationary - no idling vehicles.	To manage exhaust emissions during construction works. Construction plant has the potential to result in emissions to air.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 5 (Air Quality)** of the **ES (Document Reference 6.1)**	Principal Contractor	No idling vehicles on site	C	Daily site inspections
AQ10	All construction plant will use fuel equivalent to ultra-low sulphur diesel (ULSD) where possible.	To manage exhaust emissions during construction works. Construction plant has the potential to result in emissions to air.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 5 (Air Quality)** of the **ES (Document Reference 6.1)**	Principal Contractor	Procurement of compliant plant	C	None required
AQ11	Ensure equipment is readily available on site to clean any dry spillages (that may release dust) and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.	To manage dust, air pollution and exhaust emission during the construction works. On site activities have the potential to generate dust and air pollutants.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 5 (Air Quality)** of the **ES (Document Reference 6.1)**	Principal Contractor	Ensure cleaning equipment is readily available Adhere to Emergency Spill Response Plan (to be included as an appendix to the siEMP) siEMP approval by the SoS following consultation with the relevant planning authorities	C	Daily site inspections

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
						Maintain record of spillages		
AQ12	Surfacing equipment (e.g. planer) only to be operated with any manufacturers dust abatement measures in place and scabbling (roughening of concrete surfaces) should be avoided where possible.	To reduce potential dust impacts. On site activities have the potential to generate dust.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 5 (Air Quality)** of the **ES (Document Reference 6.1)**	Principal Contractor	Site inspections undertaken Site inspection log book completed.	C	Daily site inspections
AQ13	Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place.	To reduce potential dust impacts. On site activities have the potential to generate dust.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 5 (Air Quality)** of the **ES (Document Reference 6.1)**	Principal Contractor	No open stockpiles of dust generating materials. Approval of siEMP (Soil Management Plan will form **Appendix C**) by SoS following consultation with relevant planning authorities – a draft copy of the Soil Management Plan is provided in **Appendix C** of this fiEMP Site inspections undertaken Site inspection log book completed	C	Daily site inspections
AQ14	Damping down of surfaces prior to their being worked. Use water-assisted dust sweeper(s) on access and local roads, to remove, as necessary, any material tracked out of the site. This may require the sweeper being continuously in use.	To limit the mobilisation of dust by construction works. On site activities have the potential to generate dust.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 5 (Air Quality)** of the **ES (Document Reference 6.1)**	Principal Contractor	Site inspections undertaken Site inspection log book completed	C	Daily site inspections

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
AQ15	Avoid dry sweeping of large areas.	To reduce potential dust impacts. On site activities have the potential to generate dust.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 5 (Air Quality)** of the **ES (Document Reference 6.1)**	Principal Contractor	Site inspections undertaken Site inspection log book completed	C	Daily site inspections
AQ16	Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport.	To limit the mobilisation of dust by construction vehicles. On site activities have the potential to generate dust.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 5 (Air Quality)** of the **ES (Document Reference 6.1)**	Principal Contractor	Site inspections undertaken Site inspection log book completed	C	Daily site inspections
AQ17	Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site) where reasonably practicable. Situate facilities in a bunded area and collect and recycle wash waters where there is no risk of contamination.	To minimise air quality impacts on neighbouring receptors. On site activities have the potential to generate dust.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 5 (Air Quality)** of the **ES (Document Reference 6.1)**	Principal Contractor	Approval of siEMP (Soil Management Plan will form Appendix C) by SoS following consultation with relevant planning authorities – a draft copy of the Soil Management Plan is provided in **Appendix C** of this fiEMP Site inspections undertaken Site inspection log book completed	C	Daily site inspections
AQ18	Impose and signpost a maximum speed-limit of 10mph on surfaced and un-surfaced haul roads and work areas.	To manage dust and air pollution during the construction works.	Requirement 11 of the **draft DCO (Document Reference 3.1)**	**Chapter 5 (Air Quality)** of the **ES (Document Reference 6.1) and Chapter**	Principal Contractor	SoS approval of detailed Traffic Management Plan following consultation with the relevant planning authorities and the local	C	Daily site inspections

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
		On site activities have the potential to generate dust.				highways authority. An **outline Traffic Management Plan** is provided in **Document Reference 7.8.** Site inspections undertaken Site inspection log book completed		
AQ19	Where temporary site roads are finalised in detailed design, their width will be considered to minimise their surface area.	To reduce the total surface area of exposed earth and material that could be mobilised to dust by weather and construction movements. On site activities have the potential to generate dust.	Requirement 12 of the **draft DCO (Document Reference 3.1)**	**Chapter 5 (Air Quality)** of the **ES (Document Reference 6.1)**	Principal Contractor	Approval of detailed design by SoS following consultation with the relevant planning authority and the local highway authority.	D	None required
	Cultural Heritage							
CH1	No part of the Scheme can start until a detailed Archaeology and Heritage Mitigation Strategy is developed and Written Scheme of Investigation (WSIs) in accordance with **Appendix 6.8 (Archaeology and Heritage Outline Mitigation Strategy)** of the **ES (Document Reference 6.3),** has been subject to consultation with the Winchester City Council Archaeologist and South Downs National Park Authority and has been approved by the SoS.	To manage and minimise impacts on the historic environment	Requirement 3 and 9 of the **draft DCO (Document Reference 3.1)**	**Chapter 6 (Cultural Heritage**) of the **ES (Document Reference 6.1)**	Principal Contractor	Preparation, in consultation with the Winchester City Archaeologist and South Downs National Park Authority, of a detailed Archaeology and Heritage Mitigation Strategy and WSI Approval of detailed Archaeology and Heritage Mitigation	D	None required

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
						Strategy and WSI by the SoS		
CH2	Undertake and implement all required mitigation stipulated in the detailed Archaeology and Heritage Mitigation Strategy and WSIs unless otherwise agreed in writing by the SoS. The detailed Archaeology and Heritage Mitigation Strategy will be produced in accordance with the outline strategy within **Appendix 6.8** of the **ES (Document Reference 6.3)**.	To ensure cultural heritage effects are managed appropriately. Construction works will be mitigated by archaeological investigations as set out in the Detailed Mitigation Strategy.	Requirement 3 and 9 of the **draft DCO (Document Reference 3.1)**	**Chapter 6 (Cultural Heritage)** of the **ES (Document Reference 6.1)**	Principal Contractor	Compliance with the detailed Archaeology and Heritage Mitigation Strategy and WSIs to ensure important cultural heritage assets are managed appropriately	C	Audits by project archaeologist
CH3	Consult Historic England on the detailed design of project elements which have been assessed in the ES as affecting designated heritage assets and their settings i.e. Scheduled Monuments and Listed Buildings (Grade I and II*). Consult the Winchester City Council Archaeologist, South Downs National Park Authority and the Local Planning Authorities Conservation Officer on the design of project elements which affect Conservation Areas, Grade II listed buildings and locally designated archaeological and built heritage assets and their settings. Consultation and technical information provided must detail the nature and level of impacts to the asset in question, the design approach pursued and rationale, options considered and the approach to mitigation.	To consult with the relevant authority on the detailed design of the Scheme to ensure it meets archaeological and cultural heritage objectives.	Requirement 4 and 12 of the **draft DCO (Document Reference 3.1)**	**Chapter 6 (Cultural Heritage)** of the **ES (Document Reference 6.1)**	Principal Contractor	Consultation on detailed design information with Historic England, Winchester City Archaeologist, South Downs National Park Authority and LPA conservation officer. SoS approval of detailed design following consultation with the relevant planning authorities	D	None required

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
CH4	In the event of human remains being found during the course of the works, works should stop, the local coroner, Project Manager, the Winchester City Council Archaeologist and South Downs National Park Authority should be notified immediately. The local area around the remains should be immediately isolated and protected by the Principal Contractor. Work in this area should not recommence without the prior acceptance of the Project Manager. If human remains are discovered during assessment work, they should be left in situ. If located during excavation, then a Ministry of Justice licence will need to be applied for prior to removal.	To ensure human remains are managed appropriately. Assumption is remains if found will be removed appropriately.	Requirement 3 and 9 of the **draft DCO (Document Reference 3.1)**	**Chapter 6 (Cultural Heritage)** of the **ES (Document Reference 6.1)**	Principal Contractor	Compliance with Archaeology and Heritage Mitigation Strategy Implementation of stated measures Record findings and action taken maintained	C	Audits by project archaeologist
CH5	Conservation Areas have been taken into account in planning temporary traffic diversions with a presumption to avoid where possible, recognising that there may be instances where this cannot be achieved and, in such circumstances, the duration should be kept to a minimum.	To minimise disturbance on cultural heritage assets as a result of construction traffic.	Requirement 11 of the **draft DCO (Document Reference 3.1)**	**Chapter 6 (Cultural Heritage)** of the **ES (Document Reference 6.1)**	Principal Contractor	Implementation of measure	D (and compliance C)	Periodic haul route inspections
CH6	Ensure watching briefs, where required, will be constant unless an intermittent watching brief has been agreed with the Winchester City Council Archaeologist and South Downs National Park Authority or it has been agreed that the watching brief can be abandoned based on the archaeological findings.	To ensure cultural heritage effects are managed appropriately. If any unknown archaeology is identified the watching brief will identify it.	Requirement 3 and 9 of the **draft DCO (Document Reference 3.1)**	**Chapter 6 (Cultural Heritage)** of the **ES (Document Reference 6.1)**	Principal Contractor	Consultation with Council Archaeologist and South Downs National Park Authority	C	None required

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
CH7	An archaeological/ geoarchaeological watching brief may be required to monitor additional machine excavated trial pits and record any archaeologically relevant deposits that might be present. This should be reviewed by the Project Archaeologist in consultation with the Winchester City Council Archaeologist and South Downs National Park Authority. It is unlikely archaeological monitoring of the boreholes or hand excavated inspection pits is required. All stratigraphic logs generated during ground investigation works should be archaeologically reviewed to further inform the evolving mitigation strategy.	To ensure cultural heritage effects are managed appropriately. If any unknown archaeology is identified the watching brief will identify it.	Requirement 3 and 9 of the **draft DCO (Document Reference 3.1)**	**Chapter 6 (Cultural Heritage)** of the **ES (Document Reference 6.1)**	Principal Contractor	Watching briefs (if required) to be reviewed by the Project Archaeologist in consultation with the Winchester City Council Archaeologist and South Downs National Park Authority. Stratigraphic logs to be reviewed and Mitigation Strategy updated if required.	C	Watching brief by Project Archaeologist, if required
CH8	The final proposed location of all intrusive works will be reviewed by the Project Archaeologist to assess the need for mitigation	To ensure cultural heritage effects are managed appropriately. Assumed that archaeology will be identified during the works.	Requirement 3 and 9 of the **draft DCO (Document Reference 3.1)**	**Chapter 6 (Cultural Heritage)** of the **ES (Document Reference 6.1)**	Principal Contractor	Review of intrusive work locations by Project Archaeologist and consultation with the Winchester City Council Archaeologist and South Downs National Park Authority to ensure assets are managed appropriately	D and C	Audits by project archaeologist
CH9	Undertake archaeological investigations including: • required pre-construct strip map and sample programme in the areas of permanent highways work, attenuation features and utility diversions within previously undisturbed areas.	To ensure cultural heritage effects are managed appropriately. Assumed that archaeology will be	Requirement 3 and 9 of the **draft DCO (Document Reference 3.1)**	**Chapter 6 (Cultural Heritage)** of the **ES (Document Reference 6.1)**	Principal Contractor	Approval of detailed Archaeology and Heritage Mitigation Strategy by SoS Mitigation Strategy to be updated if required	D and C	Audits by project archaeologist

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
	• specialist boreholes taken for geoarchaeological analysis in the area around the new foot and cycle bridge • pre-construction archaeological strip map and sample in the landscaping and environmental mitigation area to the eastern side of the existing M3 to record any archaeological remains present. • pre-construction archaeological strip map and sample in areas proposed for temporary compounds to record any archaeological remains present.	identified during the works.				Keep record of archaeological investigations site inspections of protective measures		
CH10	Areas deemed less archaeologically significant but still requiring archaeological recording will be subject to a programme of archaeological monitoring. This monitoring or 'watching brief' will be undertaken during the topsoil strip on specific areas of the Scheme where archaeological potential is identified. This will help to identify any previously unrecorded archaeological remains within the Scheme and will provide a preservation by record. The archaeological monitoring will be undertaken in accordance with the Detailed Archaeology and Heritage Mitigation Strategy and WSI noted above.	To ensure cultural heritage effects are managed appropriately. Assumed that archaeology will be identified during the works.	Requirement 9 of the **draft DCO (Document Reference 3.1)**	**Chapter 6 (Cultural Heritage)** of the **ES (Document Reference 6.1)**	Principal Contractor	Archaeological assets are recorded properly Compliance with Archaeology and Heritage Mitigation Strategy and WSIs	D and C	Audits by project archaeologist Watching brief in areas requiring archaeological recording
CH11	Ensure reporting of the archaeological mitigation and monitoring undertaken are completed and submitted in a timely manner. A copy of any analysis,	To ensure cultural heritage effects are managed appropriately.	Requirement 3 and 9 of the **draft DCO (Document Reference 3.1)**	**Chapter 6 (Cultural Heritage)** of the	Principal Contractor	Report archaeological mitigation and	C and O	None required

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
	reporting or publication required as part of the Detailed Archaeology and Heritage Mitigation Strategy should be deposited with the Historic Environment Record (HER) within one year of completion of the Scheme or such other period as may be agreed in writing by Winchester City Council and South Downs National Park Authority. The digital and paper archives should be deposited with an appropriate museum.	Assumed that archaeology will be identified during the works.		**ES (Document Reference 6.1)**		monitoring undertaken Deposit report with the HER within one year if completion of Scheme		
	Landscape and Visual							
LV1	Undertake a topographic and photographic survey of the Site prior to construction to record current condition and to inform detail design and reinstatement.	To ensure baseline data is up to date. Assumed time period between application and construction.	Requirement 3, 5 and 12 of the **draft DCO (Document Reference 3.1)**	**Chapter 7 (Landscape and Visual)** of the **ES (Document Reference 6.1)**	Principal Contractor	Undertake site surveys Submission of updated survey reports to SoS SoS approval of detailed design following consultation with the relevant planning authorities and the local highway authority	D	None required
LV2	No part of the Scheme can start until an Arboricultural Impact Assessment has been undertaken and detailed Tree Protection Plans (TPP) are prepared in relation to **Appendix 7.5 (Preliminary Arboricultural Impact Assessment)** of the **ES (Document Reference 6.3)** and taking due regard to British Standard (5837:2012).	Protection of existing and retained trees and hedgerows	Requirement 3, 5 and 12 of the **draft DCO (Document Reference 3.1)**	**Chapter 7 (Landscape and Visual)** of the **ES (Document Reference 6.1)** **Appendix 7.5 (Preliminary Arboricultural Impact Assessment)** of the **ES**	Principal Contractor	SoS determination of Tree Protection Plans and Arboricultural Impact Assessment following consultation with the relevant planning authorities	D	None required

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
	Measures shall be included in the TPPs to be implemented during construction to ensure the protection of retained trees and hedgerows within and adjacent to the Application Boundary. Measures to be implemented include: • Fencing of root protection areas (RPA) or defined construction exclusion zone of retained tree s to avoid accidental damage during construction; • Specified working methods to be employed when working within RPAs if this cannot be reasonably avoided; • Inspection, maintenance and management of trees, hedgerows and scrub to be retained.			**(Document Reference 6.3).**				
LV3	No part of the Scheme can start until a detailed Landscape and Ecological Management Plan (LEMP) has been developed and with particular regard to the South Downs National Park, its features, character and special qualities. The LEMP must be subject to consultation with the relevant planning authorities and be approved by the SoS. The LEMP will include: • Location, number, species, size and planting density of proposed planting; • Proposed finished ground levels; • Details of trees and hedgerows to be retained, with measures for their protection during the construction period;	To ensure an appropriate landscape scheme for the local environment Soft landscape designs to provide visual screening, landscape integration and visual amenity To consult with relevant authorities on aspects of the detailed LEMP to ensure it appropriately reflects the mitigation commitments made in the **ES (Document Reference 6.1)**.	Requirement 3 and 5 of the **draft DCO (Document Reference 3.1)**	**Chapter 7 (Landscape and Visual)** of the **ES (Document Reference 6.1)**	Principal Contractor	SoS approval of the LEMP following consultation with the relevant planning authorities	D	None required

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
	• Implementation timetable for landscaping works; Planting must be drawn from a native palette of suitable species, locally indigenous, and from local provenance where reasonably practicable, reflecting the variations in planting character across the Application Boundary and respecting local / site conditions. The Principal Contractor must consult Winchester City Council, Natural England and other relevant planning authorities on the LEMP prior to submission for approval.							
LV4	Design proposals reflect local design characteristics and use materials commonplace in the local area. Planting mixes will be selected to ensure a contextual led approach, and resilience to potential climate change effects (in particular wildfire) and future pest and disease threats. New planting will be sourced from UK nurseries and locally available stock where reasonably practicable to help lessen the risk of introducing pests and disease. Indicative species for the proposed landscape elements are provided in **Appendix 7.6 (OLEMP)** of the **ES (Document Reference 6.3).**	To ensure an appropriate landscape scheme for the local environment Assumes local nurseries have stock availability.	Requirement 3, 5 and 6 of the **draft DCO (Document Reference 3.1)**	**Chapter 7 (Landscape and Visual)** of the **ES (Document Reference 6.1)**	Principal Contractor	SoS determination of the detailed LEMP following consultation with the relevant planning authorities	D	None required
LV5	Weed control should be undertaken as appropriate. Control of invasive species as identified **Appendix 7.7 (OLEMP**) of the **ES (Document Reference 6.3).**	To ensure control and management of invasive species	Requirement 3, 5 and 6 of the **draft DCO (Document Reference 3.1)**	**Chapter 7 (Landscape and Visual)** of the **ES (Document Reference 6.1)**	Principal Contractor	SoS determination of the detailed LEMP following consultation with the relevant planning authorities	D (and C for implementation of measure)	Audits by project landscape architect

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
		Assumes weeds still present on site at start of construction.				Implementation of measure		
LV6	Signage during construction will be kept to a minimum and only positioned at site entrances. This will allow for project information boards only.	To minimise visual impacts on nearby receptors. Assumes signage required to manage and control construction works.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 7 (Landscape and Visual)** of the **ES (Document Reference 6.1)**	Principal Contractor	Implementation of measure	C	None required
LV7	There will be static lighting points fixed to temporary structures such as the masts, cabins, workshops, gantry cranes and silos with the lamps up to 10m in height. These will be used to illuminate regularly used work areas, the car park and access areas. Baffles will be installed on all lighting columns and light is to be angled to face works.	To minimise construction lighting impacts on visual receptors Assumes lighting required to undertake construction works.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 7 (Landscape and Visual)** of the **ES (Document Reference 6.1)**	Principal Contractor	Implementation of measure and ensure light is always angled to face construction works	C	None required
LV8	Existing vegetation will be retained in accordance with requirements identified in **Appendix 7.5 (Preliminary Arboricultural Impact Assessment)** of the **ES (Document Reference 6.3)** and areas as shown on **Figure 2.3 (Environmental Masterplan)** of the **ES (Document Reference 6.2)**. Temporary fencing will be used to demarcate important and protected habitats, preventing construction access to protect them from accidental damage. Important and protected habitats include ecological translocation sites, and retained woodland, trees and hedgerows shown on **Figure 2.3**	Protection of existing and retained vegetation. Assumes impacts to trees and protection measures required as identified in the **Appendix 7.5 (Preliminary Arboricultural Impact Assessment)** of the **ES (Document Reference 6.3)**	Requirement 5 and 6 of the **draft DCO (Document Reference 3.1)**	**Chapter 7 (Landscape and Visual)** of the **ES (Document Reference 6.1)**	Principal Contractor	Supervision by Environmental Manager during fence installation Fencing to be constructed and installed in accordance with *Manual of Contract Documents for Highway Works*, except where any departure from this is agreed in writing by the SoS.	D and C	Supervision during fence installation

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
	(Environmental Masterplan) of the **ES (Document Reference 6.2)**. Fencing will be installed under the supervision of the Environmental Manager and in accordance with good practice guidance such as BS 5837:2012 Trees in relation to design, demolition and construction.					Production and approval of detailed Arboricultural Impact Assessment by SoS following consultation with the relevant planning authorities Implementation of detailed LEMP following approval by SoS		
LV9	Where guards are used to protect seedlings and whips, the use of plastic tree guards will be avoided in favour of biodegradable options where available. If plastic guards must be used, then they shall be removed and safely disposed of following successful establishment of vegetation and within a time frame to be identified on **Figure 2.3 (Environmental Masterplan)** of the **ES (Document Reference 6.2)**	To minimise waste associated with landscape planting and adhere to the Waste Hierarchy. Assumes planting requires protection due to stock specification.	Requirement 5 and 6 of the **draft DCO (Document Reference 3.1**)	**Chapter 7 (Landscape and Visual)** of the **ES (Document Reference 6.1)**	Principal Contractor	Approval of Site Waste Management Plan (SWMP) by SoS following consultation with the relevant planning authorities (this will form an appendix to the siEMP). A **draft SWMP** is provided in **Appendix E** of this fiEMP.	C	Periodic audits by Principal Contractor
LV10	Opportunities to reduce impacts on nearby highly sensitive visual receptors should be sought through sensitive design of construction compounds e.g. organising compound features and using earthworks / fencing to screen internal activities during the construction phase.	To minimise impacts to nearby visual receptors Assumes opportunities to review construction compound layout as detail design progresses.	Requirement 3, 5 and 6 of the **draft DCO (Document Reference 3.1)**	**Chapter 7 (Landscape and Visual)** of the **ES (Document Reference 6.1)**	Principal Contractor	Approval of detailed design by SoS following consultation with the relevant planning authorities and the local highway authority	D	None required
LV11	Standard temporary boundary fences for the main construction compound would be used. These reduce visual intrusion, assist in noise attenuation and ensure public	To minimise visual and physical intrusion and assist in noise attenuation	Requirement 3 and 6 of the **draft DCO** (**Document Reference 3.1**)	**Chapter 7 (Landscape and Visual)** of the **ES**	Principal Contractor	Implementation of measures	C	None required

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
	safety (including uninvited intruder entrance to site). Any damage or graffiti will be rectified as soon as reasonably practicable. The boundary fence will be maintained to an acceptable standard.	Assumes this type of boundary fencing will provide visual screening.		**(Document Reference 6.1)**				
LV12	Reuse of excess earth arisings during construction to facilitate landscape mitigation within the Application Boundary.	To minimise waste removal from Site, adhere to the Waste Hierarchy and assist in providing mitigation to reduce visual impacts to nearby receptors. Assumes material is of suitable grade and does not require removal from site.	Requirement 3, 5 and 6 of the **draft DCO (Document Reference 3.1)**	**Chapter 7 (Landscape and Visual)** of the **ES (Document Reference 6.1)**	Principal Contractor	Implementation of measure Site inspections undertaken Site inspection log book completed	C	Periodic audits by Principal Contractor
LV13	All earthworks where possible shall have rounded crests and profiles to tie in with local landform and avoid the appearance of engineered solutions.	To ensure landscape integration where possible during the construction works. Assumes standard construction practice to tie earthworks into existing landform.	Requirement 5,6 and 12 of the **draft DCO (Document Reference 3.1)**	**Chapter 7 (Landscape and Visual)** of the **ES (Document Reference 6.1)**	Principal Contractor	Implementation of measure Site inspections undertaken Site inspection log book completed	C	Daily site inspections
LV14	Land required temporarily during the construction phase will be reinstated to support the required end use in-line with land use identified on **Figure 2.3 (Environmental Masterplan)** of the **ES (Document Reference 6.2).** The full soil profile, in accordance with the soil re-use requirements and the soils management procedures, will be	To ensure landscape and visual effects are reduced. Assumes construction activity will result in compaction to soils.	Requirement 3, 5 and 6 of the **draft DCO (Document Reference 3.1)**	**Chapter 7 (Landscape and Visual)** of the **ES (Document Reference 6.1)**	Principal Contractor	Compliance with detailed Soil Management Plan, which will form an appendix to the siEMP Approval of siEMP by SoS following consultation with the	C	None required

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
	recreated in the correct sequence of horizons, in such a manner that there are good remaining fissures to facilitate soil profile drainage and plant root development.					relevant planning authorities A **draft Soil Management Plan** is provided in **Appendix C** of this fiEMP.		
LV15	Creation of new woodland and linear planting (LE2.1 and LE2.4) and scrub/shrub planting (LE2.8) alongside new road alignments and within internal islands as indicated on **Figure 2.3 (Environmental Masterplan)** of the **ES (Document Reference 6.2)** and detailed within **Appendix 7.6 (OLEMP**) of the **ES (Document Reference 6.3).**	To ensure landscape and visual effects are reduced. Assumed planting in suitable soils	Requirement 3, 5 and 6 of the **draft DCO (Document Reference 3.1)**	**Chapter 7 (Landscape and Visual)** of the **ES (Document Reference 6.1)**	Principal Contractor	Implementation of measure in line with **Figure 2.3 (Environmental Masterplan)** of the **ES (Document Reference 6.2)** and detailed within **Appendix 7.6 (OLEMP**) of the **ES (Document Reference 6.3).**	C	None required
LV16	Early planting (advanced planting) of new woodland (LE2.1 and LE2.4) and scrub/shrub planting (LE2.8), will be undertaken for landscape plots 003-16, 008-27, 009-25, -009-41 as indicated on **Figure 2.3 (Environmental Masterplan)** of the **ES (Document Reference 6.1).**	To support environmental visual screening. Assumed advanced planting is undertaken at the start of construction works to provide opportunity for establishment during construction period to provide improved mitigation at Scheme opening.	Requirement 3, 5 and 6 of the **draft DCO (Document Reference 3.1)**	**Chapter 7 (Landscape and Visual)** of the **ES (Document Reference 6.1)**	Principal Contractor	Implementation of measure in line with **Figure 2.3 (Environmental Masterplan)** of the **ES (Document Reference 6.2).**	C	None required
LV17	Grassland on roadside verges and earthworks including embankments, cuttings and false cuts shall be managed to become species-rich chalk grassland suitable to underlying soil type comprising chalk	To ensure landscape and visual effects are reduced.	Requirement 3, 5 and 6 of the **draft DCO (Document Reference 3.1)**	**Chapter 7 (Landscape and Visual)** of the **ES (Document Reference 6.1)**	Principal Contractor	Undertake soil sampling Manage grassland in line with **Figure 2.3 (Environmental Masterplan)** of the	C	None required

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
	(LE1.3) as indicated on **Figure 2.3 (Environmental Masterplan)** of the **ES (Document Reference 6.2)** and detailed within **Appendix 7.6 (OLEMP)** of the **ES (Document Reference 6.3).** Areas of species-rich grassland (LE1.3) (including those with chalk grassland characteristics) are proposed in locations on the east side of the M3 alignment including in areas where conversion from arable farmland is required. Management to become species-rich grassland will vary due to the underlying soil and subsoil type as indicated on **Figure 2.3 (Environmental Masterplan)** of the **ES (Document Reference 6.2)** and detailed within **Appendix 7.6 (OLEMP**) of the **ES (Document Reference 6.3).** This includes commitments to undertake soil sampling to determine conditions of the soil and measures required to prepare the soil for successful species rich grassland establishment.	Species-rich chalk grassland - assumed placement of / exposure of chalk on roadside verges and earthworks to achieve species rich grassland with chalk grassland characteristics in some areas.				**ES (Document Reference 6.2)** and detailed within **Appendix 7.6 (OLEMP**) of the **ES (Document Reference 6.3).**		
LV18	The creation of chalk grassland (LE1.3) on the lower open downland slopes within the South Downs National Park as indicated on **Figure 2.3 (Environmental Masterplan)** of the **ES (Document Reference 6.2)** and detailed within **Appendix 7.6 (OLEMP**) of the **ES (Document Reference 6.3).**	To ensure landscape and visual effects are reduced. Assumed placement of / exposure of chalk on earthworks to achieve chalk grassland.	Requirement 3, 5 and 6 of the **draft DCO (Document Reference 3.1)**	**Chapter 7 (Landscape and Visual)** of the **ES (Document Reference 6.1)**	Principal Contractor	Implementation of measure in line with **Figure 2.3 (Environmental Masterplan)** of the **ES (Document Reference 6.2).**	C	None required

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
LV19	Typically, drainage features shall be designed to appear as naturalistic elements within the wider setting this including seeding with marginal aquatic grass mixes (LE6.1). The infiltration feature on the eastern slopes to be seeded with a chalk grassland (LE1.3) mix. Planting shall be provided to soften edges where this is appropriate to the context. All as indicated on **Figure 2.3 (Environmental Masterplan)** of the **ES (Document Reference 6.2)** and detailed within **Appendix 7.6 (OLEMP)** of the **ES (Document Reference 6.3).**	To ensure landscape and visual effects are reduced. Assumes suitable growing medium in lined features. Assumes eastern slope drainage features are dry.	Requirement 3, 5 and 6 of the **draft DCO (Document Reference 3.1)**	**Chapter 7 (Landscape and Visual)** of the **ES (Document Reference 6.1)**	Principal Contractor	Implementation of measure in line with **Figure 2.3 (Environmental Masterplan)** of the **ES (Document Reference 6.2)** and detailed within **Appendix 7.6 (OLEMP**) of the **ES (Document Reference 6.3.**	C	None required
LV20	Ongoing management and maintenance of new planting within the highways estate to ensure successful establishment to be undertaken in accordance with the measures set out in **Appendix 7.6 (OLEMP)** of the **ES (Document Reference 6.3)**, and future LEMP prepared during detailed design to provide further detail on the long-term management. Detailed design proposals will be developed in accordance with *Manual of Contract Documents for Highway Works* (MCDHW) Volume 1, Series 3000 Landscape and Ecology (Highways Agency, 2001).	To ensure landscape and visual effects are reduced. Assumes the landscape design is delivered	Requirement 3and 6 of the **draft DCO (Document Reference 3.1)**	**Chapter 7 (Landscape and Visual)** of the **ES (Document Reference 6.1)**	Principal Contractor	Approval of detailed LEMP by SoS following consultation with relevant planning authorities and compliance with the measures outlined within it.	C	Periodic inspections by Environmental Manager
LV21	During the onsite construction activities an Environmental Manager will ensure the Scheme construction is delivered in accordance with best	To ensure an appropriate landscape scheme for the local environment.	Requirement 3, 5 and 6 of the **draft DCO**	**Chapter 7 (Landscape and Visual)** of the **ES**	Principal Contractor	Compliance with **Figure 2.3 (Environmental**	C (and D for approval of detailed LEMP)	Periodic inspections by

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	practice and the planting is implemented in line with **Figure 2.3 (Environmental Masterplan)** of the **ES (Document Reference 6.2),** and detailed design drawings and specification, and the requirements of the **Appendix 7.6 (OLEMP)** of the **ES (Document Reference 6.3)**, and future LEMP. The Environmental Manager will ensure compliance with the Arboricultural Method Statement and Tree Protection Plans (to be developed during detailed design) and protection commitments.	Assumes National Highways will appoint an Environmental Manager during the construction period, responsible for overseeing landscape works.	**(Document Reference 3.1)**	**(Document Reference 6.1)**		**Masterplan)** of the **ES (Document Reference 6.2)** Approval of detailed LEMP by SoS following consultation with relevant planning authorities and compliance with the measures outlined within it Compliance with the Arboricultural Method Statement and Tree Protection Plans (to be developed during detailed design and approved by the SoS following consultation with the relevant planning authorities)		Environmental Manager
LV22	During the establishment aftercare period and beyond, environmental features (including soft landscape features) will be routinely inspected and monitored to ensure compliance with **Appendix 7.6 (OLEMP)** of the **ES (Document Reference 6.3)**, and future LEMP. During the establishment period monitoring for establishment of newly created landscape elements will take the form of quarterly inspection in the first two years, followed by annual inspections in the following three years after seeding/planting.	To ensure landscape and visual functions are achieved. Assumes National Highways will appoint an Environmental Manager during the establishment period responsible for monitoring.	Requirement 3, 5 and 6 of the **draft DCO** (**Document Reference 3.1**)	**Chapter 7 (Landscape and Visual)** of the **ES (Document Reference 6.1)**	Principal Contractor	Routine inspections and monitoring in compliance with **Appendix 7.6 (OLEMP)** of the **ES (Document Reference 6.2)**, and future LEMP (to be developed during detailed design and approved by the SoS following consultation with the relevant planning authorities)	O	Quarterly inspection by Environmental Manager in the first two years, followed by annual inspections in the following three years after seeding/planting.

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LV23	At the end of the soft landscape establishment aftercare period, prior to handover to National Highways or its appointed agent, a further iteration to the LEMP will be prepared by the Contractors to identify the longer-term maintenance, management and monitoring responsibilities of landscape and environmental commitments and mitigation. This will be included within the tiEMP.	To ensure landscape and visual functions are achieved. Assumes an updated LEMP will respond to any requirements identified during the establishment period.	Requirement 3and 6 of the **draft DCO (Document Reference 3.1)**	**Chapter 7 (Landscape and Visual)** of the **ES (Document Reference 6.1)**	Principal Contractor	Update LEMP to identify long-term maintenance, management and monitoring responsibilities. Approval of tiEMP by SoS following consultation with relevant planning authorities	O	None required
LV24	The carriageway and junctions will not be illuminated. The M3 and A34 underpasses will be lit to 50% of full daytime lighting level, however the exit portals of the underpasses will be unlit during the day and night-time. The gantry-mounted signage will be lit. This lighting is required for safety in accordance with Design Manual for Roads and Bridges, CD 365 Portal and cantilever signs/signals gantries. The gantries are located outside of the South Downs National Park; however, lighting should be within the parameters for requirements of Environmental Light Zone in which the gantries are located (E2 / E1b) as set out in the *South Downs National Park (TLL-10), Technical Advice Note.*	To ensure landscape and visual effects and those on the dark sky reserve are reduced Assumes the final design solution will be resolved at detailed design stage.	Requirement 3, 5 and 12 of the **draft DCO** (**Document Reference 3.1**)	**Chapter 7 (Landscape and Visual)** of the **ES (Document Reference 6.1)**	Principal Contractor	Implementation of lighting within the parameters for requirements of Environmental Light Zone in which the gantries are located (E2 / E1b) as set out in the *South Downs National Park (TLL-10), Technical Advice Note.*	O	None required
LV25	In accordance with REAC entry LV15 the creation of new woodland would be delivered as indicated on **Figure 2.3** in **Chapter 2 (The Scheme and its Surroundings – Figures (Part 2 of 4))** of the **ES (6.2,**	To support environmental visual screening.	**Requirement 3**, **5** and **6** of the **draft Development Consent Order (3.1, Rev 4)**	**Applicant Response to the Examining Authority's Second Written Questions**	Principal Contractor	Implementation of measure in accordance with fiEMP	C	None required

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	Rev 1) and detailed within **Appendix 7.6 (Outline Landscape and Ecological Management Plan)** of the **ES (6.3, APP-102).** In addition, further opportunities would be sought to deliver additional woodland planting within plot reference 5/3a as identified on the **Land Plans (2.2, APP-006)** in areas currently identified as species rich grassland on **Figure 2.3** in **Chapter 2 (The Scheme and its Surroundings – Figures (Part 2 of 4))** of the **ES (6.2, Rev 1)** to provide additional visual screening features. Additional planting would be subject to constraints of utilities, maintenance of highways infrastructure and visibility requirements for the proposed and existing highway.			**(ExQ2) (Document Reference 8.17)**		Update LEMP to identify long-term maintenance, management and monitoring responsibilities (as per entry LV23 of the REAC) Approval of tiEMP by SoS following consultation with relevant planning authorities		
LV26	In accordance with REAC entry LV15 the creation of new woodland would be delivered as indicated on **Figure 2.3** in **Chapter 2 (The Scheme and its Surroundings – Figures (Part 2 of 4))** of the **ES (6.2, Rev 1)** and detailed within **Appendix 7.6 (Outline Landscape and Ecological Management Plan)** of the **ES (6.3, APP-102).** In addition, further opportunities would be sought to increase the woodland and scrubland belt within plot reference 5/3b as identified on the **Land Plans (2.2, APP-006)** on the lower slopes of the proposed cut batter in areas currently identified as chalk grassland on **Figure 2.3** in **Chapter**	To support environmental visual screening and provide a total width of planting of 25m.	Requirement 3, 5 and 6 of the **draft Development Consent Order (3.1, Rev 4)**	**Applicant Response to the Examining Authority's Second Written Questions (ExQ2) (Document Reference 8.17)**	Principal Contractor	Implementation of measure in accordance with fiEMP Update LEMP to identify long-term maintenance, management and monitoring responsibilities (as per entry LV23 of the REAC) Approval of tiEMP by SoS following consultation with relevant planning authorities	C	None required

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	2 (The Scheme and its Surroundings – Figures (Part 2 of 4)) of the **ES (6.2, Rev 1)** to provide a minimum total width of planting of 25m.							
	Biodiversity							
B1	No part of the Scheme can start until a Landscape and Ecological Management Plan is developed in detail in substantial accordance with the outline plan provided at **Appendix 7.6 (OLEMP)** of the **ES (Document Reference 6.3)**, The LEMP shall identify what the landscape and ecology mitigation measures are, how they will be implemented, monitored, maintained and managed; and who will be responsible for ensuring they achieve their stated functions. As a minimum, the LEMP will include the following measures to be implemented: • Planting shall be native and locally sourced; • Specifications shall be provided for long term management and monitoring to ensure the proposed habitats achieve their intended objective, including corrective actions to be taken if monitoring identifies failure; • A requirement to monitor and adapt measures included within the LEMP that could be vulnerable to climate change (e.g	To manage and deliver the design and mitigation objectives specified in the **ES (Document Reference 6.1**).	Requirement 3 and 5 of the **draft DCO (Document Reference 3.1)**	**Chapter 8 (Biodiversity)** of the **ES (Document Reference 6.1)**	Principal Contractor	Approval of detailed LEMP by SoS following consultation with relevant planning authorities	D	None required

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
	changes to timing of breeding seasons as a result of climate change).							
B2	An ECoW will be present on site during key periods of the construction phase. The ECoW will be required to make certain that all committed mitigation measures are adhered to.	To ensure biodiversity effects are avoided or reduced. Assumed that they will be in place throughout construction.	Requirement 3 and 10 of the **draft DCO (Document Reference 3.1)**	**Chapter 8 (Biodiversity)** of the **ES (Document Reference 6.1)**	Principal Contractor	Undertake site audits Record any action undertaken	C	Regular audits by ECoW
B3	Due to the mobility of species and potential for changes in habitats, to make certain the ecological baseline is up-to-date and suitable to inform the detail of required mitigation measures at construction phase, baseline ecological surveys will be updated at the appropriate time of year in accordance with industry standards and at least three months prior to construction. The surveys will include, but are not limited to the following: ▪ Updated habitat and notable plant survey ▪ Updated bat roost surveys of all trees and buildings affected during construction ▪ Updated badger survey ▪ Updated dormice survey ▪ Updated otter survey ▪ Updated invasive species survey	To ensure minimise impacts on habitats and protected species Assumption that species may be present on site prior to construction.	Requirement 3 of the **draft DCO** (**Document Reference 3.1**)	**Chapter 8 (Biodiversity)** of the **ES (Document Reference 6.1)**	Principal Contractor	Undertake ecological site surveys Update LEMP if required	D	None required

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	▪ Updated reptile survey							
B4	Areas of chalk grassland to the east of the M3, and species rich grasslands on the highway cuttings and embankments will be created. Grassland will be created using suitable seed mixes of local provenance. Chalk grassland will be created over exposed chalk substrate, with little or no topsoil to enable a nutrient-poor substrate suitable for establishment of chalk grassland. The habitat creation will also provide connectivity between existing areas of chalk grassland in the wider landscape.	To ensure biodiversity effects are reduced, and to deliver an increase in habitats of ecological value. Scheme will result in a loss of habitats.	Requirement 3, 5 and 6 of the **draft DCO (Document Reference 3.1)**	**Chapter 8 (Biodiversity)** of the **ES (Document Reference 6.1)**	Principal Contractor	Compliance with **Figure 2.3 (Environmental Masterplan)** of the **ES (Document Reference 6.2)** Approval of detailed LEMP by SoS following consultation with relevant planning authorities and compliance with the measures outlined within it.	C	Regular monitoring to ensure effective establishment of new vegetation will be undertaken by the Environmental Manager in line with the future LEMP.
B5	The creation of new areas of chalk grassland will provide habitats for a range of species including priority species of invertebrates and birds. As discussed during consultation with Butterfly Conservation, the seed mix used will include dark mullein *Verbascum nigrum*, the larval foodplant of the stripped lychnis moth (a SPI and Local BAP species with very restricted national distribution). In addition, the seed mix will include kidney vetch *Anthyllis vulneraria* and horseshoe vetch *Hippocrepis comosa*, the foodplants of small blue (a SPI), *Adonis blue* and chalkhill blue butterflies.	To ensure biodiversity effects are reduced, and to deliver an increase in habitats of ecological value. Scheme will result in a loss of habitats.	Requirement 3, 5 and 6 of the **draft DCO (Document Reference 3.1)**	**Chapter 8 (Biodiversity)** of the **ES (Document Reference 6.1)**	Principal Contractor	Compliance with **Figure 2.3 (Environmental Masterplan)** of the **ES (Document Reference 6.2)** Approval of detailed LEMP by SoS following consultation with relevant planning authorities and compliance with the measures outlined within it.	C	Regular monitoring to ensure effective establishment of new vegetation will be undertaken by the Environmental Manager in line with the future LEMP.
B6	Species-rich grassland in farmland in the north of Scheme to the west of the M3 will be enhanced through a	To ensure biodiversity effects are reduced, and to deliver an increase in	Requirement 3, 5 and 6 of the **draft DCO**	**Chapter 8 (Biodiversity)** of the **ES**	Principal Contractor	Compliance with **Figure 2.3 (Environmental**	C	Regular monitoring to ensure effective establishment of new vegetation will

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	combination of overseeding and favourable management.	habitats of ecological value. Scheme will result in a loss of habitats.	**(Document Reference 3.1)**	**(Document Reference 6.1)**		**Masterplan)** of the **ES (Document Reference 6.2)** Approval of detailed LEMP by SoS following consultation with relevant planning authorities and compliance with the measures outlined within it.		be undertaken by the Environmental Manager in line with the future LEMP.
B7	A mosaic of native scrub and natural regeneration will be created along a stretch of the redundant A34 between the M3J9 gyratory and the River Itchen crossing to provide habitat for wildlife such as hazel dormice, breeding birds and invertebrates	To ensure biodiversity effects are reduced and to deliver an increase in habitats of ecological value. Scheme will result in a loss of habitats.	Requirement 3, 5 and 6 of the **draft DCO (Document Reference 3.1)**	**Chapter 8 (Biodiversity)** of the **ES (Document Reference 6.1)**	Principal Contractor	Compliance with **Figure 2.3 (Environmental Masterplan)** of the **ES (Document Reference 6.2)** Approval of detailed LEMP by SoS following consultation with relevant planning authorities and compliance with the measures outlined within it.	C	Regular monitoring to ensure effective establishment of new vegetation will be undertaken by the Environmental Manager in line with the future LEMP.
B8	Where hedgerows cannot be retained, either during construction or following landscaping activities, these will be replaced or translocated where possible. This includes section of the hedgerow running alongside Easton Lane.	To minimise impacts and protect existing and retained landscape features which act as habitats for a number of species Scheme will result in a loss of habitats.	Requirement 5 and 6 of the **draft DCO (Document Reference 3.1)**	**Chapter 8 (Biodiversity)** of the **ES (Document Reference 6.1)**	Principal Contractor	Compliance with **Figure 2.3 (Environmental Masterplan)** of the **ES (Document Reference 6.2)** Approval of detailed LEMP by SoS following consultation with relevant planning authorities and compliance with the measures outlined within it.		Regular monitoring to ensure effective establishment of new vegetation will be undertaken by the Environmental Manager in line with the future LEMP.

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						Compliance with the Arboricultural Method Statement and Tree Protection Plans (to be developed during detailed design and approved by the SoS following consultation with relevant planning authorities.		
B9	Whilst noting their primary function is for attenuation and treatment of surface water, some of the drainage features including wetlands and swales will provide semi-natural habitats of value to biodiversity.	To ensure biodiversity effects are reduced and to deliver an increase in habitats of ecological value. Scheme will result in a loss of habitats.	Requirement 13 of the **draft DCO (Document Reference 3.1)**	**Chapter 8 (Biodiversity)** of the **ES (Document Reference 6.1)**	Principal Contractor	Implement measures in the detailed operational Drainage Strategy (to be prepared at detailed design stage) following approval by SoS in consultation with the relevant planning authorities, the lead local flood authority and the Environment Agency. A preliminary Drainage Strategy Report is provided as **Appendix 13.1** of the **ES (Document Reference 6.3**)	C	None required
B10	Works near watercourses will be carried out in accordance with Construction Industry Research and Information Association (CIRIA) guidance, in particular *C532 Control of water pollution from construction sites, C650 Environmental Good Practice on Site, and CIRIA C648 Control of water pollution from linear construction projects*	To minimise impacts on riparian habitats and aquatic species Scheme will result in a loss of habitats.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 8 (Biodiversity)** of the **ES (Document Reference 6.1)**	Principal Contractor	Compliance with Construction Industry Research and Information Association (CIRIA) guidance, in particular *C532 Control of water pollution from construction sites, C650 Environmental*	C	Daily site inspections

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	(Further detail on measures to avoid impacts to the water environment are set out in the Road Drainage and Water Environment section of this table).					*Good Practice on Site, and CIRIA C648 Control of water pollution from linear construction projects* Undertake site inspections Complete site inspection log book		
B11	Fencing of adjacent designated areas and retained important habitat will be installed to protect the habitats and avoid incidental species mortality. Easton Down SINC is located within the Application Boundary but will be fenced and protected throughout the construction phase.	To minimise impacts on designated sites and protected species Assumed species associated with the SINC may be present on site.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 8 (Biodiversity)** of the **ES (Document Reference 6.1)**	Principal Contractor	Implement the measure	C	None required
B12	Measures will be provided to avoid entrapment of animals during construction, such as covering excavations at night or where this is not feasible providing escape ramps.	To minimise impacts on biodiversity. Assumed species may become trapped.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 8 (Biodiversity)** of the **ES (Document Reference 6.1)**	Principal Contractor	Implement measures Undertake site inspections Complete site inspection log book	C	Daily site inspections
B13	Prior to construction, a Reptile Mitigation Strategy will be produced and implemented to allow reptiles to be safeguarded throughout the construction and operational phases. This strategy will include trapping and translocation of reptiles, as well as habitat manipulation and displacement of reptiles (this method has been successfully utilised on road schemes in the region and was supported by Natural England[1]). Prior to translocation, receptor sites	To minimise impacts on reptiles Assumed reptiles may be present on site.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 8 (Biodiversity)** of the **ES (Document Reference 6.1)**	Principal Contractor	Approval of siEMP by SoS following consultation with relevant planning authorities Implement measures to enhance receptor sites carrying capacities in accordance with the Reptile Mitigation Strategy (to be	D (and C for enhancing receptor sites)	None required

[1] Case study: A338 Major Maintenance Scheme A new approach for ensuring road schemes avoid harm to reptiles, including European Protected Species (EPS), while securing significant wildlife gains (Natural England, Dorset County Council)

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	will be enhanced to increase their carrying capacity for reptiles through creating mosaics of habitats including scrub, grassland and open areas; and creating reptile refuges and hibernacula. Receptor sites will be within National Highway landholding, or with the agreement of landowner, and will be managed in the long term to maintain suitability for reptiles. This strategy will form **Appendix K** of the siEMP.					developed during detailed design).		
B14	Habitat clearance has been programmed to avoid sensitive periods for fauna such as breeding birds (including species listed on Schedule 1 of the *Wildlife and Countryside Act 1981* (as amended)), dormice, roosting bats and badgers. Where this is not possible, for instance if vegetation clearance is required during the bird breeding season, any vegetation will be checked by an ecologist a maximum of 48 hours prior to clearance to make certain no active nest are present, or no Schedule 1 species are nearby. If active nests are found vegetation clearance will be postponed until all birds have fledged and the nest is no longer in use, or a buffer zone established appropriate for the species.	To minimise disturbance to local ecological receptors Assumed breeding birds present.	Requirement 3 and 10 of the **draft DCO (Document Reference 3.1)**	**Chapter 8 (Biodiversity)** of the **ES (Document Reference 6.1)**	Principal Contractor	Approval of LEMP (to be produced at detailed design stage and approved by the SoS following consultation with the relevant planning authorities) ECoW to undertake searches of vegetation go be cleared if within sensitive time periods Record results of search Postpone clearance if required	C	None required
B15	No works in the Scheme located in or near a watercourse shall start until a Method Statement for working in and near watercourses, is developed in detail and has been approved by	To minimise impacts on riparian habitats and aquatic species	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 8 (Biodiversity)** of the **ES (Document Reference 6.1)**	Principal Contractor	Approval of Method Statement by SoS following consultation with relevant planning authorities.	C	None required

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	the SoS following consultation with the relevant planning authorities. The Method Statement shall include details of the watercourses present and key sensitives associated with those watercourses, construction methodology for all works within or near to a watercourse and control measures to be implemented to ensure their protection.							
B16	Construction of the Scheme will adhere to guidance issued by the Environment Agency on working methods and timing restrictions in relation to avoiding impacts to fish within the River Itchen, including the qualifying species of the River Itchen SAC/SSSI. In-river working required for installation of drainage outflows will avoid sensitive periods (1 October to 31 May inclusive for salmonid fish, and 15 March to 15 June inclusive for cyprinid fish). Where dewatering of sections of the river is required to facilitate construction, fish will be removed from these areas using electrofishing, in agreement with the Environment Agency and under any necessary permits.	To minimise impacts on watercourses, designated sites and species Assumed fish may be impacted by the Scheme.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 8 (Biodiversity)** of the **ES (Document Reference 6.1)**	Principal Contractor	Adherence to Environment Agency guidance on working methods and timing restrictions in relation to construction works, Consultation with the Environment Agency Adhere to relevant permits and consents	C	Environmental Manager to record actions taken if required i.e. removal of fish from areas of the river which is being dewatered.
B17	Piling works required for the construction of the new foot/cycle bridge will be carried out using vibro-piling (low vibration) methods or will adhere to the timing restrictions detailed above.	To minimise noise disturbance on ecological receptors Assumed piling may affect local species.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 8 (Biodiversity)** and **Chapter 11 (Noise and Vibration)** of the **ES (Document Reference 6.1)**	Principal Contractor	Adherence to low vibration piling or timing restrictions in consultation with the Environment Agency Undertake site inspections	C	Daily site inspections

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
						Complete site inspection log book		
B18	Where practicable, construction phase lighting will be designed to reduce light spill on important light-sensitive biodiversity features, in particular the River Itchen corridor which is known to support bats and otters. Measures will also include reference to measures in Section 10.4 (Temporary Floodlighting) of *Dark Skies Technical Advice Note 2*, (South Downs National Park Authority (SDNPA), May 2021)	To minimise disturbance to biodiversity Assumed lighting may affect local species.	Requirement 3 and 12 of the **draft DCO (Document Reference 3.1)**	**Chapter 8 (Biodiversity)** of the **ES (Document Reference 6.1)**	Principal Contractor	SoS approval of detailed design following consultation with the relevant planning authorities and the local highway authorities Undertake routine site inspections Complete site inspection log book	C	Regular site inspections
B19	Ensure the lighting scheme is designed to minimise light spill onto adjacent habitats. During the operational phase, lighting of the Scheme will minimise light spill and will be restricted to subways, underpasses, and at two gantries over the M3 south of Junction 9, where it is essential for safety reasons. ,	To minimise disturbance to biodiversity Assumed lighting may affect local species.	Requirement 3, 5 and 12 of the **draft DCO (Document Reference 3.1)**	**Chapter 8 (Biodiversity)** of the **ES (Document Reference 6.1)**	Principal Contractor	SoS approval of detailed design following consultation with the relevant planning authorities and the local highway authorities	O	None required
B20	To compensate for the loss of a main badger sett, an artificial badger sett will be provided. A licence under the *Protection of Badgers Act 1992* will be obtained to legally allow closure of the existing sett. All works affecting badgers shall be undertaken in accordance with the requirements of the licence. The artificial sett will be located within the Application Boundary as close as possible to the existing main sett, but to avoid disturbance will be outside the area of main works and	To ensure biodiversity effects are compensated. Assumed badgers may be affected by the Scheme.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 8 (Biodiversity)** of the **ES (Document Reference 6.1)**	Principal Contractor	Implementation of measures outlined and adherence to requirements of the license and guidance from Natural England	C	Monitoring of badger populations is necessary as part of the licensing requirements and will be agreed with Natural England.

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	temporary works. Other setts identified within the Application Boundary will be retained and where necessary protected during the construction phase through fencing or other barriers to avoid accidental damage or disturbance of setts.							
B21	To compensate for the loss of hazel dormice habitat (woodland, scrub and hedgerow) within the Application Boundary, the landscape planting has provided compensatory planting to enable a net increase in dormouse habitat within the Application Boundary in the long term, and to maintain connectivity across the wider landscape. A European Protected Species licence will be obtained to legally allow clearance of dormouse habitat. The licence application will include full details of appropriate mitigation strategies.	To ensure biodiversity effects are compensated. Assumed hazel dormouse may be affected by the Scheme.	Requirement 3, 5 and 6 of the **draft DCO (Document Reference 3.1)**	**Chapter 8 (Biodiversity)** of the **ES (Document Reference 6.1)**	Principal Contractor	Obtain European Protected Species license and adhere to it Approval and implementation of the measures set out in the LEMP (to be developed at detailed design stage and approved by the SoS following consultation with the relevant planning authorities)	D	Monitoring of dormice populations is necessary as part of the licensing requirements and will be agreed with Natural England.
B22	An Invasive Species Management Plan will be developed (this will form part of the EMP), identifying relevant invasive non-native species within the area to ensure that all necessary precautions are taken to prevent their spread. The invasive Species Management Plan will form **Appendix G** of the siEMP.	To avoid the spread of invasive species Assumed that invasive species are present on site.	Requirement 3 of the **draft DCO (Document Reference 3.1)**		Principal Contractor	Develop Invasive Species Management Plan Approval of siEMP by SoS following consultation with relevant planning authorities	D	Monitoring of badger populations is necessary as part of the licensing requirements and will be agreed with Natural England.
B23	During operation of the Scheme, essential mitigation in relation to important biodiversity receptors will include the management and monitoring of habitat creation and enhancement measures. Further	To ensure biodiversity effects are avoided or reduced, as well as to and to deliver an	Requirement 3, 5 and 6 of the **draft DCO (Document Reference 3.1)**	**Chapter 8 (Biodiversity)** of the **ES (Document Reference 6.1)**	Principal Contractor	Adhere to mitigation set out in **Appendix 7.6 (OLEMP)** of the **ES (Document Reference 6.3)** and the detailed LEMP (to	C	Environmental Manager will conduct period reviews of habitat created as part of the Scheme and

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	details are provided within **Appendix 7.6 (OLEMP)** of the **ES (Document Reference 6.3),** the detailed LEMP will be prepared prior to construction and is secured through the DCO.	increase in habitats of ecological value. Assumed species will be identified prior to construction.				be prepared prior to construction) SoS approval of LEMP following consultation with relevant planning authorities		record any actions taken
B24	During construction, the Environmental Manager shall develop and maintain a register of Sensitive Habitats and Protected Species encountered on the Scheme.	To ensure biodiversity effects are avoided or reduced. Assumed various habitats and species may be affected by the Scheme.	Requirement 3 and 10 of the **draft DCO (Document Reference 3.1)**	**Chapter 8 (Biodiversity)** of the **ES (Document Reference 6.1)**	Principal Contractor	Produce register of Sensitive Habitats and Protected Species Update register as necessary Provide records to relevant Authorities if requested	C	None required
B25	In the eventuality that a protected unforeseen species is found on the works during construction, the area should be isolated and protected from any further construction activities immediately. The Project Manager and Environmental Manager should be notified immediately; and the Principal Contractors ECoW should propose mitigation options-based impact evaluation. Localised construction activities should not recommence without the prior approval of the Project Manager and ECoW.	To ensure biodiversity effects are avoided or reduced. Assumed unforeseen species may be identified.	Requirement 3 and 10 of the **draft DCO (Document Reference 3.1)**	**Chapter 8 (Biodiversity)** of the **ES (Document Reference 6.1)**	Principal Contractor	Update register of Sensitive Habitats and Protected Species as necessary Notify relevant personnel and stop works	C	None required
B26	Existing vegetation will be retained in accordance with requirements identified in **Appendix 7.5 (Preliminary Arboricultural Impact Assessment)** of the **ES (Document Reference 6.3)** and areas as shown on **Figure 2.3 (Environmental**	To ensure biodiversity effects are avoided or reduced.	Requirement 3, 5 and 6 of the **draft DCO (Document Reference 3.1**)	**Chapter 8 (Biodiversity)** of the **ES (Document Reference 6.1)**	Principal Contractor	Compliance with **Appendix 7.5 (Preliminary Arboricultural Impact Assessment)** of the **ES (Document**	C	Environmental Manager to undertake regular site inspections in relation to the

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	Masterplan) of the **ES (Document Reference 6.2)**.	Assumed trees may need to be taken down / lopped.				**Reference 6.3)** and areas as shown on **Figure 2.3 (Environmental Masterplan)** of the **ES (Document Reference 6.2)**. Undertake site inspections Complete site inspection log book		establishment of new planting
B27	Implement advanced planting to support biodiversity mitigation for dormice on landscape plots 003-02, 003-04, 008-26 as shown on **Figure 2.3** (**Environmental Masterplan)** of the **ES (Document Reference 6.2)**	To support habitat creation to provide a more established asset by Scheme opening to ensure biodiversity effects are avoided or reduced. Assumed advanced planting is undertaken at the start of construction works and required to support biodiversity.	Requirement 3 and 6 of the **draft DCO (Document Reference 3.1)**	**Chapter 8 (Biodiversity)** of the **ES (Document Reference 6.1)**	Principal Contractor	Implement measures outlined on **Figure 2.3** (**Environmental Masterplan)** of the **ES (Document Reference 6.2)**	C	Environmental Manager to undertake regular site inspections in relation to the establishment of new planting
B28	Construction phase monitoring will be carried out and documented by the Principal Contractors Environmental Manager. Construction phase monitoring will include: • Water quality of discharges to watercourse (pH, total suspended solids, visible oils) – this is in accordance with the temporary Drainage Strategy at **Appendix J**	To ensure biodiversity effects are avoided or reduced.	Requirement 3 and 8 of the **draft DCO** (**Document Reference 3.1**)	**Habitats Regulations Assessment (Document Reference 7.5)**	Principal Contractor	SoS approval of siEMP following consultation with the relevant planning authorities Undertake monitoring and record results and any actions taken Make records available to the SoS and other relevant planning authorities if requested	C	Principal Contractors Environmental Manager to monitor water quality and species

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	• Annual surveys for qualifying and invasive non-native species • Further details will be provided in the siEMP							
B29	To avoid risk to white-clawed crayfish and other aquatic species from introduction of non-native species or pathogens, biosecurity measures will be implemented when carrying out works within the watercourses. This will include disinfecting all equipment, personal protective equipment (PPE), and machinery with a broad-spectrum disinfectant. This treatment will be repeated whenever machinery, equipment or PPE is transferred to another site or watercourse. No in-river working activities to the river channel or its banks will be undertaken without prior checks for white-clawed crayfish. If found to be present within the working area, white-clawed crayfish will be moved to an adjacent (unaffected) section of the River Itchen. If required, a licence will be obtained for the works. The timing of in-river works will be scheduled between 1 July and 30 September to avoid the sensitive period for white-clawed crayfish.	To ensure biodiversity effects are avoided or reduced. Assumed white-clawed cray fish are present.	Requirement 3 of the **draft DCO** (**Document Reference 3.1**)	**Chapter 8 (Biodiversity)** of the **ES (Document Reference 6.1)**	Principal Contractor	Production of Method Statement for working in or adjacent to watercourses and approval by SoS following consultation with relevant planning authorities. ECoW to check presence of white-clawed crayfish prior to works within watercourses and relocate if appropriate. Obtain a license for works involving white-clawed crayfish and adhere to it Undertake works in the time period identified	D and C	ECoW to monitor presence prior to works within watercourses, record presence and action taken
B30	**Figure 2.3 (Environmental Masterplan)** of the **ES (Document Reference 6.2)** identifies areas of the River Itchen river where enhancement measures will be provided. Measures will align with the Environment Agency's *River Itchen Restoration Strategy*. These	To provide enhancements to the River Itchen.	Requirement 5, 6 and 12 of the **draft DCO (Document Reference 3.1)**	**Chapter 8 (Biodiversity)** of the **ES (Document Reference 6.1)**	Principal Contractor	SoS approval of detailed design following consultation with relevant planning authorities and the local highway authority	D	None required

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	areas are likely to include riparian planting and / or channel narrowing by marginal planting.					Approval of LEMP (to be developed during detailed design) by the SoS following consultation with relevant planning authorities Compliance with the Environment Agency's River Itchen Restoration Strategy.		
B31	In areas of retained woodland within the Application Boundary removal of invasive species such as snowberry will be undertaken, along with favourable management to provide improvements to this existing habitat.	To improve the habitat condition, as defined in the Defra metric 3.1, from 'moderate' to 'good'.	Requirement 3, 5 and 6 of the **draft DCO (Document Reference 3.1)**	**Chapter 8 (Biodiversity)** of the **ES (Document Reference 6.1)**	Principal Contractor	Implementation of measures outlined Approval of LEMP (to be developed during detailed design) by the SoS following consultation with relevant planning authorities Undertake site audits and record results / actions completed	C	Periodic Audits by Environmental Manager
	Geology and Soils							
GS1	In relation to the potential for ground instability; where the Scheme design has identified the need for mitigation of potential risks, additional phased site-specific intrusive ground investigation will be carried out to inform measures such as treatment of solution features, use of geogrids or other risk-based solutions as appropriate.	To ensure effects on geology and soils are reduced. Assumed there is the potential for ground instability	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 9 (Geology and Soils)** of the **ES (Document Reference 6.1)**	Principal Contractor	Undertake ground investigation works Record results of ground investigation works and update siEMP accordingly with revised mitigation measures if required SoS approval of siEMP following consultation with	D	None required

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						relevant planning authorities.		
GS2	In relation to the potential for land contamination, additional phased site- specific intrusive ground investigation will inform an update to and refinement of the Conceptual Site Model, and if necessary any additional risk assessments. The outcome of any additional risk assessments will determine/refine any mitigation/remediation requirements in relation to land contamination and these will be included within the siEMP.	To ensure effects on geology and soils are reduced. Assumed additional site specific ground investigation will be carried out.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 9 (Geology and Soils) of the ES (Document Reference 6.1)**	Principal Contractor	Undertake ground investigation works Record results of ground investigation works and update siEMP accordingly with revised mitigation measures if required SoS approval of siEMP following consultation with relevant planning authorities.	D	None required
GS3	A FWRA in accordance with Environment Agency guidance *Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination* (Environment Agency, 2001) will be prepared once the proposed foundation solutions are known.	To ensure effects on geology and soils are reduced. Assumed a FWRA will be prepared and consulted with the Environment Agency.	Requirement 3 and 12 of the **draft DCO** (**Document Reference 3.1**)	**Chapter 9 (Geology and Soils)** of the **ES (Document Reference 6.1)**	Principal Contractor	Approval of detailed design i.e. foundation solutions by SoS following consultation with the relevant planning authorities and the local highway authority Production of a FWRA and approval by the SoS following consultation with the relevant planning authorities	D	None required
GS4	A Soil Resources Plan for the Scheme will be prepared setting out the areas and type of soil to be stripped, haul routes, the methods to be used, and the location, type and management of each soil stockpile to help protect and enhance soil resources on site. This plan will be	To ensure soils are handled correctly. The assumption is that the siEMP will be implemented throughout	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 9 (Geology and Soils)** of the **ES (Document Reference 6.1)**	Principal Contractor	Prepare a detailed Soil Resources Plan (to be prepared during detailed design) A **draft Soil Resources Plan** is provided in	D	None required

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
	prepared by the Principal Contractor during the detailed design stage and included within **Appendix D** of the siEMP,	the construction of the Scheme.				**Appendix C** of this fiEMP SoS approval of siEMP following consultation with relevant planning authorities		
GS5	A Soil Management Plan will be prepared and ensure / include: ▪ Works are undertaken in compliance with the Defra Construction Code of Practice for the Sustainable Use of Soils on Construction Sites. (Defra, 2009). ▪ A soil sampling, testing, assessment and re-use criteria defined in an earthworks specification for the construction works. The specification will be prepared in accordance with the Specification for Highway Works, Series 600 Earthworks. ▪ Detail the areas and type of top/subsoil and chalk to be stripped, stripping method, haul routes and the management of the stockpiles. ▪ Details of how topsoil and chalk will be handled in various weather conditions and outline suitable machinery in line with the Defra Construction Code of Practice. ▪ Details of how topsoil excavated from areas of known high quality agricultural land will be stored separately and, where possible, reused in areas that will be returned to agricultural use.	To ensure effects on geology and soils are reduced. Assumed the Soils Management Plan will be prepared and implemented throughout construction.	Requirement 3 and 11 of the **draft DCO (Document Reference 3.1)**	**Chapter 9 (Geology and Soils)** of the **ES (Document Reference 6.1)**	Principal Contractor	Prepare Soil Management Plan (to be prepared during detailed design) A **draft Soil Management Plan** is provided in **Appendix C** of this fiEMP SoS approval of siEMP following consultation with relevant planning authorities	D	None required

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	▪ Details of how stockpiling of soils and chalk will be avoided wherever possible. Where stockpiling is unavoidable, heaps will be tipped loosely and the surface firmed and shaped to shed water. Where soils are to be stockpiled for more than six months the surface will be seeded with an appropriate seed mix. ▪ Details of the strategy for placement and reuse of site gained chalk material to ensure its functionality is maintained following placement. ▪ An outline of how any soils that do not meet chemical acceptability criteria they will be treated or disposed of to a suitable licenced facility. ▪ Details of how traffic movements will be confined to designated haul routes to reduce the amount of heavy machinery tracking over soil / chalk materials which could cause compaction. ▪ A draft Soil Management Plan can be found at **Appendix C** of this fiEMP.							
GS6	Following completion of construction operations all agricultural land taken temporarily will be fully reinstated as near as practically possible to its former condition (or to a state agreed with the landowner). Topsoil will be prepared and seeded using an appropriate seed mix.	To be a good neighbour. Assumed the soils will be reinstated following construction.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 9 (Geology and Soils)** of the **ES (Document Reference 6.1)**	Principal Contractor	Prepare Soil Management Plan (to be prepared during detailed design) A **draft Soil Management Plan** is provided in **Appendix C** of this fiEMP	C	Site inspections

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
						SoS approval of siEMP following consultation with relevant planning authorities Undertake site inspections Complete site inspection log book		
GS7	The Site Waste Management Plan (SWMP) and a Materials Management Plan (MMP) will be prepared following the protocols within the Contaminated Land Application in the Real Environment (CL:AIRE) Definition of Waste: Development Industry Code of Practice to ensure that excavated materials are re-used appropriately, sustainably and remain outside the waste hierarchy.	To adhere to the Waste Hierarchy and dispose of materials in an appropriate manner. Assumed the Site Waste Management Plan and the MMP will be prepared and implemented throughout construction.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 9 (Geology and Soils)** of the **ES (Document Reference 6.1)**	Principal Contractor	Prepare SWMP and Materials Management Plan (to be prepared during detailed design). These will form appendices to the siEMP Drafts of these ECPs can be found in **Appendix E and F** of this fiEMP. SoS approval of siEMP following consultation with relevant planning authorities	D	None required
GS8	During the stripping and excavation work, a watching brief will be adopted with site workers remaining vigilant such that visual or olfactory signs of contamination are noted and subsequently dealt with appropriately.	To minimise the potential for spreading contamination. Assumed contamination may be encountered during construction.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 9 (Geology and Soils)** of the **ES (Document Reference 6.1)**	Principal Contractor	Undertake watching brief during stripping and excavation work Inform Principal Contractor and Environmental Manager if signs of contamination are found Stop works if signs of contamination found	C	Watching briefs

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						Record details of contamination and action undertaken		
GS9	Potentially contaminated soil encountered during construction will be kept separate from other materials and analysed to determine if it is suitable for re-use on site or requires disposal off-site to an appropriate disposal facility. .	To minimise potential for soil contamination. Assumed contamination may be encountered during construction.	Requirement 3 and 8 of the **draft DCO (Document Reference 3.1)**	**Chapter 9 (Geology and Soils)** of the **ES (Document Reference 6.1)**	Principal Contractor	Ensure contaminated soil is separate from non-contaminated Adhere to the SWMP and MMP (to be prepared during detailed design). These will form appendices to the siEMP Drafts of these ECPs can be found in **Appendix E and F** of this fiEMP. Undertake site inspections Complete site inspection log book	C	Site inspections
GS10	To reduce the spread of contaminants during construction, contaminated soils (identified by the intrusive investigation) within areas to be excavated will be removed prior to the main works as detailed in a remedial method statement (this will be included at **Appendix I** of the siEMP). Where appropriate materials will be treated for re-use or if this is not possible materials will be disposed of at an appropriate waste facility.	To minimise the spread of contaminants during construction works. Assumed contamination may be encountered during construction.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 9 (Geology and Soils)** of the **ES (Document Reference 6.1)**	Principal Contractor	Adhere to Waste Hierarchy SoS approval of siEMP following consultation with relevant planning authorities	C	None required
GS11	During construction, specific areas will be designated for the storage of chemicals, waste oils and fuel and	To avoid accidental spillages / leaks that may lead to contamination.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 9 (Geology and Soils)** of the **ES**	Principal Contractor	All construction personnel will be briefed in regard to	C	Site inspections

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	refuelling activities. These areas will be bunded and placed on an impermeable base, where appropriate, to prevent migration of contaminants.	Assumed measures will be implemented throughout construction.		**(Document Reference 6.1)**		managing and storing chemicals, oils, fuels etc. i.e Toolbox talks Site inspections Record any spillages / leaks in site inspection log book		
GS12	Designated fuel transfer areas during construction are to be established and used for the transfer of fuel or other potentially contaminating liquids. Drip trays are to be provided.	To reduce the potential for spillages / leaks which may lead to contamination. Assumed measures will be implemented throughout construction.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 9 (Geology and Soils)** of the **ES (Document Reference 6.1)**	Principal Contractor	All construction personnel will be briefed in regard to transferring fuels etc. i.e Toolbox talks Site inspections Record any spillages / leaks in site inspection log book	C	Site inspections
GS13	During construction, generators are to be placed within the compound areas. These will be appropriately contained including bunds and impermeable base, where appropriate to protect underlying soils from leaks and spillages.	To reduce the potential for spillages / leaks which may lead to contamination. Assumed measures will be implemented throughout construction.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 9 (Geology and Soils)** of the **ES (Document Reference 6.1)**	Principal Contractor	All construction personnel are briefed in regard to managing and storing chemicals, oils, fuels etc. i.e Toolbox talks Site inspections Record any spillages / leaks in site inspection log book	C	Site inspections
GS14	During the construction phase, localised contamination may occur within the compound areas through spillages / leakages of fuel and therefore a repeat baseline survey will be undertaken once the construction has finished and the compound dismantled to demonstrate the area has been returned to its previous state. If contamination has occurred during	To ensure there will be no contamination as a result of the Schemes construction works Assumed contamination may occur.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 9 (Geology and Soils)** of the **ES (Document Reference 6.1)**	Principal Contractor	Undertake site surveys following construction to ensure no contamination has occurred as a result Suitable and qualified personnel to remediate if required	O	None required

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	the lifetime of the compounds, remediation will be undertaken to return the land to an agreed quality.							
GS15	During the construction phase, all persons engaged in site construction works will be made aware of any potential contaminated material. To prevent risks from exposure to any contaminants the appropriate Personal Protective Equipment will be made available.	To minimise the risk of contamination to construction personnel Assumed contamination may be encountered during construction.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 9 (Geology and Soils)** of the **ES (Document Reference 6.1)**	Principal Contractor	Construction personnel will wear appropriate PPE All construction personnel will be briefed in regard to contaminated materials on site. i.e Toolbox talks	C	None required
GS16	In the event site operatives discover any adverse ground conditions and suspect it to be contaminated, it will be reported as soon as reasonably practicable to the Site Manager, the relevant planning authority and the Environment Agency. Construction work in the location of the adverse ground conditions will cease temporarily. An appropriately qualified person will be employed to undertake sampling and analysis of the suspected contaminated materials. A report detailing sampling methodologies and analysis results, together with remedial measures will be submitted to the Secretary of State, following consultation with the relevant Planning Authority and Environment Agency, for approval. Remediation will be carried out in accordance with the approved Scheme.	To minimise the risk of contamination to sensitive receptors Assumed contamination may be encountered during construction.	Requirement 3 and 8 of the **draft DCO (Document Reference 3.1)**	**Chapter 9 (Geology and Soils)** of the **ES (Document Reference 6.1)**	Principal Contractor	Adverse ground conditions will be reported to the relevant authorities and construction works will halt until a qualified person appropriately manages the risk Report of findings and remediation measures will be submitted to the SoS following consultation for approval.	C	None required

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GS17	On land to be returned to agriculture surface water/ agricultural drains will be re-installed to reinstate any pre-existing field drainage systems to pre-construction condition.	To ensure drainage is reinstated appropriately. Assumed drainage will be reinstated to its pre-condition state or a condition agreed with the landowner.	Requirement 3 and 13 of the **draft DCO (Document Reference 3.1)**	**Chapter 9 (Geology and Soils)** of the **ES (Document Reference 6.1)**	Principal Contractor	Approval of Temporary (Construction) **Drainage Strategy** contained in **Appendix J** of this fiEMP by the SoS following consultation with the relevant planning authority, the lead local flood authority and the Environment Agency. Site inspections Complete site inspection log book	O	Site inspections
GS18	All soils will be stored a minimum of 5m from watercourses (or potential pathways to watercourses) and any potentially contaminated soil will be stored on an impermeable surface and covered to reduce leachate generation and potential migration to surface waters.	To minimise the potential for leachate generation and migration to waterbodies. Assumed there is the potential for surface water contamination.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 9 (Geology and Soils)** of the **ES (Document Reference 6.1)**	Principal Contractor	Site inspections Complete site inspection log book	O	Site inspections
GS19	A considerate construction approach will be used to minimise potential impacts on the agricultural enterprises during the construction phase. Toolbox talks will be used to inform all those working on the site of the requirements for soil handling and minimisation of disturbance to neighbouring agricultural activities.	To be a considerate and good neighbour. Assumed regular toolbox talks will be given during construction.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 9 (Geology and Soils)** of the **ES (Document Reference 6.1)**	Principal Contractor	Contractor will sign up to the Considerate Contractors Scheme (CCS) and adhere to its guidelines. All construction personnel will be briefed in regard to minimising disturbance to neighbours i.e Toolbox talks	C	Maintain complaints log

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						Community Liaison Manager will be appointed Maintain complaints log		
GS20	Works will cease, and the Animal Health Regional Office will be advised, should animal bones be discovered which indicate a potential burial site.	To avoid disturbance to burial sites.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 9 (Geology and Soils)** of the **ES (Document Reference 6.1)**	Principal Contractor	Construction personnel will be made aware to stop works should animal bones be discovered	C	None required
GS21	All movement of plant and vehicles between fields will cease in the event of a disease outbreak and official Defra advice will be followed to minimise the biosecurity risk associated with the continuation of works.	To ensure reduce biosecurity risks. Assumed there is the potential for biosecurity risks.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 9 (Geology and Soils)** of the **ES (Document Reference 6.1)**	Principal Contractor	Defra advice will be adhered to in the event of a disease outbreak	C	None required
GS22	Pre -construction agricultural survey, testing and recording of the existing topsoil and subsoil conditions.	To ensure soils are reinstated in an appropriate condition following construction. Assumed soils will be reinstated in accordance with the measures set out in this fiEMP.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 9 (Geology and Soils)** of the **ES (Document Reference 6.1)**	Principal Contractor	Undertake site surveys to ensure up to date baseline conditions are known	D	None required
GS23	Pre-construction activity to establish the exact nature of the existing field drainage system including any associated farm drainage which may be affected by the Scheme	To ensure drainage is reinstated appropriately following construction. Assumed drainage will be reinstated following construction.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 9 (Geology and Soils)** of the **ES (Document Reference 6.1)**	Principal Contractor	Undertake site surveys to ensure up to date baseline conditions are known	D	None required
	Material Assets and Waste							

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MA1	No part of the Scheme can start until a SWMP and MMP is developed in detail in substantial accordance with the outline plans included at **Appendix E and F** of this fiEMP, has been subject to consultation with the relevant planning authorities and has been approved as part of the siEMP by the SoS. The purpose of the SWMP is to: • Identify key waste streams that are likely to be produced from the Scheme and appropriate waste management and minimisation options, with an aim to encourage resource efficiency and sustainable waste management; • To record design and construction decisions that demonstrate best practice in material resource use and waste management; • To record how waste is prevented, minimised, re-used, recycled and disposed of on a construction site	To maximise efficiency and minimise waste through design Assumed excavated earthworks can be re-used.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 10 (Material Assets and Waste)** of the **ES (Document Reference 6.1)**	Principal Contractor	Approval of siEMP by the SoS following consultation with the relevant planning authorities.	D	None required
MA2	The re-use of and processing of excavated earthworks materials will be employed wherever possible to minimise the amount of surplus materials and import of primary aggregate materials.	To reduce consumption of resources and minimise off-site disposal Assumed excavated earthworks can be re-used.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 10 (Material Assets and Waste)** of the **ES (Document Reference 6.1)**	Principal Contractor	Adherence to the SWMP and MMP (to be developed in the detailed design stage and approved by the SoS following consultation with the relevant planning authorities) Drafts of these ECPs are provided at	C	None required

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
						Appendix E and F of this fiEMP		
MA3	Principal Contractor to identify possible mitigation measures, and to identify opportunities to reduce waste through collaboration and regional synergies.	To ensure effects on material assets and waste are reduced. Assumed that further opportunities can be sought to reduce waste following detailed design.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 10 (Material Assets and Waste)** of the **ES (Document Reference 6.1)**	Principal Contractor	Liaison with other contractors working on nearby schemes	C	None required
MA4	Working to a proximity principle: ensuring arisings generated are handled, stored, managed and re-used or recycled at one of the nearest appropriate installations.	To ensure effects on material assets and waste are reduced. Assumed the handling of arisings generated will be minimised.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 10 (Material Assets and Waste)** of the **ES (Document Reference 6.1)**	Principal Contractor	Adherence to the SWMP and MMP (to be developed in the detailed design stage and approved by the SoS following consultation with the relevant planning authorities) Drafts of these ECPs are provided at **Appendix E and F** of this EMP	C	None required
MA5	The Principal Contractor is committed to achieving 95% of non-hazardous waste (by weight) diverted from landfill. The Principal Contractor will have overall responsibility for the management of all waste streams generated within the site. Hazardous waste where possible will look to be 'cleaned' and recycled dependent on the chemical analysis and costs, prior to disposal.	To ensure effects on material assets and waste are reduced. Assumed targets can be achieved.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 10 (Material Assets and Waste)** of the **ES (Document Reference 6.1)**	Principal Contractor	Adherence to the SWMP and MMP (to be developed in the detailed design stage and approved by the SoS following consultation with the relevant planning authorities) Drafts of these ECPs are provided at **Appendix E and F** of this EMP	C	None required

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MA6	Capture information and data on waste sent to landfill, by developing a Site Waste Management Plan and a Materials Management Plan (drafts of these ECPs are provided at **Appendix E and F**).	To ensure effects on material assets and waste are reduced. Assumed a Site Waste Management Plan and Materials Management Plan will be implemented throughout construction.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 10 (Material Assets and Waste)** of the **ES (Document Reference 6.1)**	Principal Contractor	Update SWMP with data on waste sent to landfill	C	Environmental Manager to record levels and types of waste being disposed to landfill
MA7	Identification and specification of materials that can be acquired responsibly, in accordance with BES 6001 Responsible Sourcing of Construction Products.	To ensure effects on material assets and waste are reduced. Assumed materials will be sourced responsibly.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 10 (Material Assets and Waste)** of the **ES (Document Reference 6.1)**	Principal Contractor	Procurement of sustainable construction products where practicable	C	None required
MA8	Maximising the use of renewable materials and materials with recycled or secondary content and setting material balance as a goal.	To ensure effects on material assets and waste are reduced. Assumed the use of renewable materials can be maximised.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 10 (Material Assets and Waste)** of the **ES (Document Reference 6.1)**	Principal Contractor	Adherence to the SWMP and MMP (to be developed in the detailed design stage and approved by the SoS following consultation with the relevant planning authorities) Drafts of these ECPs are provided at **Appendix E and F** of this EMP	C	None required
MA9	Design for off-site construction: maximising the use of pre-fabricated structures and components.	To maximise efficiency and minimise waste through design Assumed pre-fabricated structures and components can be maximised.	Requirement 3 and 12 of the **draft DCO (Document Reference 3.1)**	**Chapter 10 (Material Assets and Waste)** of the **ES (Document Reference 6.1)**	Principal Contractor	Procurement of pre-fabricated structure and components where practicable Approval of detailed design by the SoS following consultation with the relevant planning authority	D	None required

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
						and the local highways authority		
MA10	Design for recovery and re-use: identifying, securing and using materials at their highest value, whether they already exist on site, or are sourced from other locations.	To maximise efficiency and minimise waste through design Assumed that design for re-use and recovery is embedded into the design.	Requirement 3 and 12 of the **draft DCO (Document Reference 3.1)**	**Chapter 10 (Material Assets and Waste)** of the **ES (Document Reference 6.1)**	Principal Contractor	Procurement of sustainable construction products where practicable Approval of detailed design by the SoS following consultation with the relevant planning authority and the local highways authority	D	None required
MA11	Identify opportunities to minimise the export and import of materials.	To minimise the export and import of materials Assumed export and import of materials is minimised.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 10 (Material Assets and Waste)** of the **ES (Document Reference 6.1)**	Principal Contractor	Collaboration during design of technical disciplines i.e waste material may be used to create visual screening	D	None required
MA12	Identify areas for stockpiling and storing arisings in a manner minimising quality degradation and leachate, and damage and loss.	To reduce the potential for degradation and contamination of soils and materials Assumed stockpiling and storing arisings will be needed during construction.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 10 (Material Assets and Waste)** of the **ES (Document Reference 6.1)**	Principal Contractor	Comply with measures set out in the siEMP (to be prepared during detailed design and approved by the SoS following consultation with the relevant planning authorities) Undertake site inspections Complete site inspection log book	C	Site inspections
MA13	Making sure potential arisings and waste are properly characterised before or during design, to maximise the potential for highest value reuse.	To maximise efficiency and minimise waste through design	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 10 (Material Assets and Waste)** of the	Principal Contractor	Characterise waste streams when preparing the SWMP (to be prepared	D	None required

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
		Assumed arisings will be re-used during construction.		**ES (Document Reference 6.1)**		during detail design and approved by the SoS following consultation with the relevant planning authorities) A draft SWMP is provided at **Appendix E** of this EMP		
	Noise and Vibration							
NV1	A Noise and Vibration Management Plan (NVMP) will be prepared, outlining how construction noise and vibration will be managed (and monitored) throughout the construction of the Scheme including any noise limits agreed with the EHO. This plan will be prepared by the Principal Contractor during the detailed design stage and will be **Appendix L** of the siEMP. No part of the Scheme will start until this has been subject to stakeholder engagement and consultation with Winchester City Council. The NVMP shall include: • Details of any consents to be sought under Section 61 of the Control of Pollution Act 1974; • Details on proposed site working hours; • Requirements for noise and vibration monitoring; • Details on how local residents that may be affected by construction noise and vibration will be notified of activities that	To manage and minimise impacts arising from construction and operational noise Assumed there is the potential for noise and vibration effects.	Requirement 3 and 14 of the **draft DCO (Document Reference 3.1)**	**Chapter 11 (Noise and Vibration)** of the **ES (Document Reference 6.1)**	Principal Contractor	Production of the NVMP and approval by the SoS following consultation with the relevant planning authorities. Implement measures within the approved NVMP.	D	None required

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
	have the potential to cause a nuisance; • Details on how complaints will be recorded and responded to							
NV2	A Section 61 (of the Control of Pollution Act 1974) Consent will be obtained prior to the start of works. The requirement for demolition and construction noise and vibration monitoring will be agreed with Winchester City Council through the Section 61 application. The exact methodology and location of the monitoring will be agreed with Winchester City Council.	To monitor construction noise and determine mitigation methods following this Assumed there is the potential for noise and vibration effects.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 11 (Noise and Vibration)** of the **ES (Document Reference 6.1)**	Principal Contractor	Obtain a Section 61 Consent and agree methodology and location of monitoring with Winchester City Council	D (and C for monitoring)	Noise and vibration monitoring will be agreed with Winchester City Council.
NV3	To reduce noise impacts associated with the operation of the Scheme, low noise road surfaces are proposed where new roads surfaces are to be laid. The surface shall be specified to achieve a Road Surface Influence (RSI) of -3.5dB.	To reduce effects of noise and vibration from construction traffic. Assumed low noise road surfacing will be implemented.	Requirement 12 and 14 of the **draft DCO (Document Reference 3.1)**	**Chapter 11 (Noise and Vibration)** of the **ES (Document Reference 6.1)**	Principal Contractor	Implement the measure outlined	C	None required
NV4	A set of generic best practice working methods referred to as Best Practicable Means (BPM) will be employed during the construction phase. Typical BPM are provided below.	To reduce effects of noise and vibration. Assumed there is the potential for noise effects.	Requirement 3 and 14 of the **draft DCO (Document Reference 3.1)**	**Chapter 11 (Noise and Vibration)** of the **ES (Document Reference 6.1)**	Principal Contractor	Approval of siEMP by the SoS following consultation with the relevant planning authorities Construction personnel will be made aware of these measures via e.g. Toolbox Talks	C	None required
NV5	Provision of contact details for a site representative in the event that disturbance due to noise or vibration from the construction works occurs;	To reduce effects of noise and vibration.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 11 (Noise and Vibration)** of the	Principal Contractor	Maintain complaints log	C	Environmental Manager to monitor which activities cause

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	ensuring that any complaints are dealt with pro-actively and that subsequent resolutions are communicated to the complainant.	Assumed there is the potential for noise effects.		**ES (Document Reference 6.1)**		Appoint Community Liaison Manager		complaints most frequently
NV6	Site access routes will be in good condition and well maintained with no potholes or other significant surface irregularities.	To reduce effects of noise and vibration caused by construction vehicles. Assumed access routes will be in good condition.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 11 (Noise and Vibration)** of the **ES (Document Reference 6.1)**	Principal Contractor	Undertake site inspections Complete site inspection log book Upgrade / maintain surfaces if condition deteriorates Approval of siEMP by the SoS following consultation with the relevant planning authorities	C	Site inspections
NV7	Silenced equipment will be used where possible, in particular silenced power generators and pumps.	To minimise noise and vibration from plant and equipment used during the construction phase Assumed there is the potential for noise effects.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 11 (Noise and Vibration)** of the **ES (Document Reference 6.1)**	Principal Contractor	Procurement of silenced equipment	C	None required
NV8	Plant and equipment covers/hatches will be properly secured and there will be no loose fixings causing rattling.	To minimise noise and vibration from plant and equipment used during the construction phase Assumed there is the potential for noise effects.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 11 (Noise and Vibration)** of the **ES (Document Reference 6.1)**	Principal Contractor	Undertake site inspections Complete site inspection log book	C	Site inspections
NV9	On site speed limits will be in place to reduce the effect of construction traffic noise. Speed limits will be enforceable within the main works	To reduce effects of noise and vibration from construction traffic	Requirement 3 and 11 of the **draft DCO**	**Chapter 11 (Noise and Vibration)** of the	Principal Contractor	Adhere to the detailed Traffic Management Plan (to be prepared during	C	None required

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	sites, with all non-surfaced roads restricted to 10mph and any surfaced roads restricted to 10mph.	Assumed there is the potential for noise and vibration effects.	**(Document Reference 3.1)**	**ES (Document Reference 6.1)**		the detailed design stage and approved by the SoS following consultation with the local highway authority) An **Outline Traffic Management Plan** has been prepared in **Document Reference 7.8**		
NV10	To minimise vibration from HGV movements, there will be monthly condition assessments to inspect for defects such as pot holes which could cause an increase in noise levels. Existing potholes will need to be considered by a condition assessment prior to the commencement of works.	To reduce effects of noise and vibration. Assumed there is the potential for noise and vibration effects.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 11 (Noise and Vibration)** of the **ES (Document Reference 6.1)**	Principal Contractor	Undertake inspections of HGVs used on site during construction works	C	Monthly condition assessments
NV12	Restriction of number of plant items in use at any one time	To reduce effects of noise and vibration. Assumed there is the potential for noise effects.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 11 (Noise and Vibration)** of the **ES (Document Reference 6.1)**	Principal Contractor	Undertake site inspections Complete site inspection log book Ensure that construction personnel are aware of working methods via Toolbox Talks	C	Site inspections
NV13	Locating noisy plant and equipment at a suitable distance away from residential dwellings / sensitive receptors.	To minimise noise and vibration effects through design.. Assumed there is the potential for noise effects.	Requirement 3 and 12 of the **draft DCO (Document Reference 3.1)**	**Chapter 11 (Noise and Vibration)** of the **ES (Document Reference 6.1)**	Principal Contractor	Approval of detailed design by SoS following consultation with the relevant planning authorities Consultation with EHO	D	None required

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NV14	Frequent maintenance of plant and equipment.	To reduce effects of noise and vibration. Assumed there is the potential for noise effects.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 11 (Noise and Vibration)** of the **ES (Document Reference 6.1)**	Principal Contractor	Regular inspections of construction equipment should be undertaken Any issues with equipment should be logged and managed appropriately	C	Plant and equipment inspections
NV15	Where practical, carry out loading and unloading activities at a suitable distance away from residential dwellings.	To minimise noise disturbance to local receptors through design Assumed there is the potential for noise effects.	Requirement 3 and 12 of the **draft DCO (Document Reference 3.1)**	**Chapter 11 (Noise and Vibration)** of the **ES (Document Reference 6.1)**	Principal Contractor	Approval of detailed design by SoS following consultation with the relevant planning authorities Consultation with EHO	D	None required
NV16	Closing of compressor, generator and engine compartment doors when in use	To minimise noise and vibration impacts associated with plant and equipment Assumed there is the potential for noise effects.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 11 (Noise and Vibration)** of the **ES (Document Reference 6.1)**	Principal Contractor	Ensure that construction personnel are aware of working methods via Toolbox Talks	C	None required
NV17	Careful lowering of materials/equipment and the minimisation of drop heights.	To reduce effects of noise and vibration generated by construction works. Assumed there is the potential for noise effects.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 11 (Noise and Vibration)** of the **ES (Document Reference 6.1)**	Principal Contractor	Ensure that construction personnel are aware of working methods via Toolbox Talks	C	None required
NV18	Following any changes to the design, the Principal Contractor will ensure that an updated noise assessment has been carried out to ensure there will be no additional or	To reduce effects of noise and vibration. Assumed there is the potential for noise and vibration effects.	Requirement 3 and 14 of the **draft DCO (Document Reference 3.1)**	**Chapter 11 (Noise and Vibration)** of the **ES (Document Reference 6.1)**	Principal Contractor	Undertake updated noise assessment prior to construction works to ensure baseline information is up to date	D	None required

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	increase in negative effects on nearby receptors.							
NV19	The Principal Contractor will be responsible for notifying the local residents of particularly noisy work prior to commencement of those works. Effective communication should be established, keeping residents informed of the type and timing of works involved.	To reduce effects of noise and vibration. Assumed there is the potential for noise and vibration effects.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 11 (Noise and Vibration)** of the **ES (Document Reference 6.1)**	Principal Contractor	Appointment of Community Liaison Manager Manage complaints log	C	Monitor complaints to determine most frequent cause
	Population and Human Health							
PH1	National Highways will inform local businesses / residents of proposed works via the Scheme website.	To maintain a good relationship with local residents and businesses. Assumes this will be implemented throughout construction.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 12 (Population and Human Health)** of the **ES (Document Reference 6.1)**	National Highways	Ensure website is updated regularly	D and C	None required
PH2	National Highways will seek to develop links with educational establishments in the locality. For example, cycle proficiency courses for children. Talks at local secondary schools to provide an insight into engineering as a possible profession.	To reduce effects on population and human health. Assumes establishments will be interested in making links with the site.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 12 (Population and Human Health)** of the **ES (Document Reference 6.1)**	National Highways	Community Liaison Manager to seek links with educational establishments	D and C	None required
PH3	Construction site will be clearly delineated and fenced. This will ensure no trespassing onto land with construction activities and therefore reduce health and safety risks.	To reduce effects on population and human health. Assumes fencing will be in place throughout construction.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 12 (Population and Human Health)** of the **ES (Document Reference 6.1)**	Principal Contractor	Adhere to the siEMP following approval by SoS and consultation with the relevant planning authorities	C	None required

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PH4	The relationship with the landowners, occupiers, stakeholders and the local community will be maintained throughout the construction phase through the Scheme website and a dedicated stakeholder representative appointed by the Principal Contractor.	To reduce effects on population and human health. Assumes good relationships will be maintained.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 12 (Population and Human Health)** of the **ES (Document Reference 6.1)**	Principal Contractor	Appoint a Community Liaison Manager Maintain complaints log	C	Monitor complaints log
PH5	Where reasonably practicable, maintain Public Rights of Way (PRoW) (including diversions) for pedestrians, cyclists and equestrians affected by the Scheme, including reasonable adjustments to maintain or achieve inclusive access.	To minimise adverse impacts on human health. Assumes maintenance will be undertaken throughout construction.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 12 (Population and Human Health)** of the **ES (Document Reference 6.1)**	Principal Contractor	Authority approval of detailed design involving consultation with the Council PRoW Officer	D	None required
PH6	Additional signage will be provided for businesses receptors who require access from the M3 Junction 9, including Kier Highways and those within Winnall Industrial Estate, taking into account the need to mimise visual intrusion and landscape effects.	In order to avoid or reduce impacts on local residents and local communities, maintain essential access to private residences, community facilities and businesses throughout construction period Assumes good relationships will be maintained.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 12 (Population and Human Health)** of the **ES (Document Reference 6.1)**	Principal Contractor		C	None required
PH7	National Highways and Principal Contractor to maximise procurement of local workers.	To ensure the local area economically benefits from the Scheme. Assumes local labour can be sourced.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 12 (Population and Human Health)** of the **ES (Document Reference 6.1)**	National Highways, Principal Contractor	Source local labour where possible	C	None required

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PH8	Public notices, particularly those relating to comments on site activities will be inclusive to all protected groups under the Equalities Act 2010.	To ensure the project is inclusive. Assumes signage will be put out on site.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 12 (Population and Human Health)** of the **ES (Document Reference 6.1)**	Principal Contractor Community Liaison	Site notices will undergo checks prior to being displayed	C	None required
PH9	Access to the construction works will not be permitted through the agricultural enterprise on Fulling Mill Lane without consultation with the landowners.	To reduce effects on landowners and to be a good neighbour. Assumes contact will be made with the owners of the agricultural enterprise on Fulling Mill Lane.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**N/A**	Principal Contractor and Principal Community Liaison	Consultation with the landowner will be undertaken prior to allowing access through agricultural enterprises	C	None required
PH10	Discussions will be held with the owners of the agricultural enterprise on Fulling Mill Lane during detailed design regarding plot 5/1c (as shown on the **Land Plans (Document Reference 2.2)** and maintaining a buffer between the enterprise and the construction works.	To reduce effects on landowners and to be a respectful neighbour. Assumes contact will be made with the owners of the agricultural enterprise on Fulling Mill Lane.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**N/A**	Principal Contractor and Principal Community Liaison	Approval of detailed design by SoS following consultation with the relevant planning authorities and the and the local highway authority.	D	None required
	Road Drainage and the Water Environment							
WE1	The new bridge (footway and cycleway) over the River Itchen has been designed to be a clear span structure with abutments set back from the river channel and has been designed to ensure no construction works are required within the river channel.	To avoid construction works in the River Itchen. Assumed the new footway and cycleway over the River Itchen will be implemented.	Requirement 3 and 12 of the **draft DCO (Document Reference 3.1)**	**Chapter 13 (Road Drainage and the Water Environment)** of the **ES (Document Reference 6.1)**	Principal Contractor	Approval of detailed design by SoS following consultation with the relevant planning authorities and the and the local highway authority.	D	None required
WE2	Fuel tanks will be appropriately bunded and placed on an impermeable base.	To minimise the potential for contamination of	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 13 (Road Drainage and the Water Environment)** of	Principal Contractor	Approval of siEMP by the SoS following consultation with the	C	Site inspections

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
		waterbodies from construction works. Assumed there is the potential for fuel tanks to leak.		the **ES (Document Reference 6.1)**		relevant planning authorities Undertake site inspections Complete site inspection log book		
WE3	The construction works will be appropriately phased to include suitable surface water drainage measures prior to construction works commencing, to intercept potential contaminates which may arise. Temporary drainage will be designed in accordance with the Temporary (Construction) Drainage Strategy at **Appendix J** prior to construction.	To reduce effects on road drainage and the water environment. Assumed temporary drainage design will be designed in accordance with the Temporary (Construction) Drainage Strategy	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 13 (Road Drainage and the Water Environment)** of the **ES (Document Reference 6.1)**	Principal Contractor	Compliance with the **Temporary (Construction) Drainage Strategy** at **Appendix J** of this fiEMP	C	None required
WE4	No part of the Scheme shall start until the detailed operational drainage design has been designed in accordance with DMRB LA 113 and is compatible with the preliminary Drainage Strategy Report provided as **Appendix 13.1** of the **ES (Document Reference 6.3**), has been subject to stakeholder consultation, including Winchester City Council.	To ensure that the receiving environment is protected from increased risk of flooding as a result of the Scheme Assumed a detailed drainage design will be prepared for the operational phase of the Scheme	Requirement 3 and 13 of the **draft DCO (Document Reference 3.1)**	**Chapter 13 (Road Drainage and the Water Environment)** of the **ES (Document Reference 6.1)**	Principal Contractor	Compliance with the **preliminary Drainage Strategy Report** provided as **Appendix 13.1** of the **ES (Document Reference 6.3**) Approval of detailed drainage design (to be prepared during detailed design stage and approved by SoS following consultation with the relevant planning authorities, the lead local flood authority, the Environment Agency, and the local highway authority where that the surface water drainage system	D	None required

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						interacts with a highway maintainable at the expense of that local highway authority.		
WE5	Use of silt fencing, cut off ditches, settlement retention in lined ponds and bunds to manage surface water.	To minimise adverse impacts on road drainage and the water environment. Assumed there is the potential for adverse effects on surface water drainage.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 13 (Road Drainage and the Water Environment)** of the **ES (Document Reference 6.1)**	Principal Contractor	Implement the measures outlined	C	None required
WE6	Implementing appropriate surface water drainage measures to reduce opportunities for construction activities to pollute nearby sensitive receptors (including the River Itchen and chalk groundwater body). Implementing appropriate surface water drainage measures to reduce opportunities for construction activities to pollute nearby sensitive receptors (including the River Itchen and chalk groundwater body. Temporary drainage will be designed in accordance with the **Temporary (Construction) Drainage Strategy** at **Appendix J** prior to construction.	To minimise the potential for pollution of waterbodies. Assumed temporary drainage design will be designed in accordance with the Temporary (Construction) Drainage Strategy	Requirement 3 and 13 of the **draft DCO (Document Reference 3.1)**	**Chapter 13 (Road Drainage and the Water Environment)** of the **ES (Document Reference 6.1)**	Principal Contractor	Approval and implementation of measures set out in the **Temporary (Construction) Drainage Strategy** at **Appendix J** of this fiEMP Approval of detailed drainage design (to be prepared during detailed design stage and approved by SoS following consultation with the relevant planning authorities, the lead local flood authority and the Environment Agency	C (and D for detailed drainage design)	None required
WE7	Reducing the amount of topsoil stripping where possible and soil stockpiles will be located as far from watercourses as practicable. Any potentially contaminated soil will be	To minimise the potential of pollution to waterbodies and groundwater.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 13 (Road Drainage and the Water Environment)** of the **ES**	Principal Contractor	Approval of siEMP by the SoS following consultation with the relevant planning authorities and	C	Site inspections

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	stored on an impermeable surface and covered to reduce leachate generation and potential migration to surface and groundwaters.	Assumed there is the potential for adverse effects to arise.		**(Document Reference 6.1)**		adherence to the measures set out Undertake site inspections Complete site inspection log book		
WE8	Use of silt fences at bases of stockpiles.	To minimise the potential of pollution to waterbodies and groundwater. Assumed there is the potential for adverse effects to arise.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 13 (Road Drainage and the Water Environment)** of the **ES (Document Reference 6.1)**	Principal Contractor	Approval of siEMP by the SoS following consultation with the relevant planning authorities and adherence to the measures set out Undertake site inspections Complete site inspection log book	C	Site inspections
WE9	Plant and wheel washing and haul road damping in designated areas.	To minimise the potential of pollution to waterbodies and groundwater. Assumed there is the potential for adverse effects to arise.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 13 (Road Drainage and the Water Environment)** of the **ES (Document Reference 6.1)**	Principal Contractor	Approval of siEMP by the SoS following consultation with the relevant planning authorities and adherence to the measures set out Undertake site inspections Complete site inspection log book	C	Site inspections
WE10	Plant to be re-fuelled in designated locations at a safe distance from water courses and good practice to be in place with relation to pollution prevention (adequate bunding, storage etc) to reduce risk associated with spills.	To minimise the potential for spillages and leaks which could lead to pollution of waterbodies Assumed there is the potential for adverse effects to arise.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 13 (Road Drainage and the Water Environment)** of the **ES (Document Reference 6.1)**	Principal Contractor	Approval of siEMP by the SoS following consultation with the relevant planning authorities and adherence to the measures set out	C	Site inspections

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						Undertake site inspections Complete site inspection log book		
WE11	Spill kits are to be positioned at strategic locations on site and thorough training provided for staff to ensure a rapid and effective response to any pollution incidents that occur on site.	To minimise the potential for spillages and leaks which could lead to pollution of waterbodies Assumed there is the potential for adverse effects to arise.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 13 (Road Drainage and the Water Environment)** of the **ES (Document Reference 6.1)**	Principal Contractor	Approval of siEMP by the SoS following consultation with the relevant planning authorities and adherence to the measures set out Undertake site inspections Complete site inspection log book	C	Site inspections
WE12	Use of an ECoW or Environmental Manager, along with toolbox talks and training to promote Principal Contractor awareness of pollution risks.	To reduce effects on road drainage and the water environment. Assumed toolbox talks will be delivered regularly.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 13 (Road Drainage and the Water Environment)** of the **ES (Document Reference 6.1)**	Principal Contractor	Construction personnel made aware of pollution risks via regular Toolbox Talks	C	None required
WE13	Areas of exposed soils deemed at risk of erosion during heavy rainfall or flood inundation will be protected using temporary measures (for example sheeting) until vegetation is able to establish on these surfaces	To reduce effects on road drainage and the water environment. Assumed there is the potential for adverse effects to arise.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 13 (Road Drainage and the Water Environment)** of the **ES (Document Reference 6.1)**	Principal Contractor	Approval of siEMP by the SoS following consultation with the relevant planning authorities and adherence to the measures set out Undertake site inspections Complete site inspection log book	C	Site inspections

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WE14	For all works within the vicinity of the watercourses, the Scheme will be registered with the recognised Environment Agency Flood Warning Service so if a flood event was expected, all plant/material/staff will be moved out of potential floodplain extents and works suspended during out-of-bank river flows or during intense rainstorms. The construction compound is located in Flood Zone 1.	To minimise the potential for damage from flooding. Assumed there is the potential for adverse effects to arise.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 13 (Road Drainage and the Water Environment)** of the **ES (Document Reference 6.1)**	Principal Contractor	Ensure the Scheme is registered with the recognised Environment Agency Flood Warning Service Construction personnel made aware of these working methods via regular Toolbox Talks	C	None required
WE15	For all works within 8m of the River Itchen i.e. new drainage outfalls, cleaning existing outfall, new bridge, improvements to Kingsworthy Bridge Flood Risk Activity Permit (FRAP) applications will be prepared for the Environment Agency approval (refer to the **Consents and Agreements Position Statement (Document Reference 3.3).**	To minimise impacts on waterbodies including the River Itchen. Assumed FRAPs will be needed.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 13 (Road Drainage and the Water Environment)** of the **ES (Document Reference 6.1)**	Principal Contractor	Apply for and gain approval of a FRAP from the Environment Agency Adhere to the consent if received	C	None required
WE16	The drainage parameters for the construction phasing will account for the Environment Agency's Flood Risk Assessment Climate Change Allowance document which advises for the period 2015 to 2039, a peak rainfall allowance of 10% is used for climate change. Temporary drainage will be designed in accordance with the Temporary (Construction) Drainage Strategy at **Appendix J** prior to construction.	To account for climate change parameters within the design of the Scheme Assumed temporary drainage design will be designed in accordance with the Temporary (Construction) Drainage Strategy.	Requirement 3 and 13 of the **draft DCO (Document Reference 3.1)**	**Chapter 13 (Road Drainage and the Water Environment)** of the **ES (Document Reference 6.1)**	Principal Contractor	Adherence to the **Temporary (Construction) Drainage Strategy** at **Appendix J** of this fiEMP	C	None required
WE17	Temporary works associated with a new bridge over the River Itchen footway and cycleway will include measures, such as bunds situated	To minimise the potential for pollution in the local water environment.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 13 (Road Drainage and the Water Environment)** of	Principal Contractor	Approval of siEMP by the SoS following consultation with the relevant planning	C	Site inspections

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
	around hydraulic machines and plant nappies installed beneath machinery to reduce the risk of a hydraulic failure resulting in fluid leakage to the watercourse. Bunding will also be provided to capture any concrete waste from in-situ placement (if required).	Assumed there is the potential for adverse effects.		the **ES (Document Reference 6.1)**		authorities and adherence to the measures set out Undertake site inspections Complete site inspection log book		
WE18	Depending on the bridge deck installation detail over the River Itchen, access may be required to potential bolt connections positions. If this is necessary, pontoons could be used to support an access system to the bridge. It is anticipated that this pontoon will only be in place for a few days. An assessment of the proposed piling platform relating to any impact on flood risk will be undertaken and a FRAP obtained from the Environment Agency. Depending on the outcome of this assessment, in the detailed design stage of the temporary platform could include the use of pre-cast voided units under the platform to provide a flow area in flood conditions. Notwithstanding this, works will be carried out under 'normal' flow conditions so impact on floodplain storage and flood risk will be limited.	To reduce effects on road drainage and the water environment. Assumes pontoons may be required.	Requirement 3 and 12 of the **draft DCO (Document Reference 3.1)**	**Chapter 13 (Road Drainage and the Water Environment)** of the **ES (Document Reference 6.1)**	Principal Contractor	Approval of detailed design by the SoS following consultation with the relevant planning authorities and the local highways authority Apply for and gain approval of a FRAP from the Environment Agency if necessary Adhere to the consent if received	C	None required
WE19	The existing Kingsworthy Bridge may require strengthening of the existing concrete edge beams (this is subject to further assessment during detailed design). However, if required this strengthening will include carbon fibre plates that are	To minimise adverse impacts on water quality. Assumes pontoons may be required.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 13 (Road Drainage and the Water Environment)** of the **ES**	Principal Contractor	Implement the measures outlined in this fiEMP	C	None required

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
	stuck to the underside of the edge beams. They will be carried and fixed into position by hand. In order to fix the carbon fibre plates onto the bridge beam access will be required for up to three weeks, either from a pontoon or from an overhung system from the bridge deck. In order to ensure no effect on water quality of the watercourse a dust protection frame with a cover will be placed across the river in the work area for the duration of the concrete grinding operation.			**(Document Reference 6.1)**				
WE20	A FWRA in accordance with the Environment Agency's guidance 'Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination' (Environment Agency, 2001) will be prepared once the proposed foundation solutions are known and attached at **Appendix M** of the siEMP.	To reduce effects on road drainage and the water environment. Assumes the FWRA will be prepared.	Requirement 3 and 12 of the **draft DCO (Document Reference 3.1)**	**Chapter 13 (Road Drainage and the Water Environment)** of the **ES (Document Reference 6.1)**	Principal Contractor	Approval of detailed design by the SoS following consultation with the relevant planning authorities and the local highways authority Approval of the siEMP by the SoS following consultation with the relevant planning authorities	D	None required
WE21	Temporary works to implement the permanent drainage scheme will involve cleaning of the existing outfall, as well as the temporary installation of two localised dams to dewater an isolated area to facilitate the permanent installation of the two new outfalls – relevant consents will be sought from the Environment Agency – refer to the **Consents and Agreements Position Statement (Document Reference 3.3).**	To reduce effects on road drainage and the water environment. Assumes dewatering will be required.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 13 (Road Drainage and the Water Environment)** of the **ES (Document Reference 6.1)**	Principal Contractor	Apply for relevant consents from the Environment Agency and comply with their conditions	D	None required

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
WE22	Control any pollution events at source.	To minimise the potential for pollution as a result of the Scheme. Assumed there is the potential for pollution events.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Water Framework Directive Assessment (Document Reference 7.7)**	Principal Contractor	Approval of the siEMP by the SoS following consultation with the relevant planning authorities Compliance with the siEMP	C	None required
WE23	Reduce the need for dewatering through the prevention of water entering excavations by limiting their time of opening to only that required.	To reduce effects on road drainage and the water environment. Assumed dewatering may be needed.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Water Framework Directive Assessment (Document Reference 7.7)**	Principal Contractor	Adherence to best practice measures outlined in the fiEMP Approval of the siEMP by the SoS following consultation with the relevant planning authorities	C	None required
WE24	Minimise the amount of exposed ground and soil stockpiles, stripping topsoil only when needed and minimising time that the ground is exposed where possible.	To reduce effects on road drainage and the water environment. Assumed topsoil stripping is needed.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Water Framework Directive Assessment (Document Reference 7.7)**	Principal Contractor	Approval of the siEMP by the SoS following consultation with the relevant planning authorities Undertake site inspections Complete site inspection log book	C	Site inspections
WE25	Re-seeding/planting of soil stockpiles to limit soil erosion and run-off.	To reduce effects on road drainage and the water environment. Assumed stockpiles may be seeded.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Water Framework Directive Assessment (Document Reference 7.7)**	Principal Contractor	Approval of the siEMP by the SoS following consultation with the relevant planning authorities Undertake site inspections Complete site inspection log book	C	Site inspections

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
WE26	Use of settlement tanks as required	To reduce effects on road drainage and the water environment. Assumed settlement tanks may be required.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Water Framework Directive Assessment (Document Reference 7.7)**	Principal Contractor	Approval of the siEMP by the SoS following consultation with the relevant planning authorities	C	None required
	Climate							
C1	Use of warm mix asphalt (WMA) instead of hot mix asphalt on all new road surfaces, reducing embodied carbon associated with the production of materials.	To minimise embodied carbon during the construction phase. Assumed this design feature will be implemented.	Requirement 3 and 12 of the **draft DCO (Document Reference 3.1)**	**Chapter 14 (Climate)** of the **ES (Document Reference 6.1)**	Principal Contractor	Implement the measures outlined within the fiEMP	C	None required
C2	Existing pavements are to be retained wherever possible within the Scheme to reduce the requirement for additional materials and construction.	To minimise carbon usage and emissions. Assumed pavements will be retained where possible.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 14 (Climate)** of the **ES (Document Reference 6.1)**	Principal Contractor	Implement the measures outlined within the fiEMP	C	None required
C3	The bridleway to the east will be made from type 1 unbound material (i.e. crushed basalt) which is appropriate to the recreational use of the route, with a lower carbon intensity than asphalt, and is free draining.	To reduce effects on surface drainage, minimise carbon usage and emissions, and provide a design solution which is sympathetic to the local landscape character. Assumed this design feature will be implemented.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 14 (Climate)** of the **ES (Document Reference 6.1)**	Principal Contractor	Implement the measures outlined within the fiEMP	C	None required

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
C4	Material excavated during construction is to be processed for use in the works wherever possible to reduce the amount of material disposed of.	To minimise carbon usage and emissions associated with waste disposal. Assumed material excavated can be re-used on site.	Requirement 3 and 12 of the **draft DCO (Document Reference 3.1)**	**Chapter 14 (Climate)** of the **ES (Document Reference 6.1)**	Principal Contractor	Approval of and adherence to the SWMP and MMP (to be prepared during detailed design and will append the siEMP) Drafts of these ECPs are provided at **Appendix E and F** of this fiEMP Approval of detailed design by the SoS following consultation with the relevant planning authorities and the local highways authority Adhere to the Waste Hierarchy Undertake site inspections Complete site inspection log book	C	Site inspections Maintain log of waste sent to landfill
C5	Construction compounds are located close to the area of works which will reduce the distance of vehicle trips.	To minimise emissions associated with construction vehicles. Assumed construction compounds will be located in appropriate locations.	Requirement 3 and 12 of the **draft DCO (Document Reference 3.1)**	**Chapter 14 (Climate)** of the **ES (Document Reference 6.1)**	Principal Contractor	Approval of detailed design by the SoS following consultation with the relevant planning authorities and the local highways authority	D	None required
C6	The Scheme seeks to facilitate and encourage active travel and sustainable forms of transport. The Scheme is improving NCN 23 through the gyratory, enhancing the footway along the west of the	To encourage sustainable travel.	Requirement 3 and 12 of the **draft DCO (Document Reference 3.1)**	**Chapter 14 (Climate)** of the **ES (Document Reference 6.1)**	Principal Contractor	Approval of detailed design by the SoS following consultation with the relevant planning authorities	D	None required

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
	Scheme through the provision in a shared footway and cycleway, and adding a new bridleway link to the east of the Scheme connecting Long Walk and Easton Lane. The provision of a shared high quality and accessible pedestrian and cyclist routes will encourage and enable travel by low-carbon, sustainable modes.	Assumes active travel will be encouraged.				and the local highways authority		
C7	Using materials with lower embedded GHG emissions and water consumption where possible. Using sustainably sourced materials where possible. Using recycled or secondary materials where possible.	To minimise carbon usage and emissions. Assumes materials with lower embedded GHG emissions will be used. Assumes sustainable resources and recycled materials are available for use and will be sourced	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 14 (Climate)** of the **ES (Document Reference 6.1)**	Principal Contractor	Procurement of a sustainable supply chain	C	None required
C8	Management of plant and equipment use so that there is no unnecessary idling of engines and equipment is maintained to check they are operating optimally.	To minimise carbon usage and emissions. Assumes idling will be minimised.	Requirement 3 and 11 of the **draft DCO (Document Reference 3.1)**	**Chapter 14 (Climate)** of the **ES (Document Reference 6.1)**	Principal Contractor	Approval of siEMP and detailed Traffic Management Plan (to be prepared during detailed design) by SoS following consultation with the relevant planning authorities and the local highway authority Undertake site inspections Complete site inspection log book	C	Site inspections and regular vehicle inspections

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
C9	Lower carbon energy sources for the site welfare facilities with the potential to explore the use of solar panels to reduce reliance on diesel or petrol generators for electricity.	To minimise carbon usage and emissions. Assumes appropriate site welfare facilities will be sourced.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 14 (Climate)** of the **ES (Document Reference 6.1)**	Principal Contractor	Procurement of welfare facilities with lower carbon energy sources if and where practicable	C	None required
C10	Use of Euro 6 vehicles within National Highway's project specific fleet used during the construction of the Scheme.	To minimise emissions associated with construction vehicles. Assumes Euro 6 vehicles will be used where possible.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 14 (Climate)** of the **ES (Document Reference 6.1)**	Principal Contractor	Procurement of appropriate vehicles	C	None required
C11	Use of electric and hybrid plant and equipment	To minimise carbon usage and emissions. Assumes electric and hybrid plant and equipment will be used where possible	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Chapter 14 (Climate)** of the **ES (Document Reference 6.1)**	Principal Contractor	Procurement of appropriate vehicles	C	None required
C12	Delivering substantial tree planting proposed within the Scheme, as shown on **Figure 2.3 (Environmental Masterplan)** of the **ES (Document Reference 6.2).**	To minimise carbon usage and emissions. Assumed tree planting will be implemented.	Requirement 3 and 5 of the **draft DCO (Document Reference 3.1)**	**Chapter 14 (Climate)** of the **ES (Document Reference 6.1)**	Principal Contractor	Approval of detailed LEMP (to be prepared during detailed design in accordance with the **OLEMP (Appendix 7.6** of the **ES (Document Reference 6.3)** and approved by the SoS following consultation with the relevant planning authorities, Adherence to **Figure 2.3 (Environmental Masterplan)** of the	D (and C for tree planting)	Periodic monitoring of planting to ensure appropriate establishment

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
						ES (Document Reference 6.2).		
C13	Structures of the Scheme will be inspected in accordance with DRMB CS 450 Inspection of Highway Structures.	To monitor the condition of the structure and identify any potential need for maintenance, which might arise as a result of deterioration from climatic changes. Assumed monitoring will be undertaken.	Requirement 12 of the **draft DCO (Document Reference 3.1)**	**Chapter 14 (Climate) of** the **ES (Document Reference 6.1)**	Principal Contractor and maintenance contractor	Undertake general inspections and record findings in inspection log book	O	There would be a General Inspection every two years and a Principal Inspection every six years (in place of the General Inspection that two-year period) which would involve full access to all parts of the bridge.
C14	Quarterly greenhouse gas (GHG) emission returns during construction and operation shall be reported in accordance with National Highway's requirements. Data provided for the GHG returns shall be evaluated to inform any ongoing monitoring of GHG emissions and feed back into future assessment of projects during design development and planning approval.	To monitor GHG emissions during construction and operation	Requirement 3 of the **draft Development Consent Order (3.1, Rev 4)**	**Chapter 14 (Climate) of** the **Environment Statement** (**ES) (6.1, Rev 2)**	Principal Contractor and maintenance contractor	Adherence to National Highway's guidance; DMRB LA 114 Climate (Highways England, 2021)	C and O	Quarterly reporting
C15	A Green Travel Plan will be developed during detailed design and will form **Appendix R** of the second iteration Environmental Management Plan (siEMP)	To promote and encourage sustainable travel	Requirement 3 of the **draft Development Consent Order (3.1, Rev 4)**	**ExQ2 9.2.18 of Applicant Response to the Examining Authority's Second Written Questions (ExQ2) (Document Reference 8.17)**	Principal Contractor and maintenance contractor	Approval of the siEMP by the SoS following consultation with the relevant planning authorities	C	N/A

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
	Monitoring							
MON1	Monitoring of the badger and dormice populations will be a requirement of the licences required for these species and will be secured through conditions within the licences.	To comply with licence obligations. Assumed licences will be required and obtained from Natural England.	Licences obtained from Natural England.	**Chapter 8 (Biodiversity)** of the **ES (Document Reference 6.1)**	Principal Contractor			
MON2	Once operational, post-construction monitoring for a period of 5 years to ensure that drainage features, including the attenuation basins, function correctly as they become fully established. Monitoring of the pedestrian fencing adjacent to the River Itchen will also be undertaken.	To ensure biodiversity effects are avoided or reduced. Assumed monitoring will be undertaken.	Requirement 3 of the **draft DCO (Document Reference 3.1)**	**Habitats Regulations Assessment (Document Reference 7.5)**	Principal Contractor			
MON3	Structural planting proposed for the Scheme requires monitoring under a management plan.	To ensure successful establishment and development of planting and ensure it is functioning as required to meet its environmental function and mitigation requirement. Assumed monitoring would be undertaken for the five year aftercare period.	Requirement 12 of the **draft DCO (Document Reference 3.1)**	**Chapter 7 (Landscape and Visual)** of the **ES (Document Reference 6.1)**	Principal Contractor			
MON4	**Appendix 7.6 (Outline Landscape and Ecological Management Plan)** of the **ES (Document Reference 6.3)** sets out the monitoring requirements. As the design develops a final Landscape	To ensure successful establishment and development of planting and ensure it is functioning as required to meet its environmental	Requirement 3 and 12 of the **draft DCO (Document Reference 3.1)**	**Appendix 7.6 (Outline Landscape and Ecological Management Plan)** of the **ES**	Principal Contractor			

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
	Ecological Management Plan will be prepared and appended to the SiEMP.	function and mitigation requirement. Assumed monitoring will be undertaken for the five-year aftercare period.		**(Document Reference 6.3)**				
MON5	The requirement for any demolition and construction noise and vibration monitoring will be agreed with Winchester City Council through a Section 61 application and the Noise and Vibration Monitoring Plan (which will be appended to the siEMP).	To manage and monitor construction noise and vibration throughout the construction of the Scheme including any noise limits. Assumed monitoring will be required.	Agreed with the Winchester City Council EHO	**Chapter 11 (Noise and Vibration)** of the **ES (Document Reference 6.1)**	Principal Contractor			
MON6	Structures of the Scheme will be inspected in accordance with DRMB CS 450 Inspection of Highway Structures. There would be a General Inspection every two years and a Principal Inspection every six years (in place of the General Inspection that two-year period) which would involve full access to all parts of the bridge.	To monitor the condition of the structure and identify any potential need for maintenance, which might arise as a result of deterioration from climatic changes. Assumed monitoring will be undertaken.	Requirement 12 of the **draft DCO (Document Reference 3.1)**	**Chapter 14 (Climate) of** the ES **(Document Reference 6.1)**	Principal Contractor and maintenance contractor			
	Enhancement							
	Cultural Heritage							
EH1	The Detailed Mitigation Strategy should allow for sensitive interpretation/ public art and a suitable programme of public outreach to be developed at a future stage of the Scheme in consultation with the key heritage stakeholders. Digital technologies such as QR codes and push notifications should be considered, but longevity and sustainability of technology need to be considered. Interpretation boards, whilst intrusive, will allow a larger proportion of the community to engage with, and appreciate, the information and a combination of digital technologies and more traditional forms of information presentation should be considered, as favoured by the Inspector of Monuments consulted. These could form part of trails highlighting the nature of the archaeology within the Itchen Valley on the outskirts of Winchester to the public. Other methods of disseminating archaeological information which could be considered include podcasts, vlogs, blogs and open days.							

Ref	Environmental Action/commitment	Objective and assumption of which the action / commitment is based	How the action/commitment will be implemented/secured	Source ref	Responsible person(s)	Achievement criteria and reporting requirements (if applicable)	Project stage	Monitoring requirements
EH2	The findings of the archaeological mitigation would result in knowledge gain, providing a better understanding of the historic environment within Winchester's hinterland and provide further context for known archaeological remains previously investigated. The information would enhance the existing Winchester Historic Environment Record data set for the area proving further knowledge to the public of past human activity within the surrounding area.							
	Landscape and Visual							
EH3	The extent of chalk grassland creation on the eastern slopes (adjacent to the proposed WCH bridleway) provides landscape enhancement. It positively responds to the location within the South Downs National Park and its setting and the identified environmental opportunities for this area. It does not provide a visual screening function, but it does however aid landscape integration of the Scheme with the surrounding landscape and supports biodiversity.							
EH4	The provision of improved WCH links to the South Downs National Park positively responds to the location within the South Downs National Park, the aims of the designation (promoting access and recreation), and the identified environmental opportunities for this area. The design solutions for the bridleway on the eastern slopes provides a well-considered user route which reinforces the special qualities of the South Downs National Park, whilst minimising visibility of the highway and overall achieving a varied visual experience for future users. The placement within an area of Chalk grassland also positively responds to and provides opportunity for users to experience a feature which reinforces the landscape character of the open downlands.							
	Biodiversity							
EH5	The Scheme includes provision of a road drainage scheme that will capture pollutants within road runoff and remove pollutants before the treated runoff is discharged. The Scheme will provide a betterment on the existing road drainage system and improve the quality of water discharged into the River Itchen.							
EH6	Habitat provision will enhance connectivity for wildlife within the Scheme. New areas of woodland and scrub towards the north of the Scheme, mostly located adjacent to exiting habitats, will enhance connectivity for bats and dormice and other wildlife. The provision of substantial areas of chalk grassland, woodland and scrub along the eastern boundary of the Scheme will also improve connectivity for a range of wildlife including bats, dormice, and terrestrial invertebrates in a north-south direction.							

4 Consents and permissions

4.1 Regulations

4.1.1 The principal consent for the Scheme is the DCO which provides development consent for the works and enables land acquisition and temporary possession, along with many consents and powers to be dealt with at the same time. However, there is a need to supplement the DCO with additional consents and permissions that relate directly to measures within the EMP these need to be sought separately from the DCO.

4.1.2 It will be the responsibility of the Principal Contractor and separately the statutory undertakers and their contractors, to ensure all licences, consents and permits are obtained within the relevant timescales. Key regulations potentially applicable to the Proposed Scheme include, but are not limited to:

- Highways Act 1980
- Control of Pollution Act 1974
- Health and Safety at Work Act 1974
- Wildlife and Countryside Act 1981 (as amended)
- Protection of Badgers Act 1992
- The Conservation of Habitats and Species Regulations 2017 (as amended)
- Environmental Protection Act 1990
- Environmental Permitting (England and Wales) Regulations 2016
- Water Resources Act 1991
- Environmental Protection (Duty of Care) Regulations 1991
- Noise and Statutory Nuisance Act 1993
- Environment Act 1995
- Special Waste Regulations 1996
- Countryside and Rights of Way Act 2000
- Control of Pollution (Oil Storage) (England) Regulations 2001
- Control of Substances Hazardous to Health Regulations 2002
- Landfill Regulations 2002

- Waste (England and Wales) Regulations 2011

4.2 Consent and Agreement Position Statement

4.2.1 The **Consent and Agreement Position Statement (Document Reference 3.3)** is provided as part of the DCO application and sets out National Highway's intended strategy for obtaining consents and associated agreements needed to implement the Scheme. It identifies at a high level the consents that are likely to be needed for the Scheme, and how those consents are proposed to be secured.

4.2.2 This chapter will be updated by the Principal Contractor, as part of the final EMP to cover developments through the detailed design and construction planning phase, and throughout the operational phase, to capture all relevant items.

4.2.3 **The Consents and Agreements Position Statement (Document Reference 3.3)** has been submitted as part of the DCO application. This sets out National Highways intended strategy for obtaining the consents and associated agreements needed to implement the scheme. It identifies at a high-level what consents are expected to be needed for the scheme, together with how these consents will be obtained. A list of other permissions and agreements that National Highways intends to obtain to allow for the construction, operation and maintenance of the Scheme is provided in **Table 4.1**.

Table 4.1: Permits, consents and licences

Type of licence and reference	Issuing authority	Requirement	Comments / actions
Badger Licence (Section 10 of the *Protection of Badgers Act 1992*).	Natural England	To ensure badgers are not disturbed and ensure legal compliance with the *Protection of Badgers Act 1992*.	For works affecting the badger setts identified within the Application Boundary and the relocation of a badger main sett. Principal Contractor to action.
Dormice – *Conservation of Habitats and Species Regulations 2017*.	Natural England	To ensure Dormice are not disturbed and ensure legal compliance with the *Habitats and Species Regulations 2017* and *Wildlife and Countryside Act 1981*.	For works in relation to the disturbance or removal/translocation of dormice within the Application Boundary prior to and during construction of the Scheme. Principal Contractor to action.
White-clawed crayfish – *Wildlife and Countryside Act 1981*	Natural England	A licence may be required to catch and relocate white-clawed crayfish (if present).	For in-river works affecting the River Itchen. Principal Contractor to action.
Natural England Assent – Consent to carry out works within a Site of Special Scientific Interest (SSSI) under section 28E of the *Wildlife and Countryside Act 1981*.	Natural England	Required for works within the River Itchen SSSI.	Principal Contractor to action.

Type of licence and reference	Issuing authority	Requirement	Comments / actions
Water Discharge Activities – Permit to discharge to surface water and/or groundwater under Regulation 12 of the *Environmental Permitting (England and Wales) Regulations 2016*.	Environment Agency	Required following treatment of waters arising from construction activity or for the discharge of treated contaminated waters to ground, via re-injection (or possible soakaway) or a watercourse.	Principal Contractor to obtain prior to construction.
Water Abstraction Licence – Abstraction of water under sections 24 and 25 of the *Water Resources Act 199*1.	Environment Agency	Required for de-watering operations on site during construction.	Principal Contractor to obtain prior to construction.
Trade Effluent Consent under the *Water Industry Act 1991*.	Southern Water	For the purposes of discharging trade effluent from welfare facilities	Should a trade effluent consent be required to discharge any trade effluent into a public sewer, then a consent will be applied for in advance of the works commencing. The requirement for a Trade Effluent Consent will be discussed with the relevant local water undertaker should it be required during the construction phase. Principal Contractor to action.
Flood Risk Activity Permit, under the *Environmental*	Environment Agency	For specified temporary and permanent works in the vicinity of a	Principal Contractor to obtain prior to construction.

Type of licence and reference	Issuing authority	Requirement	Comments / actions
Permitting Regulations (England and Wales) Regulations 2016.		main river in accordance with the Environmental Permitting Regulations.	
Land Drainage Consent – Ordinary Watercourse Land Drainage Consent: under section 23 of *The Land Drainage Act 1991*	Hampshire County Council (Lead Local Flood Authority)	Required for all works over, under or near ordinary watercourses.	Principal Contractor to action.
Waste - Management and disposal of waste under the *Environmental Permitting (England and Wales) Regulations 2016*.	Environment Agency	Required for the management and disposal of waste from site, to protect the environment against contamination.	Principal Contractor to action.
Materials – *Pollution Prevention and Control Act 1999, Environmental Permitting (England and Wales) Regulations 2016*.	Environment Agency	A mobile plant permit for crushing operations or site permits will be required if a subcontractor within a mobile plant permit is used for construction of the scheme.	Principal Contractor to action.
Asbestos – *Control of Asbestos Regulations 2012*.	Health and Safety Executive	Required for any works where asbestos is present	Principal Contractor to action.

Type of licence and reference	Issuing authority	Requirement	Comments / actions
Section 61 agreement – under *Section 61 of the Control of Pollution Act 1974*.	Winchester City Council	Required to inform the relevant local authority of construction works resulting in noise and vibration effects.	Applications for consent to be made to the relevant local authority at least 28 days before the relevant work is due to start, or earlier if reasonably practicable. Principal Contractor to action.

4.3 Recording

4.3.1 A register of environmental permits and a record of all consents, licences etc. relating to construction activities will be maintained and updated by the Principal Contractor and made available for audit to National Highways and the Principal Contractor Environmental Manager.

5 Environmental asset data and as built drawings

5.1 National Highways asset data management manual (ADMM)

5.1.1 The Asset Data Management Manual (ADMM) sets out National Highway's asset data requirements to achieve both its corporate objectives as well as its asset management objectives. It brings clarity and consistency to reflect asset data needs and is revised every six months to accommodate changes and expansion to the business needs.

5.1.2 The ADMM contains the company's asset data requirements to ensure the company collects and maintains the asset data it needs to operate safely and efficiently. It is for use by anyone creating, maintaining, or using data on behalf of or within National Highway's.

5.2 Collection and submission of environmental data

5.2.1 National Highway's Environmental Information System (EnvIS) consists of specific environmental data supplied by service providers, National Highways and other bodies collated and displayed in the National Highways geographical information system. This data is used to assist in managing the environment, on and adjacent to the road network, and in the review and reporting of the environmental performance of both service providers and National Highways.

5.2.2 The following asset data will be provided to National Highways:

- Air quality
- Cultural heritage
- Landscape and visual
- Biodiversity
- Geology and soils
- Material assets and waste
- Noise and vibration
- Population and human health
- Road drainage and the water environment
- Climate

5.2.3 At this stage of the Scheme, environmental data has been submitted through the publication of the **ES (Document Reference 6.1)** as part of the DCO application. This includes the submission of all species surveys results undertaken to inform the ES.

5.2.4 Surveys undertaken to inform the ES are provided in **Appendix 8.1(A-Z)** of the **ES (Document Reference 6.3)** as pdfs and include the following:

- Badger survey
- Bat activity survey
- Botanical survey
- Breeding bird survey
- Great Crested Newt survey
- Hazel dormouse survey
- Phase 1 Habitat Survey
- Preliminary bat roost assessment
- Reptile survey
- Water vole survey
- Orchid survey
- Aquatic survey
- Terrestrial invertebrate survey
- Bat Survey
- Bat trapping survey
- Bat roost survey
- Otter survey
- White helleborine survey
- White-clawed crayfish survey

5.3 As built information

5.3.1 The process for preparing, submitting and reviewing as built information relevant to the environment will be detailed within the siEMP.

6 Details of maintenance activities and EMP monitoring activities

6.1 Environmental monitoring requirements and procedures to monitor compliance

6.1.1 This section describes systems of recording and inspections that will be required to maintain an audit trail of the environmental obligations. This will be managed through the Quality and Safety Management Systems (QMS) and the Environmental Management System (EMS) of the Principal Contractor which will be certified in line with the *ISO 14001 standards*.

6.1.2 The EMS will include methods for monitoring, recording and implementing environmental management on site, and for responding to any noted areas of non-compliance. This will ensure that a high standard of environmental control is maintained through the lifetime of the scheme through the corrective action system managed by the Principal Contractor.

6.1.3 Specific monitoring and reporting requirements are still to be developed, some in consultation with third party stakeholders. This will be done through the DCO process and detailed design and confirmed arrangements included in the siEMP and will be included at **Appendix Q**.

6.2 Inspection checklist

6.2.1 The Principal Contractor as site owner will ensure environmental mitigation and staff responsibilities are made clear to site managers, sub-contracted staff and site supervisors. This will be managed through site inductions and specialist training as required. The Principal Contractor will make key staff aware of their responsibilities for undertaking daily routine checks of the site and equipment. It will be essential that the Principal Contractor has processes and protocols in place for environmental aspects to be checked. The Principal Contractor will insert their standard inspection forms and checklists that are associated with their internal EMS into the EMP appendices for information.

6.2.2 Once inspection and checks have been completed, they will be logged and corrective actions implemented by the delegated site manager in discussion with the Principal Contractor. The log will be reviewed as part of National Highway's checking and audit role.

6.3 Procedures to monitor compliance

6.3.1 An overall project record will be required for formal records associated with implementation of the EMP. This should be managed and controlled within the standard Project Control Framework (PCF) project filing systems.

7 Induction, training and briefing procedures for staff

7.1 General

7.1.1 The Principal Contractor will develop a programme of training on environmental issues prior to and during the construction stage. On commencement of site mobilisation, the Principal Contractor will be the site owner and responsible for site inductions and training of all personnel on the site, whether full time staff, subcontractors or visitors.

7.1.2 All individuals working or visiting the site will be required to attend the Principal Contractor's site-specific induction. Site inductions for full time staff and subcontractors will be tailored to their working conditions and activities. Site inductions for visitors will be tailored to those areas of the site they are visiting and what activities they are undertaking on site. Further details will be given in RAMS briefings prior to undertaking an activity. Those participating in or near to specific activities that have an environmental impact may be required to attend additional training or toolbox talks led by the Principal Contractor or environmental topic specialists.

7.1.3 The training will equip relevant staff with the necessary level of knowledge on health, safety, community relations and environmental topics. Method Statements will be prepared for specific activities prior to the works commencing, including environmental protection and mitigation measures and emergency preparedness appropriate to the activity covered (Method statements will be included at **Appendix N** of the siEMP).

7.1.4 All personnel on site will be made aware of the Principal Contractor's Environmental Policy, the Register of Environmental Legislation, the REAC and the relevant ECPs included in the EMP.

7.2 Environmental Competencies

7.2.1 The Principal Contractor will ensure all personnel conducting environmental tasks are suitably qualified and/or experienced for the roles and responsibilities that they are employed to undertake.

7.2.2 The Principal Contractor will monitor and record that all staff have attended the relevant environmental induction or training listed above (including updated or new training) prior to undertaking any activities on site.

7.3 Training and site induction

7.3.1 All site personnel and visitors are to receive site safety induction and environmental awareness training from the Principal Contractor, prior to commencing work on site. This will introduce accountability for personnel working on the scheme. Environmental training at the induction will include, but not be limited to, the following:

- Site induction
- Toolbox Talks where relevant to specific works
- Principal Contractor's environmental policy
- Environmental legislation requirements
- General environmental awareness and environmental site rules
- Site organisation
- Spill kit use and locations
- Emergency Response Plans
- Site traffic protocols and routes
- Wheel wash
- Warning signs
- Waste management and movement
- Ecology and protected species
- Earthworks and excavation
- Define materials and storage areas
- Contamination and pollution risk management
- Fuel containment
- Cultural heritage/archaeology
- Dust and emission control
- Noise and vibration control
- Working in or near watercourses

7.3.2 The list is not exhaustive and the Principal Contractor's Environment Manager onsite must highlight requirements for additional training, as the project progresses, to improve and add value to the overall site environmental awareness and compliance.

7.4 Toolbox talks

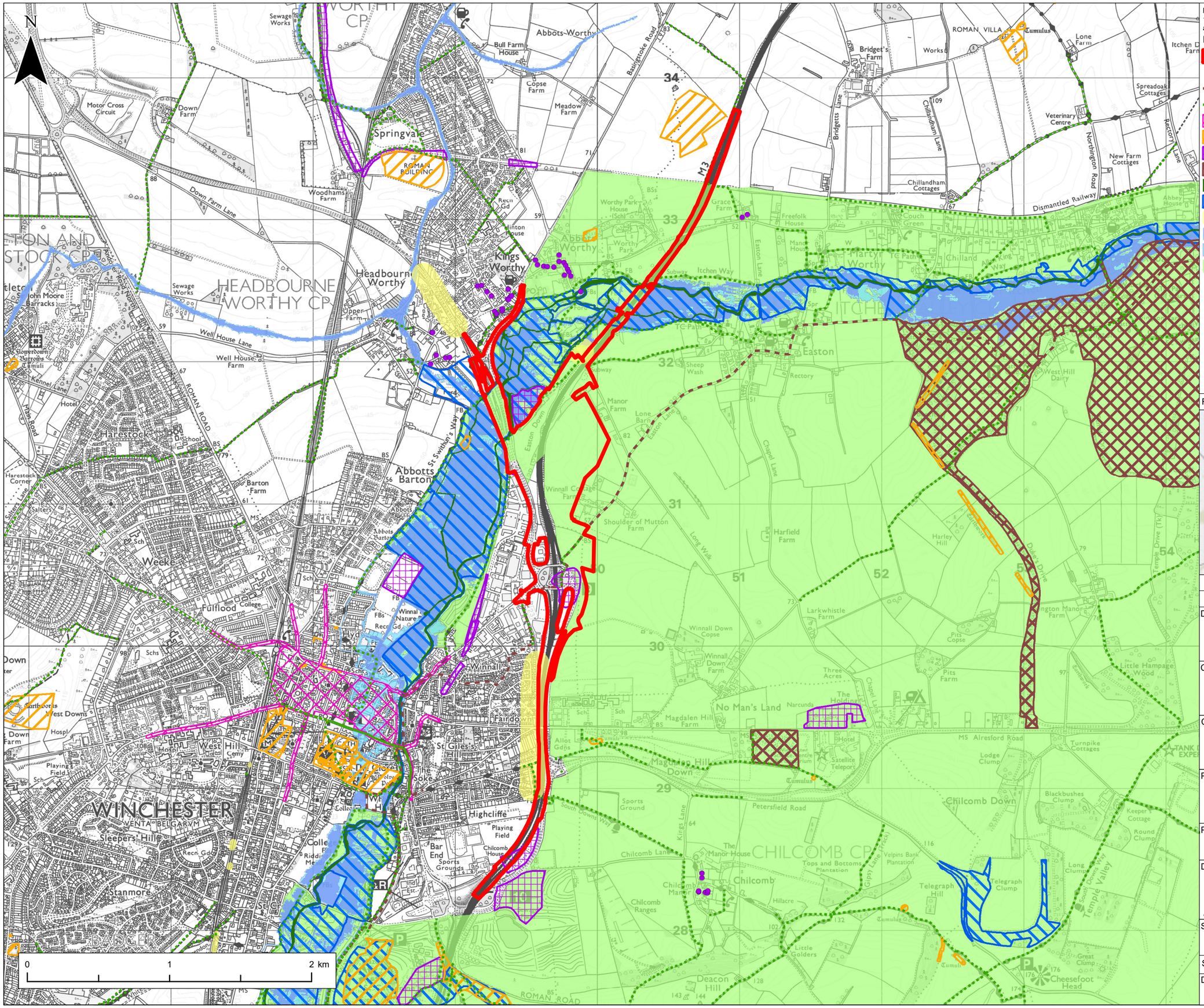
7.4.1 The Principal Contractor and their subcontractors will conduct toolbox talks such that every employee receives a health, safety and environmental briefing as appropriate. For subcontractors, their supervisors are responsible for

conducting these briefings and their implementation will be monitored by the Principal Contractor. Records must be kept of toolbox talks carried out, and who attended them. Requests for new/specific Toolbox Talks can be made to the Environment Manager.

7.4.2 Toolbox Talks will also be posted within common use areas such as welfare units and office reception areas. Key environmental issues linked to the programme will be targeted on the daily notice board as an aide memoir to all staff on site. For example, seasonal environmental constraints such as bird nesting season.

Appendix A Environmental Constraints Plan

Document Path: Z:\GIS_central\Projects\48176\02_mxd\48176_Figure1_EnvironmentalConstraintsPlan.mxd



NOTES
1. This drawing has been produced using GIS software, therefore all dimensions are shown in meters unless shown otherwise.

Legend

- Application Boundary
- Listed Building
- National Cycle Network Route
- Public Rights of Way
- Air Quality Management Area
- Scheduled Monument
- Historic Landfill
- Historic Park and Garden
- Special Area of Conservation (SAC)
- Site of Special Scientific Interest
- Noise Important Area
- Flood Zone 3
- Flood Zone 2
- South Downs National Park

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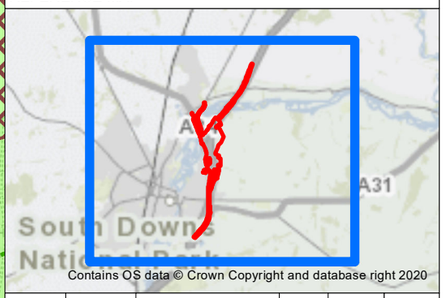
REFERENCE MAP



REV	DATE	REVISION NOTE	ORIG	CHK'D	APP'D
0	Nov 2022	APPLICATION SUBMISSION	MN	TL	AS

DESIGNER
Stantec

CONTR
VolkerFitzpatrick

CLIENT
national highways

PROJECT TITLE
M3 JUNCTION 9 IMPROVEMENT SCHEME

PROJECT STAGE
PCF STAGE 3

DRAWING TITLE
FIGURE 1 - ENVIRONMENTAL CONSTRAINTS PLAN
DOCUMENT REFERENCE 7.3
APFP REGULATION NUMBER 5(2)(q)

SUITABILITY
APPLICATION SUBMISSION

SHEET SIZE: A3	SCALE: 1:25,000	STATUS: REV 0

DOCUMENT REFERENCE
HE551511-VFK- EGN-X_XXXX_XX-TN-LE-0021

Appendix B Landscape and Ecological Management Plan [To be included as part of the siEMP]

Appendix C Draft Soil Management Plan

Infrastructure Planning

Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

M3 Junction 9 Improvement
Development Consent Order 202[x]

7.3 FIRST ITERATION ENVIRONMENTAL MANAGEMENT PLAN - APPENDIX C: DRAFT SOIL MANAGEMENT PLAN

Regulation Number:	Regulation 5(2)(q)
Planning Inspectorate Scheme Reference:	TR010055
Application Document Reference:	7.3
BIM Document Reference:	HE551511 - VFK - EGN - X_XXXX_XX - RP - LE - 0014
Author:	M3 Junction 9 Improvement Project Team, National Highways

Version	Date	Status of Version
Rev 0	November 2022	Application Submission

Contents

1 Introduction

1.1 Background

1.1.1 The purpose of the Soil Management Plan is to provide details of the methodology, control measures and monitoring programme for the site preparation and reinstatement work phases of the M3 Junction 9 Improvement Scheme (the Scheme). This includes all land within the site boundary where soils will be disturbed by the construction works.

1.1.2 The Soil Management Plan will be used as a tool by National Highways and the appointed Agent(s), Principal Contractor(s) or sub-contractor(s) acting on their behalf, as a method to control, record and audit activities relating to soil conditions and soil quality for future re-use. It includes requirements and standards for any imported topsoil and subsoil required.

1.1.3 The SMP draws on key guidance documents as follows:

- Defra Construction Code of Practice for the sustainable use of soils on construction sites
- BS 3882:2015 – Specification for topsoil
- BS 8601:2013 – Specification for subsoil and requirements for use

1.1.4 This document is a Draft Soil Management Plan. Prior to any soil stripping works commencing the Soil Management Plan will be updated to provide the required detail (as highlighted throughout this draft). The final Soil Management Plan will be submitted to National Highways (timeframe to be agreed with National Highways) for review, comment, and acceptance.

2 Roles and Responsibilities

2.1 Introduction

2.1.1 The implementation and audit of the Soil Management Plan will require certain key responsibilities to be assigned to defined roles. The Principal Contractor will have in place individuals with sufficient training and expertise in assessing soils, soil conditions and soil handling operations to ensure the measures outlined herein can be implemented, supervised, and monitored effectively.

2.1.2 In advance of any soil stripping works commencing, the Principal Contractor will confirm full details of roles and reporting mechanisms to National Highways for review and acceptance.

3 Baseline Conditions

3.1.1 In advance of soil stripping works commencing a soil survey will be undertaken to develop a Soil Resources Plan (SRP) in line with guidance in the Defra Construction Code. The SRP will be used to inform aspects of this Soil Management Plan.

3.1.2 Baseline details will be included within this section of the Soil Management Plan.

4 Calculation Of Soil Volumes

4.1.1 The soil stripping, storage, and restoration plans will be based on soil volume calculations using the data presented in the SRP.

4.1.2 The clear tracking of actual moved and stockpiled volumes of both topsoil and subsoil will be undertaken to allow restoration re-use plans to be revised based on actual volumes (including required actions in relation to the overall topsoil / subsoil balance).

4.1.3 Clear segregation and storage of topsoil and subsoil resources will be critical to maximizing re-use. All topsoil, subsoil and underlying strata will be stripped and stockpiled separately.

4.1.4 If, once detailed survey information is available, there is a requirement to import topsoil and/or subsoil materials it will be confirmed that these conform to the specifications as set out in the British Standards for topsoil and subsoil (referenced in Section 1.1.3).

5 Soil Protection Strategy

5.1.1 Since soil is a vulnerable and non-renewable resource, care must be taken throughout all handling, transporting and stockpiling activities to ensure that the soil resources of the site are protected and conserved. Many construction activities have the potential to damage soils. The purpose of this section of the Soil Management Plan is to describe how the management of soils will be controlled and to specify how soils will be protected and their quality conserved throughout all stages of the work.

5.1.2 Failure to protect soils during disturbance can lead to their degradation with consequential environmental impacts both on-site and off-site, such as: (a) soil erosion, (b) loss of soil organic matter; leading to loss of nutrients and a decline in soil fertility, (c) soil compaction leading to loss of soil structure and reduced permeability to water (leading to waterlogging) and restricted aeration and rooting potential, and (d) loss of soil biological activity.

5.1.3 Degradation of soils can lead to adverse impacts on the landscape, including: (a) alteration to the hydrology of the site caused by changes in surface runoff, (b) increased sediment loading to adjacent watercourses, (c) poor re-establishment of vegetation, and (d) visual impact of slope failure or soil erosion leading to bare soil surfaces.

5.1.4 Measures are provided in this Soil Management Plan to ensure, as far as is practicable, that soils on site will be stripped, handled and stored appropriately so that they can be re-used in restoration of the site.

5.2 Outline soil protection measures

5.2.1 This Soil Management Plan describes procedures for soil stripping, handling, transporting, storing and restoration of soils to maintain, as far as practicable, their soil quality and viability.

5.2.2 There will be a number of control measures at each stage of the works. A summary of these measures is outlined in bullet form below and described in more detail in the following sections.

Early soil protection measures

- Measures for in-situ soil protection during early site clearance activities

Soil recovery and storage (stockpiling)

- In-situ soil protection ahead of stripping; pre-treatment of existing vegetation
- Measures for handling and stockpiling; measures to ensure correct segregation of different topsoil and subsoil resources

- Measures for separate storage of different soil types; and method and locations of stockpiling

Soil reconditioning (for use where required)

- Measures to recondition wet and plastic topsoil and subsoil resources before re-use
- Measures to ensure correct segregation of different subsoil resources; measures for handling and to optimise soil drying and re-aeration
- Methods to monitor the process

Soil restoration methods

- Soil prescriptions for each different land use; soil handling/replacement methods; and in situ soil treatments for each different land use

Monitoring

- Monitoring programme; soil assessment procedures for a) soil stripping and storage b) soil reconditioning and c) restoration activities
- Acceptability criteria for soil storage, reconditioning and soil replacement activities
- Failures of acceptability criteria and corrective actions

Quality control and auditing measures

- Quality control, auditing procedures and plans; criteria for cessation of works
- Non-compliances and corrective actions
- Use of tool box talks

5.3 Wet weather working and cessation of works

5.3.1 There is no requirement for the cessation of earthworks under this Soil Management Plan. However adverse weather can cause difficult and/or dangerous working conditions and therefore may warrant a cessation of works. Criteria for the cessation of works will be agreed with relevant stakeholders in advance of any site operations commencing.

5.4 Use of tool box talks

5.4.1 Regular tool box talks will be used to ensure that all site staff are aware of the Soil Management Plan and applicable soil handling and soil protection

procedures. The tool box Talks will be site-specific, discussing soil conditions and approaches to soil handling at the site.

6 Soil Management Measures

6.1.1 Outlined below is further detail of soil management measures. Prior to any soil stripping work commencing the Soil Management Plan will be updated and appendices added to fully detail the approach for each step, based on the requirements of the Defra Construction Code. The revised Soil Management Plan will be issued to National Highways for acceptance.

6.2 Early soil protection measures

6.2.1 During the earthworks it is essential that soils are adequately protected. Plant and vehicles servicing these activities should be managed to ensure they do not traffic across in situ soils. Demarcated access routes will be provided to ensure single points of access to soil strip and storage areas to minimise compaction of underlying soils.

6.2.2 There will be no vehicle access to areas of the site outside the marked access routes (except for light vehicles for site checks and vehicles directly involved with topsoil / subsoil / overburden stripping and transportation). The access plan will be prepared and added to the Soil Management Plan prior to start of works by the Principal Contractor and issued to National Highways for acceptance

6.2.3 There will be no lay-down of materials except for those materials required for specific on-going construction activities either within the route corridors or anywhere outside designated storage areas. Subject to ground conditions, materials can be temporarily stored on topsoil if it is considered this will not be detrimental to soil quality.

6.3 Soil recovery and storage (stockpiling)

6.3.1 Before any soil stripping activities take place, a soil strip phasing plan will be prepared by the Principal Contractor, added to the Soil Management Plan and issued to National Highways for acceptance.

6.3.2 The plan will provide timescales and sequencing of topsoil and subsoil stripping and proposed haul routes. The earthworks will be phased to ensure that topsoil is stripped in each part of the site ahead of subsoil materials and that all soils are stripped from a designated area prior to bulk excavation and earthworks activities within that area.

6.4 Soil segregation

6.4.1 To ensure that the correct topsoil and subsoil depths are stripped and stockpiled tool box talks will be used to provide the required information and works will be supervised by suitably qualified personnel. The sources of all soil stockpiled will be logged/tracked and will be subject to the auditing process described in the Soil Management Plan.

6.4.2 Separate stockpiles will be created for different types of topsoil and subsoil. Documentation and physical control measures (such as signing of stockpiles) will be put in place to prevent accidental mixing and to ensure that soils are segregated according to source location. Where there are spatial constraints, it may be required to stockpile soils up against each other, with physical separation being achieved by means of a geomembrane barrier / marker layer to ensure no mixing occurs.

6.4.3 All soils to be re-used for landscape restoration will be free from significant quantities of foreign matter or other materials which will render the soils unsuitable for re-use.

6.5 Pre-treatment of existing vegetation

6.5.1 It is good practice to reduce the quantity of vegetation entering the storage stockpiles to minimise the formation of anaerobic conditions during storage. As such, in advance of soil stripping, the topsoil will be cleared of surface vegetation and arising removed by a method suited to the vegetation type present. The effectiveness of these operations will be assessed by suitably qualified personnel.

6.6 Methods of soil stripping

6.6.1 Where possible a suitably sized hydraulic excavator (maximum 60 tonne) will be used to strip the topsoil and subsoil. Alternatively, a tracked dozer may be used to strip the soils. Dump trucks will be used to transport the soils to their allocated storage location. All procedures will be planned to involve minimum tracking to minimise compaction. Access for dump trucks will be via dedicated marked routes to prevent compaction of non-stripped topsoil and subsoil.

6.7 Soil storage

6.7.1 Key issues for soil handling, storage and eventual re-use are soil moisture content and soil consistency (plasticity). Soils that are stripped when plastic will require to be reconditioned before re-use for restoration. During the works, soil plasticity status will be determined in situ prior to stripping (using a hand test – the approach will be set out for acceptance by National Highways in an updated Soil Management Plan).

6.7.2 When required prior to soil re-use, windrows for soil drying will be no more than 2m in height. Only once the soil moisture content of windrowed soil has reduced sufficiently and the soil is non-plastic in consistency will it be moved to its final stockpile location or final re-use location.

6.7.3 The general principles governing stockpile location and stability which will be adhered to are as follows:

- All areas designated as stockpiling areas will be stripped of topsoil and subsoil resources prior to stockpiling

- Stockpiles will not be positioned within the root or crown spread of trees, or adjacent to ditches, watercourses or existing or future excavations
- Topsoil and subsoil stockpiles will be seeded with a neutral grassland seed mix to maintain slope stability and to prevent erosion or dust generation
- Grass seeded and maintained stockpiles will have a maximum side slope that is based on geotechnical stability
- Topsoil and subsoil stockpiles will be managed and monitored throughout their lifetime to ensure maintenance of stockpile stability and integrity

6.7.4 Measures to manage and treat site runoff and prevent erosion and dust generation during soil stripping and stockpiling works will be set in place through a series of specific control measures. These are described in the **first iteration Environmental Management Plan (fiEMP) (Document Reference 7.3).** Construction methodologies will ensure appropriate biosecurity (disease and pest control) and weed control to protect both on-site soils and adjacent land holdings.

6.8 Stockpile locations, treatment areas and access routes

6.8.1 The location of topsoil and subsoil stockpiles will be clearly set out on stockpile plans which will be added to this Soil Management Plan and issued to National Highways for acceptance. Once agreed, locations will be clearly marked out on the ground.

6.8.2 This will include clear mapping of required access routes to stockpile locations for all phases of the soil stripping, transport, and stockpiling activities. As works progress and change location, the access route demarcation and signage will be changed accordingly, in advance.

7 Soil Restoration Methods

7.1 Introduction

7.1.1 The primary objective of soil restoration is to provide soil profiles suitable for the final landscaping proposed.

7.1.2 During the placement of topsoil and subsoil resources in their final location the methods outlined above will be followed. This will include, but not be limited to, the implementation of an access and egress plan for vehicles and plant to prevent unnecessary trafficking of restored areas, use of appropriate scale plant, such as 360° excavators rather than bulldozers, avoidance of double handling and avoidance of mixing topsoil and subsoil.

7.1.3 During restoration works, measures to manage and treat site runoff, and prevent erosion and dust generation will also be set in place through a series of specific control measures. These requirements are set out in the **fiEMP (Document Reference 7.3).** Specific issues will be around biosecurity (disease and pest control) and weed control to protect both on-site soils and adjacent land holdings during restoration.

7.1.4 These activities are detailed further in the following sections.

7.2 Placement and *in situ* treatment of soil materials

7.2.1 Prior to restoration activities taking place, topsoil will have been stored in stockpiles for extended periods. To confirm continuing suitability of stockpiled soils for restoration, they will be visually inspected, and assessments carried out before their re-use (see **Section 8 Monitoring**). If any soil is found to be plastic or display excessive anaerobic conditions the materials will be reconditioned as detailed above. It will be the responsibility of the Principal Contractor to assess soil conditions in each stockpile and to recommend appropriate pre-treatment prior to soil placement should it be required.

7.2.2 During topsoil and subsoil placement there are two fundamental requirements: (a) to replace and spread out the necessary combination of topsoil and/or subsoil to re-create the soil profile and (b) to ensure careful handling and re-placement of soils, avoiding compaction and any unnecessary damage to soil structure. The following procedure (which is further detailed in the Defra Construction Code of Practice) is designed to ensure that these requirements are met.

7.2.3 The SRP will clearly set out the topsoil and subsoil thickness in undisturbed soils and these thicknesses will be replicated in the restored soil profiles.

7.2.4 After the placement of each soil layer (overburden, topsoil and/or subsoil) it is essential that it is mechanically cultivated using appropriate tillage equipment to loosen/break up compaction and restore soil structure. To be fully effective,

these cultivations will be carried out when the soils are dry and friable. Otherwise the cultivation tool/tine merely cuts and smears the soil rather than lifting, fracturing and loosening it.

7.2.5 Prior to the placement of stockpiled subsoil and topsoil, the re-profiled surface will be overlain with overburden material to create the required landform. After placement of overburden, the area will be deep ripped prior to placement of stockpiled subsoil and topsoil. This operation will be checked by suitably qualified personnel to ensure satisfactory decompaction has been achieved.

7.2.6 The various topsoil and/or subsoil materials will be placed in layers over the ripped overburden using suitable machinery. The topsoil and subsoil will be checked by suitably qualified personnel to ensure compliance with the appropriate parameters at this stage (soil type, soil depths and stoniness). Once the soil profiles have been formed, the topsoil and subsoil will be thoroughly decompacted, loosened and prepared using land restoration / agricultural machinery to ensure they meet soil structure and aeration criteria.

7.2.7 Subsoil cultivation is scheduled after the topsoil is placed to allow the subsoil to be decompacted without risk of re-compaction during topsoil spreading. This approach will also ‘key in’ the topsoil with the subsoil to produce a soil profile that displays continuity between each layer.

8 Monitoring

8.1 Introduction

8.1.1 To ensure soil quality is maintained throughout the works, key stages will be monitored by appropriately trained and experienced personnel.

8.2 Monitoring programme

8.2.1 The monitoring programme shall incorporate the following:

Soil recovery

- The effectiveness of vegetation pre-treatment in advance of soil stripping
- An assessment of soil plasticity ahead of soil stripping. This will determine whether a soil reconditioning stage is needed after storage and before re-use.

Storage

- Assessment of soil stockpiles to ensure soil quality is maintained during storage and to determine reconditioning requirements

Reconditioning

- The effectiveness and progress of the soil reconditioning process

Soil replacement

- Key stages of the soil placement and decompaction/cultivation sequence to check correct soil spreading and effectiveness of tillage operations
- An assessment of the acceptability of the replacement soil profiles for the restoration design

8.3 Personnel

8.3.1 The monitoring tasks shall be conducted by specialist personnel with appropriate experience and training for their role.

8.4 Documentation

8.4.1 Inspection processes, checklists and acceptability criteria will be developed by the Principal Contractor and issued to National Highways for acceptance prior to any works commencing. Documentation of the monitoring undertaken, including clearly marked up plans, will be maintained and made available to National Highways.

8.5 Reporting of findings

8.5.1 The findings of all examinations and assessments will be recorded and held by the Principal Contractor for record keeping and to enable actioning of necessary corrective actions.

8.6 Failures of acceptability criteria and corrective actions

8.6.1 Where the soils are found to be non-compliant in any respect, appropriate means of remediation will be proposed by the Principal Contractor for acceptance by National Highways. Once the affected area has been treated, it will be reassessed before sign off.

9 Auditing

9.1.1 An audit checklist will be developed by the Principal Contractor and issued to National Highways for acceptance. This will be updated in advance of works commencing to identify key dates and responsible persons. This will then be used during the works to ensure all checks have been undertaken and required records completed.

Appendix D Soil Resources Plan [To be included as part of the siEMP]

Appendix E Draft Site Waste Management Plan

Infrastructure Planning

Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

M3 Junction 9 Improvement
Development Consent Order 202[x]

7.3 FIRST ITERATION ENVIRONMENTAL MANAGEMENT PLAN - APPENDIX E: DRAFT SITE WASTE MANAGEMENT PLAN

Regulation Number:	Regulation 5(2)(q)
Planning Inspectorate Scheme Reference:	TR010055
Application Document Reference:	7.3
BIM Document Reference:	HE551511 - VFK - EGN - X_XXXX_XX - RP - LE - 0014
Author:	M3 Junction 9 Improvement Project Team, National Highways

Version	Date	Status of Version
Rev 0	November 2022	Application Submission

Contents

Tables

Appendices

1 Draft Site Waste Management Plan

1.1 Introduction and background

1.1.1 On 1 December 2013, the Site Waste Management Plans (SWMP) Regulations 2008 were repealed. However, the implementation of a SWMP remains industry good practice and is a requirement of National Highways for the delivery of their schemes. This draft SWMP has been prepared in accordance with the repealed SWMP Regulations 2008 and provides a framework for the Principal Contractor to develop the M3 Junction 9 Improvement scheme's (the Scheme) SWMP.

1.1.2 Preparing the draft SWMP facilitates the identification and implementation of waste minimisation opportunities at the design stage. It also facilitates reuse and recycling opportunities during the construction phase, which will reduce the quantities of waste sent to landfill.

1.1.3 The main purpose of the SWMP is to assess and record how waste is reduced, reused, recycled and disposed of by a scheme. This means:

- Recording decisions taken to prevent waste through concept and design
- Forecasting waste produced onsite
- Planning how to reduce, reuse and then recover the forecast waste
- Implementing and monitoring the planned waste related activity
- Reviewing the SWMP and recording lessons learnt

1.2 SWMP

1.2.1 The aim of a SWMP is to encourage waste reduction and recovery practice levels, highlighting areas where good practice in waste minimisation and management can be achieved. The SWMP seeks to facilitate waste minimisation and encourage reuse and recycling opportunities during the construction phase. This all reduces the quantities of construction, demolition and excavation waste sent to landfill.

1.2.2 The final SWMP to be developed by the Principal Contractor will include the following:

- Stage 1 – Policy and set up: this section will provide a record of the administration details and set Scheme targets and stretch targets
- Stage 2 – Preparation and concept design: this section will outline the initial concept and present the design decisions to reduce waste

- Stage 3 – Detailed design: this section will forecast the waste and record the waste reduction / minimisation actions
- Stage 4 – Pre-construction: this section will record waste carriers, waste destinations and waste management and recovery actions
- Stage 5 – Construction: this section will record the actual waste movements
- Stage 6 – Post completion and use: this section will outline the outcome of reviews undertaken and compare actual quantities with estimates

1.2.3 The SWMP could be used in conjunction with existing waste management tools and systems.

1.2.4 The SWMP will provide options for planning and processing waste during the construction phase of the Scheme. It will demonstrate that the Scheme will maximise opportunities for reuse and recycling that are cost neutral (or cost negative) and will divert waste from landfill.

1.3 Outline SWMP implementation

1.3.1 The waste generated during the Scheme should be recorded and monitored by the Principal Contractor. The example template provided in Appendix A can be used, although alternative complaint formats are acceptable.

1.4 Key roles

1.4.1 The key roles and associated responsibilities for implementation of the SWMP are summarised in **Table 1.1**. These roles and responsibilities are based on those required by the now repealed SWMP Regulations 2008:

Table 1.1: Key Roles

Team Member	Key Role
Developer	▪ Promote waste minimisation and insist on good practice from all team members ▪ Ensure that all hazardous wastes have been identified prior to reconstruction ▪ Review strategy over time and identify waste reduction opportunities
Designer	▪ Consider design options and reduce bespoke elements ▪ Promote reuse / retainment of existing elements

Team Member	Key Role
	▪ Specify the use of recycled content materials ▪ Identify waste prevention and reduction opportunities
Principal Contractor – Site Manager	▪ Develop site specific waste strategy, implement and communicate to all parties ▪ Assist in design process to reduce waste and monitor implementation ▪ Drive segregation of waste arisings and designation of areas for waste activities ▪ Facilitate onsite storage compounds and treatment of segregated materials ▪ Reduce waste being brought onto site as packaging etc. ▪ Ensure appropriate waste storage and containers onsite ▪ Identify and confirm all designations for waste leaving the site, including hazardous ▪ Ensure appropriate offsite transport in line with local regulatory requirements ▪ Keep proper records of all wastes produced, reused and sent offsite
Subcontractors	▪ Develop method statements for activities onsite ▪ Liaise with the Principal Contractor and agree way forward ▪ Assist in ensuring onsite practices are safe and will not impact the environment ▪ Ensure that wastes are properly segregated
Site Workers	▪ Question unsatisfactory practices onsite and follow instructions as provided ▪ Assist in ensuring onsite practices are safe and will not impact the environment ▪ Ensure that wastes are properly segregated

Appendix A Example Monitoring Template

Duty of care documentation

Waste Type in Skip	EWC Code	Inert/Non-Hazardous/Hazardous	Waste Carrier Name (and/or broker name)	Waste Carrier License Number	License Expiry Date	Name of End Destination	Landfill License or Waste Transfer Station Registration Details	Volume Sent	Confirmation that Registered Landfill received Waste and Date

Waste Activity License/Exemption	Details of License/Exemption (including expiry date and limitations to license)	Comments

Waste collation data information

Material Use On-Site	Quantity Ordered (if known)	Estimated Waste (5% of materials ordered for example)	Quantity Wasted (m^3)	Volume Reused on-site (m^3)	Volume Reused off-site (m^3)	Volume Recycled on-site (m^3)	Volume Recycled off-site (m^3)	Volume Landfill (m^3)	Final % of materials ordered disposed to landfill

Useful waste catalogue codes

Waste Material	EWC
Bricks	17-01-02
Concrete	07-01-01
Contaminated rags/cloths/wipes	15-02-02*
Contaminated spill materials	15-02-02*
Fluorescent Tubes (FT)	20-01-21*
Mixed Municipal Waste	20-03-01
Glass	17-02-02
Mixed Metals	17-04-07
Paper and Cardboard	20-01-01
Plasterboard	17-08-02
Plastics	17-02-03
Soil and Sands not containing dangerous substances	17-05-04
Wood	17-02-01

Appendix F Draft Materials Management Plan

Infrastructure Planning

Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

M3 Junction 9 Improvement
Development Consent Order 202[x]

7.3 FIRST ITERATION ENVIRONMENTAL MANAGEMENT PLAN - APPENDIX F: DRAFT MATERIALS MANAGEMENT PLAN

Regulation Number:	Regulation 5(2)(q)
Planning Inspectorate Scheme Reference:	TR010055
Application Document Reference:	7.3
BIM Document Reference:	HE551511 - VFK - EGN - X_XXXX_XX - RP - LE - 0014
Author:	M3 Junction 9 Improvement Project Team, National Highways

Version	Date	Status of Version
Rev 0	November 2022	Application Submission

Contents

1 Draft Materials Management Plan

1.1 Introduction

1.1.1 Given the quantities of material resources to be used and waste arisings associated with the M3 Junction 9 Improvement Scheme (the Scheme), a need has been identified for a Materials Management Plan (MMP). The purpose of an MMP is to set out how the materials associated with the Scheme will be procured, handled and managed in the most efficient and sustainable manner. The MMP is also produced for the Scheme to ensure the cut / fill balance remains balanced.

1.1.2 This draft MMP provides the framework the Principal Contractor will use to develop the final Scheme MMP.

1.2 MMP

1.2.1 The final MMP will need to provide details of appropriate management of onsite and off-site reuse of materials and also demonstrate that the following principles for the use of site-won materials as 'non waste' are met:

- The material is suitable for its intended use in all respects (suitability for use)
- There is a requirement for the material (certainty of use)
- The quantity of the material required is defined
- The potential risks to human health and the environment from the material have been considered and assessed

1.2.2 Where practicable, waste streams that have the potential to be reused onsite or transported offsite for reuse / recycling will be segregated in separate containers (for example metals, plastics). Although every effort will be made to retain all suitable materials onsite, it is possible that some of these materials cannot be reused or recycled during the construction of the Scheme. In these situations, the Site Managers will work to identify suitably licensed waste facilities in order for material to be redistributed to other suitable sites. This represents the most sustainable alternative to landfill disposal.

1.2.3 The MMP is expected to follow the layout and cover, as appropriate, the broad issues outlined below.

1.3 Scheme details

1.3.1 Site details and materials, aims, targets, objectives and key performance indicators for efficient material use will be outlined in the final MMP. For example:

- 100% of suppliers and subcontractors operate their own ISO 14001 accredited Environmental Management System

1.4 The materials management team

1.4.1 The Materials Management Team (e.g., the Scheme's Project Manager, buyer, Environmental Manager, construction teams, sub-contractors, etc.) will be identified and contact details and individual responsibilities provided.

1.5 Communication

1.5.1 Communication is a major part of the success of any scheme and communication of the MMP is paramount to its implementation. A communication strategy, including meetings and training and toolbox talk plan, will be outlined.

1.6 Material resources to be used

1.6.1 The material resources to be used, including types and quantities, will be outlined.

1.6.2 Where feasible the Scheme's design team and Principal Contractor will research and investigate sustainable procurement options for material resources, that:

- Are non-hazardous
- Are reused, refurbished, or recycled
- Are recyclable
- Are from renewable sources
- Are lower in embodied energy
- Have a lower carbon footprint
- Have a lower water footprint
- Consider transport impact and mode, balancing the cost and benefits

1.7 Material resources suppliers

1.7.1 A methodology for selecting the material resources suppliers will be outlined. Material suppliers will be asked a selection of questions, depending on the material resources in question, for example:

- Is the material resource certified under the BRE BES 6001 or BS 8902 or 8905?

- Is your company registered under the Carbon Reduction Commitment Energy Efficiency scheme?
- Can your material resources be reused or recycled after use?
- What is the reused or recycled content of the material resource?
- Can you provide information on the embodied energy of the material resource?
- Can you provide information on the carbon and water footprint of the material resource?
- How far does the material resource have to be transported?
- By what mode is the material resource transported?
- Can packaging be returned to the supplier?
- Can unused material resources be returned to the supplier?
- Is the material resource hazardous?
- Is the wood FSC certified or equivalent?

1.7.2 Suppliers will be scored on their performance against the established criteria. This score will be considered when the supplier is chosen.

1.8 Waste arisings

1.8.1 The existing ground conditions and the estimated types and quantities of key waste streams likely to arise from the Scheme will be outlined.

1.8.2 Waste arisings will be recorded in the Site Waste Management Plan (Appendix F of the **first iteration Environmental Management Plan (fiEMP) (Document Reference 7.3).**

1.9 Approach to material resources management during construction

1.9.1 Phasing of materials use, and environmental management and mitigation will be outlined.

1.9.2 Minimisation of material resources through attention to specifications, delivery, storage, handling, use and disposal of material resources will be described.

1.9.3 Method of transporting material resources to minimise road transport will be outlined (where possible).

1.10 Site records

1.10.1 The following records will be kept in the MMP:

- Licenses and permits relevant to the MMP
- Material resources tracking, treatment, disposal, and delivery notes records
- Records of any contingency arrangement for material resources and waste arisings that had to be implemented will also be detailed

Appendix G Draft Invasive Species Management Plan

Infrastructure Planning

Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

M3 Junction 9 Improvement
Development Consent Order 202[x]

7.3 FIRST ITERATION ENVIRONMENTAL MANAGEMENT PLAN - APPENDIX G: DRAFT INVASIVE SPECIES MANAGEMENT PLAN

Regulation Number:	Regulation 5(2)(q)
Planning Inspectorate Scheme Reference:	TR010055
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BIM Document Reference:	HE551511-VFK-EGN-XXXX_XX-RP-LE-40001
Author:	M3 Junction 9 Improvement Project Team, Highways England

Version	Date	Status of Version
Rev 0	15 June 2023	Deadline 2 Submission

Contents

1 Introduction

1.1 Objectives

1.1.1 The objective of the Invasive Species Management Plan (ISMP) is to set out the key controls and working methods in order to prevent the spread of invasive non-native species (INNS) through the construction phase of the M3 Junction 9 Improvement Scheme (the 'Scheme').

1.1.2 This essay plan sets out the information that will be included in the ISMP in future iterations and highlights key issues for the project that must be the subject of controls in accordance with the commitments set out in the **first iteration Environmental Management Plan (fiEMP) (7.3, Rev 2).**

1.1.3 The ISMP will be updated and completed in accordance with this essay plan and the **first iteration Environmental Management Plan (fiEMP) (7.3, Rev 2)** by a suitably qualified invasive species specialist and will be subject to consultation (in accordance with the provisions set out in **first iteration Environmental Management Plan (fiEMP) (7.3, Rev 2)** with the Environment Agency and Natural England).

1.2 Legislation and guidance

1.2.1 Legislation covering the handling and disposal of invasive species include the following:

- The Invasive Alien Species (Enforcement and Permitting) Order 2019
- The Wildlife and Countryside Act (WCA) 1981
- The Natural Environment and Rural Communities Act (NERC) 2006
- The Environmental Protection Act 1990
- The Environmental Protection (Duty of Care) Regulations 1991
- The Water Resources Act 1991
- The Landfill (England and Wales) Regulations 2007
- The Hazardous Waste Regulations 2005
- The Waste Management Licensing Regulations 1994
- The Control of Substances Hazardous to Health (COSHH).

1.2.2 All works affecting INNS would be completed in accordance with:

- Department for Environment, Food & Rural Affairs (Defra). Guidance on stopping invasive non-native plants from spreading (2019)
- Environment Agency. Regulatory position statement (RPS) 178 for Treatment and disposal of invasive non-native plants (2019)

1.2.3 In addition, because part of the Order Limits interacts with a Special Area of Conservation and Site of Special Scientific Interest then the control of invasive species must also consider the relevant legislation associated with these designations. Further information can be found within the **Habitats Regulations Assessment (7.5, APP-158)** and **Chapter 8 (Biodiversity)** of the **Environmental Statement (ES) (6.1, APP-049)**.

1.3 Location and description of invasive species

1.3.1 Where records of invasive species were noted during surveys undertaken they are set out in **Appendix 8.1h (Phase 1 Habitat Survey Report 2018)** of the **ES (6.3, APP-111)** and **Appendix 8.1m (Habitat Verification and Orchid Survey 2020)** of the **ES (6.3, APP-116).**

1.3.2 The need for further surveys will be established by the Principal Contractor (PC), however as a minimum an invasive plants survey (i.e. for invasive or injurious plants) will be carried out prior to construction, to inform the development of the management plan.

1.3.3 Six invasive non-native species have been recorded, including: Japanese knotweed *Fallopia japonica*, giant bramble *Rubus armeniacus,* goat's-rue *Galega officinalis*, Himalayan cotoneaster *Cotoneaster simonsii,* Michaelmas daisy *Aster sp*., red-osier dogwood *Cornus sericea,* and wall cotoneaster *Cotoneaster horizontalis*. Of these the Japanese knotweed, Himalayan and wall cotoneaster are listed on Schedule 9 of the WCA 1981 making it an offence to plant or otherwise cause to grow in the wild these species.

1.3.4 This section will be updated to set out records of the confirmed locations of invasive weeds within the Application Boundary, and those recorded in pre-construction surveys.

1.3.5 A detailed location plan will be created, identifying all locations of INNS recorded through the surveys. This plan will be made available through toolbox talks and on-site information, to ensure all workers are aware of the locations where specific biosecurity measures apply.

1.4 General recommendations for invasive species management on construction sites

1.4.1 Works will follow good practice measures detailed in the following regulatory guidance documents:

- Department for Environment, Food and Rural Affairs (DEFRA) Environmental Management – Guidance, *'Japanese Knotweed, Giant Hogweed and Other Invasive Plants'* (Department for Environment, Food and Rural Affairs, 2013)[1]

- Environment Agency, *Managing Japanese Knotweed on Development Sites - The Japanese Knotweed Code of Practice* (Environment Agency, 2012)[2]

- Environment Agency, *Invasive Weeds – Guidance for the control of invasive weeds in or near water* (Environment Agency, 2003)[3].

1.4.2 All works in the vicinity of/or directly affecting INNS shall be managed to prevent their spread. The ISMP would include the best timing of works, biosecurity procedures and treatments and how to carry out the works to minimise the risk of dispersion of invasive non-native plant species from, into and within the Scheme and to ensure that they do not cause any delays to the programme.

1.4.3 Roles and responsibilities will be established in relation to the management and control of INNS and included within the updated ISMP in the second iteration Environmental Management Plan (siEMP).

Good site practice

1.4.4 Good site practice and hygiene will ensure the following:

- All areas of INNS not within the physical working areas are to be demarcated to ensure no accidental spread or contact.

- All vehicles and footwear entering working area to be clean on arrival.

- Assurance will be sought from external contractors that, where possible, machinery is not being brought onto site immediately from other works. Machinery should be dry and free of mud or debris from all previous sites.

- Vehicles or staff required to enter an exclusion zone, or areas previously infested, will be thoroughly inspected and boots or vehicles cleaned before moving outside of the working area.

- Areas previously infested that are likely to be disturbed by vehicles will be protected by a root barrier membrane to reduce spread and likelihood of heavy contamination of vehicles and footwear.

[1] Department for Environment, Food and Rural Affairs (2013) Environmental Management – Guidance, 'Japanese Knotweed, Giant Hogweed and Other Invasive Plants'.

[2] Environmental Agency (2013) Managing Japanese Knotweed on Development Sites – The Japanese Knotweed Code of Practice (version 3)

[3] Environmental Agency (2013) Invasive Weeds – Guidance for the control of invasive weeds in or near water

- Vehicles used to transport infested soils must be thoroughly inspected and appropriately cleaned in a designated area before being used for other work.

- The designated cleaning area must be within an area of hard standing or covered by a root barrier membrane that can contain and collect the material washed off. The cleaning area must be located so as not to allow material to contaminate drains, ditches or watercourses.

- The most appropriate methods of cleaning will be determined by a suitably qualified contractor following a visual inspection. The suitably qualified contractor will supervise the cleaning, which will pay particular attention to tyre treads, wheel arches and any other areas that might retain rhizomes or seeds.

- The material left within the designated area after vehicles have been cleaned must be contained, collected and disposed of along with other contaminated material. If required, this needs to be done in accordance with the licencing requirements in The Invasive Alien Species (Enforcement and Permitting) Order 2019.

- All staff will be made aware of what noted INNS (including regrowth) look like and what their responsibilities are. Awareness training will be undertaken in the form of tool box talks covering invasive species.

- An Ecological Clerk of Works (ECoW) will undertake pre-construction invasive species survey and update the ISMP accordingly. The ECoW will oversee the implementation of the ISMP on site. Everyone working on site should clearly understand the role and authority of the ECoW, which will be included within the site induction.

1.5 Specific invasive species management

1.5.1 This section will describe, for each of the invasive species identified at each of the locations it is present, specific measures to be implemented to ensure that there is no spread of the species. This may include production of species-specific method statements for any particularly sensitive locations or construction activities.

1.5.2 This is likely to include, but not be limited to:

- Specific storage and management procedures for vegetation cleared and excavated materials

- Biosecurity measures to be implemented when moving people, plant or equipment between locations

- Specific controls on movement of vehicles between locations

Japanese knotweed

1.5.3 This species has been noted within the Application Boundary. If confirmed as present within any construction working area, the following general recommendations will apply.

1.5.4 A 7m horizontal construction exclusion zone will be implemented around a stand of Japanese knotweed, unless otherwise advised by a specialist and suitably qualified contractor. This is considered to be the maximum horizontal distance that Japanese knotweed rhizomes are likely to cause infestation of the soil. The Japanese knotweed stand and construction exclusion zone will be isolated with fencing and a restricted access sign attached. There is no specified vertical limit of potential rhizome infestation however, the rhizome rarely penetrates deeper than 3m.

1.5.5 Long-term herbicide treatment is advised as the first line of treatment in advance of construction works, if programme allows. However, if it needs to be removed during construction that may not be feasible, in which case a specialist contractor will be appointed to advise on the most appropriate techniques for treatment and/or removal within the timescales required. Any excavations from within the 7m buffer area would therefore still be considered as controlled waste and the advice of a suitably qualified contractor should be sought.

1.5.6 Supervision of excavations will be undertaken by suitably qualified contractors to advise whether the material is contaminated with Japanese knotweed. If Japanese knotweed material is present, the suitably qualified contractor will advise of appropriate treatments, which may include those described below:

- On-site burial of Japanese knotweed contaminated material. Burial would be required to a depth of at least 5m and covered with a root barrier membrane, or as otherwise advised by a suitably qualified contractor.
- Creation of a bund for the storage and long-term treatment of Japanese knotweed contaminated material.
- Stockpiling contaminated soil and replacement in situ following the works (i.e. to ensure contaminated soil is not relocated elsewhere allowing the Japanese knotweed to spread). Stockpiles of contaminated soil should be placed on a geotextile layer, clearly indicated, isolated and contained, and treated with a suitable herbicide during the temporary storage period. The replaced material should be treated with a suitable herbicide for a specified period of time through a Landscape Maintenance Contract.
- Off-site disposal of contaminated soil to a licensed landfill operator and with adequate capacity to receive the controlled waste. This is the least preferred and least sustainable option.

Aquatic invertebrate invasive species

1.5.7 Strict biosecurity measures will be included to cover workers, plant and equipment working in/or near watercourses, that adhere to the check clean-dry protocol. In addition to the control measures set out below, pre-construction surveys will be undertaken of all areas within the construction footprint to identify the location of any invasive species not already identified.

1.5.8 Crayfish plague is a disease caused by a fungal-type organism called *Aphanomyces astaci*, which attacks the soft tissue of crayfish. Signal crayfish are carriers of the plague but are usually immune themselves. However, native white-clawed crayfish are susceptible and, once introduced, a population can be decimated in only a few weeks.

1.6 Ongoing monitoring and management

1.6.1 This ISMP will be regularly monitored by the Principal Contractor, as advised by a suitably qualified/ experienced contractor (i.e. one with appropriate accreditation or trade body membership such as the Invasive Non-Native Specialists Association) and the ECoW throughout construction. This will be done alongside species specific method statements, to be developed by the Principal Contractor. Detailed measures will be included within the regular audits as specified in the second iteration Environmental Management Plan (siEMP).

1.6.2 Site workers and the ECoW will remain vigilant for the new growth of invasive species within and in close proximity to the works, and this Invasive Species Management Plan will be updated accordingly.

1.6.3 This section will include any specific monitoring that is required post-treatment, if any locations are identified where specific treatment or management methods are required.

1.7 References

1.7.1 References used to inform the ISMP will be listed in this section.

Appendix H Emergency Spill Response Plan [To be included as part of the siEMP]

Appendix I Erosion Prevention and Sediment Control Plan [To be included as part of the siEMP]

Appendix J Temporary (Construction) Drainage Strategy

Infrastructure Planning

Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

M3 Junction 9
Development Consent Order 202[x]

Stage 3 Temporary (Construction) Drainage Strategy - Phasing and Mitigation Measures

Regulation Number:	Regulation XXXXX
Planning Inspectorate Scheme Reference:	TR010055
Application Document Reference:	7.3
BIM Document Reference:	HE551511-VFK-HDG-X_XXXX_XX-TN-CD-0005
Author:	M3 Junction 9 Improvement Project Team, Highways England

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Contents

Figures

No table of figures entries found.

Tables

Annexes

1 Executive Summary

1.1.1 The concept proposals for the drainage of construction runoff have been proposed for each construction phase and are shown on phase layouts in Annex A Limitations of this report

1.1.2 Measures to control and mitigate silt transport in construction runoff to controlled waters have been proposed, which are summarised in Annex B. The management of the risk of silt-pollution through mitigation measures, has been indicated.

1.1.3 Further steps are proposed on how to develop the design in conjunction with specialist designers and the regulatory bodies.

1.1.4 The route for the approval of temporary drainage by regulatory bodies has been indicated.

2 Introduction

2.1.1 This Temporary (Construction) Drainage Strategy relates to the control of potential pollution of groundwater and surface waters during construction. Construction activities by their nature disturb the natural soils environment, which can mobilise smaller particles, which can migrate to groundwater and surface water within rainfall run-off.

2.1.2 The interception of particles within construction runoff is required to minimise the build-up of unwanted silts in permanent features such as infiltration basins and to protect watercourses from excessive levels of suspended solids (turbidity).

2.1.3 This Technical Note identifies the methodology proposed to mitigate the risk of run-off contamination by silt in the context of existing and new drainage systems.

2.1.4 A Runoff Pollution Assessment Method and Control Measures for highway runoff in the permanent drainage network in the Scheme, are covered within a separate technical note HE551511-VFK-HGN-X_XXXX_XX-TN-CH-0003 with the scheme's permanent drainage strategy outlined within report HE551511-VFK-HDG-X_XXXX_XX-RP-CD-0001.

2.1.5 An assessment of the Proposed Use of Flocculants to Manage Silt Pollutants During the Construction Phase is covered within a separate technical note HE551511-VFK-HGN-X_XXXX_XX_TN-CH-0015.

3 Project Overview

3.1.1 The M3 Junction 9 Improvement (the Scheme) runs north-south, and lies immediately to the east of Winchester, centred in the Winnall area and extending north to Headbourne Worthy.

3.1.2 Abutting the west of the scheme are commercial and light industrial land uses associated with the Wykeham Trade Park and Winnall Industrial Estate, which fall away from the M3 towards the River Itchen.

3.1.3 Land rises to the east of the motorway and comprises entirely arable land or woodland, with a low density of minor agricultural settlements. 206 hectares (ha) of arable land drains overland from the east towards the Scheme. The 206 ha overland catchment is intercepted by the junction before it would otherwise reach the River Itchen to the west. Residual overland flow from 192 ha (4%-10% greenfield runoff coefficient) drains to ground on the eastern side of the Scheme in natural soils and in existing highway drainage soakage features maintained by National Highways. Overland flow from a 14 ha sub-catchment of the 206 ha total catchment, passes under the M3 corridor in an existing 300mm dia. culvert and then flows overland to the west, towards the River Itchen.

3.1.4 Proposed modifications to Junction 9 comprise the introduction of new on/off slip-roads to both northbound and southbound sides of the M3, new link roads between A33/A34/A272 and M3 roads and a new overhead roundabout above the M3 corridor. Junction 9 is located in a low spot of the M3, towards which a total of approximately 1.6km of the existing M3 corridor drain.

4 Approach and Measured Proposed

4.1.1 The general approach to runoff silt-control that is proposed is similar in principle to the sustainable drainage systems SuDS management train; that is to control the disturbance of silts at source and to minimise the downstream transport of silts using measures in series along the conveyance route, prior to discharge into extended detention basins and watercourses.

4.1.2 The Scheme is proposed to be constructed in multiple phases which enable existing traffic routes to be maintained until new routes are completed and brought online. Most of the existing soakage drainage elements, such as soakage trenches, which serve the existing M3 corridor, are removed by the new on/off slip road construction. The proposed temporary drainage strategy therefore considers the runoff from existing carriageway areas in addition to proposed construction areas and new carriageway.

4.1.3 During periods of extended rainfall, the infiltration capacity of construction areas can potentially be exceeded, causing saturation and the creation of surface runoff. It is proposed to build lined cut-off ditches to intercept and convey construction run-off to settlement/attenuation features. The ditches may incorporate silt mitigation features in series, such as arrangements of flocculant gel blocks, flocculant matting, silt matting and silt wattles. Ditches are expected to flow by gravity. Where gravity flow is not practical, there may be localised use of sump chambers and pumps to convey ditch flow to the same silt removal systems.

4.1.4 The silt mitigation measures proposed are not exhaustive of other options, which due to logistical, topographic and spatial complexities may be more suited to combined pump and silt separation units. The proposed measures would be defined during the detailed design stage.

4.1.5 The main silt-removal methodology is to provide flocculation elements (that is, the precipitation of suspended (colloid) solids by flocculation or coagulation) as high up in the drainage network as possible to capture silts at their highest concentration, near their source, before dilution in the runoff stream. Precipitation of solids can be supplemented by silt matting which filters solids from the flow mechanically (without active agents) and silt wattles, which limit steep gradients, slow the runoff flow and facilitate the capture of suspended silts.

4.1.6 The proposed matting arrangement is scalable. In areas of high silt-load, the frequency of components can be increased to increase removal-capacity. In areas of long ditch-run, more components can be added within the flow route, to cater for incoming silt-loads along the length of a ditch. Such a standardised application of silt-removal features allows simpler and effective control of varying conditions, maintenance and replacement.

4.1.7 Images of proposed measures are included in the **Table 4** below. These are example images, their exact arrangement and coordination would be subject to refinement at detailed design. The images of measures shown are not exhaustive of alternative options which may be provided.

Table 4 – Example images of silt treatment measures during construction

 Gel Flocculant Block	 Flocculant Matting in trench
 Flocculant Wattle	 Flocculant matting

Trench arrangement with turbulence medium, gel flocculant block and silt matting

Trench with flocculant matting

4.1.8 Following the control of silts at source and in conveyance, as above, it is proposed to utilise the Scheme's new drainage pipe network (or existing where retained) to convey flows to the Scheme's permanent treatment, attenuation, and infiltration features. These areas comprise of lined trenches with isolation penstocks these are known as pollution-control devices (PCD), Extended Detention Basins EDBs), which to infiltrate to ground and with restricted outflows to swales, then to existing/new outfalls into the River Itchen. The phasing plans (annex A) and summary table (annex B) present when features are provided, this will be developed during detailed design Existing drainage assets

4.1.9 It is proposed to modify each permanent PCD features to act as a compartmentalised settlement feature during the construction phase, before carriageways become live and before HGV spillage risk is not yet present. The temporary modifications would comprise weir arrangements constructed to provide three compartments within the PCD ditch for the staged retention of flow and settlement of progressively smaller suspended solids, with increasingly less turbid flow passing from one compartment to the next, prior to entering the extended detention basins. The basins are the first opportunity for construction runoff to discharge into the ground via infiltration. Where infiltration rates are exceeded, residual surface flows are conveyed via swales to the River Itchen. same flow rates as are proposed in the permanent design after having been through the multi-stage treatment process.

5 Implementation

5.1.1 Drawings demonstrating the phased temporary construction drainage works are provided in Annex A. These layouts indicate working areas sequentially through five phases (1 to 3B). Location references on the layouts indicate the construction activity and relevant temporary drainage proposal, within each phase, which are included in the summary table provided in Annex B. Also included in the summary table are the mitigation measures proposed (measures remain subject to detailed design), and the destination construction runoff flow and the approvals required.

5.1.2 South of the River Itchen, it is proposed to modify and re-use the existing highway drainage trenches adjacent to the existing A33/A34 carriageways to allow greater interconnectivity, until the infiltration basins are constructed. Basin 3C is proposed to be partially completed (50% of the final size) to cater for construction runoff attenuation and tertiary treatment. The extent of temporary modifications to existing ditches will be determined to suit the temporary traffic management on the retained A34 alignment. Proposed permanent Pollution Control Devices will be modified to act as staged settlement features as described above in 4.7.

5.1.3 Proposed construction runoff drainage measures are to be fully detailed with respect to; but not limited to flows, climate change allowances, retention times, water quality and SuDs efficiency, attenuation volumes and exceedance routes during the detailed design.

6 Maintenance and Monitoring

6.1.1 Detailed monitoring is to be undertaken during construction of the scheme, the following parameters in flows that discharge to watercourses / the River Itchen are to be monitored, but are not limited to:

- pH levels
- Total Suspended solids
- Visible oil
- Heavy metals
- Hydrocarbons
- Priority substances and polluting chemicals relevant to the scheme as defined within the Environmental Quality Standards Directive (EQSD)

6.1.2 Regular inspections would be undertaken of network silt-control components (flocculation, filtration and settlement types) and conveyance or flow-control systems (pipework, ditches, weirs and flow controls) for adequate performance, to be replaced, refurbished or emptied where required.

6.1.3 Additional Adhoc inspections of the temporary drainage network are also to be undertaken following periods of heavy rainfall and/or following receipt of any defect reports by site staff. Any faults / defects are to be investigated and remediated accordingly.

6.1.4 The level and frequency of the testing and inspection of construction runoff conveyance and silt control components along with emergency protocols are to be developed at detailed design and agreed with all stakeholders (regulatory bodies) prior to the commencement of works.

6.1.5 Post construction monitoring of the scheme's permanent drainage infrastructure is also likely to be required to demonstrate the works have not resulted in an increase in sediment loading and/or pollutants into the River Itchen during initial periods of vegetation establishment of the scheme's SuDs features. The level, frequency and duration of any testing and inspection is to be developed and agreed with all of the relevant stakeholders at the detailed design stage.

7 Risk

7.1.1 The management of risk has been summarised in **table 7**.

Table 7 – Management of Risks within Construction runoff proposals

Hazard	Outcome	Risk	Proposed Mitigation	Residual Risk	Comments
Building over existing highway drainage soakage features	Overland flows from interruption of existing highway runoff routes.	Medium	Provision of new conveyance routes or modification of retained highway drainage ditches.	Low	
Exposed ground during construction	Mobilisation of silts during rainfall on exposed ground	High	Cut-off trenches that incorporate silt-control measures at source, based on flocculation, settlement and filtration	Low	
Storage of hazardous materials (fuel/oils for pumps)	Spillage to construction runoff network	Medium	Pumping to be minimised by prioritising gravity drainage network.	Low	
Spillage control	Discharge of hazardous materials to controlled waters	Medium	PCD proposed to be constructed within temporary construction drainage network, to provide effective means for spillage capture during the works	Low	
Use of flocculant agents in drainage network to controlled waters.	Contamination of controlled waters with flocculant agents	Medium	Specialist solid flocculant gel blocks and matting components are proposed, to be designed by specialist suppliers to preclude flow of chemical agents to controlled waters, or storage of liquid agents within the construction areas.	Low	Specification of specialist components to be agreed with EA and LLFA.

8 Approvals

8.1.1 The control of silts using solid Gel Flocculants is a field that has undergone much research and degradation rates under different flow conditions are known processes supported by laboratory and field data. Specialist providers conclude that Water Lynx (the Flocculant Gel) has been proven to be harmless to the environment in the concentrations deployed. Gel degradation and residual concentrations in flows are able to be calculated and proposed for approval by statutory bodies; further information regarding the use of Gel Flocculants for highway runoff associated with the scheme's temporary drainage network are covered within a separate technical note HE551511-VFK-HGN-X_XXXX_XX-TN-CH-0015. During detailed design, Flocculant concentrations will be assessed and proposed for approval by the Environment Agency and the Lead Local Flood Authority.

8.1.2 The Lead Local Flood Authority (Hampshire County Council Surface Water Management Team) consultation is required for the following

- First iteration and second iteration Environmental Management Plan (fiEMP and siEMP)
- SuDS

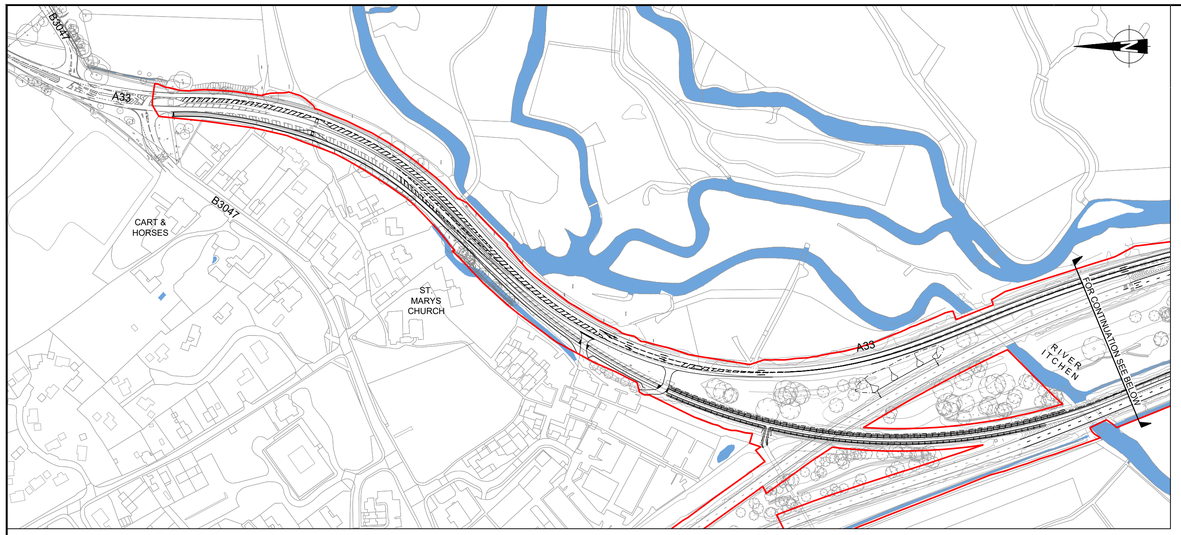
8.1.3 This temporary (construction) drainage strategy forms Appendix I of the of the fiEMP (Document Reference 7.3).

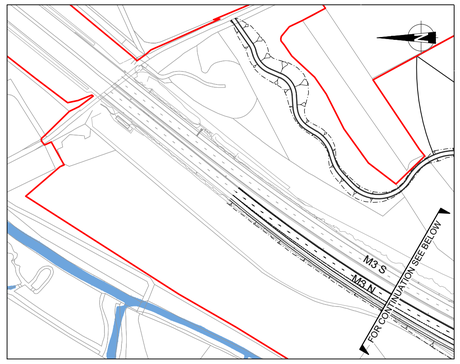
8.1.4 Environment Agency approval is required for the following

- Point discharges to ground under Environmental Permitting Regulations 2016, Schedule 22
- Flow rates and quality of discharges to main river via Flood Risk Activity Permits (FRAPs)

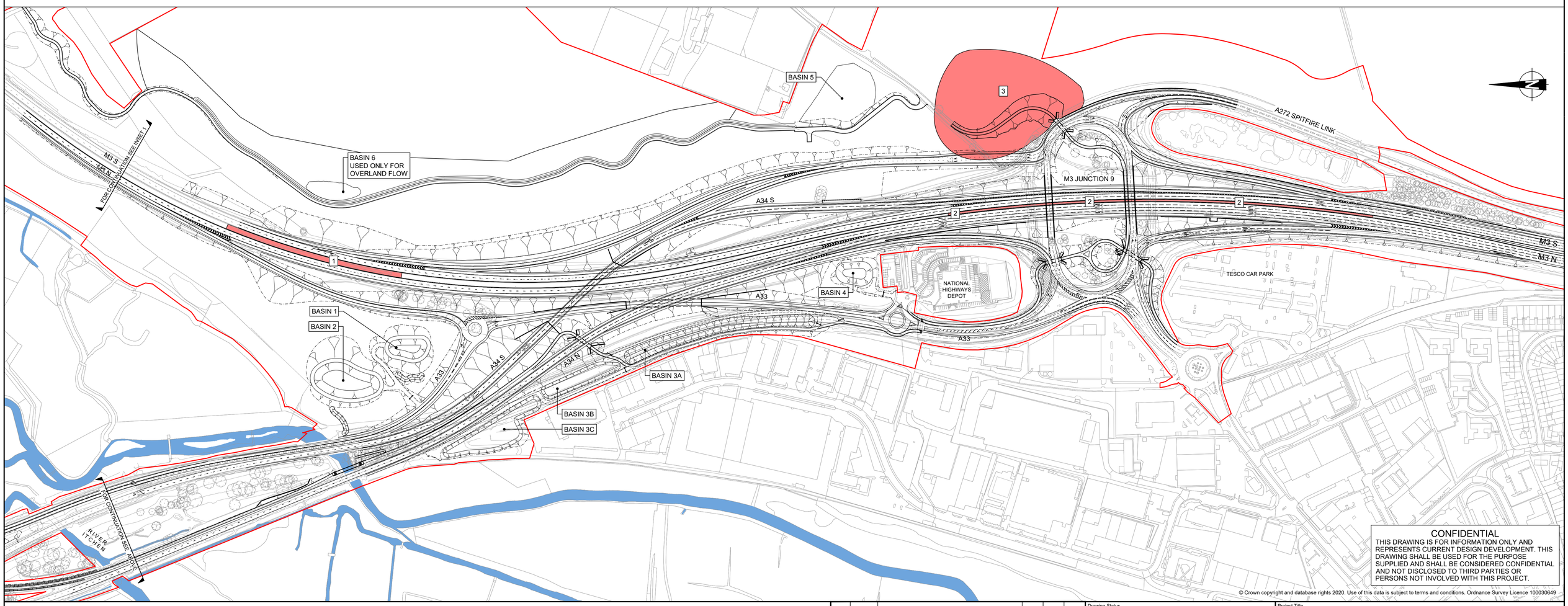
8.1.5 The permitting required for discharges to ground and main river during the operation of the temporary (construction) drainage network will be obtained prior to construction and further details are outlined in Annex B.

Annex A - Construction Phase Layouts





INSET 1: M3 NORTHBOUND CONTINUATION EXTRACT



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10. FOR OVERLAND FLOW CATCHMENT PLAN REFER TO DRAWING NUMBER HE551511-VFK-HDG-X_XXXX_XX-DR-CD-0514.

KEY:

- DEVELOPMENT CONSENT ORDER BOUNDARY
- RIVER ITCHEN
- BUILT IN PREVIOUS PHASE
- BUILT IN PREVIOUS & CURRENT PHASE
- BUILT IN CURRENT PHASE
- 2 — LOCATION REFERENCE NUMBER, REFER TO TDS SCHEDULE OF WORKS

0 50 100 150 200 250m

SCALE 1:2500

Rev.	Date	Description	Drawn	Chk'd	App'd
P01	07.01.21	FIRST ISSUE	RG	AC	TRA

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Client: national highways

Project Title: M3 JUNCTION 9 IMPROVEMENT

Drawing Title: PROPOSED TEMPORARY DRAINAGE CONSTRUCTION WORKS PHASE 1

Scale	Designed	Drawn	Checked	Approved
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Original Size	Date	Date	Date	Date
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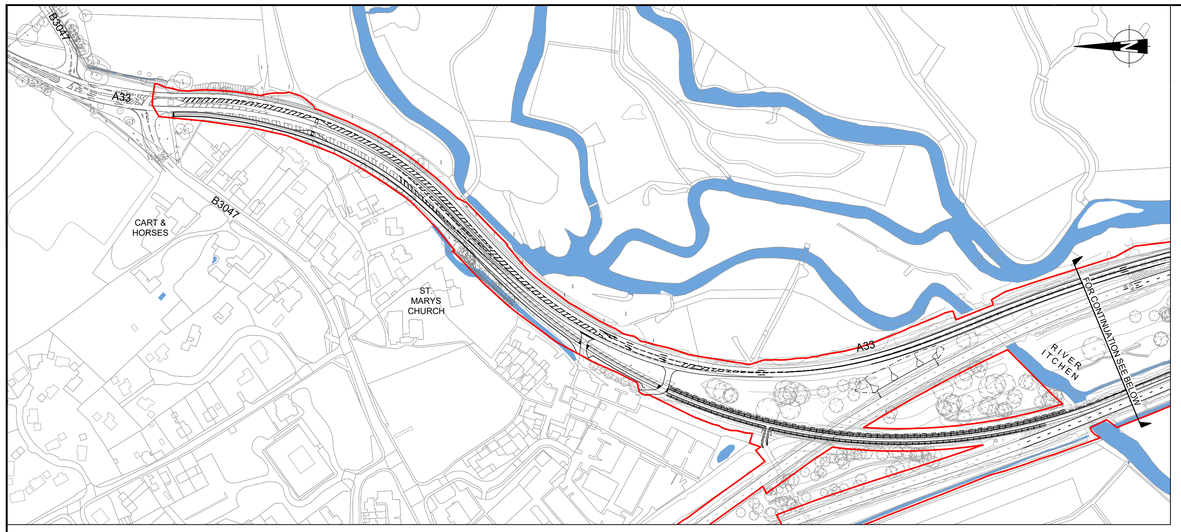
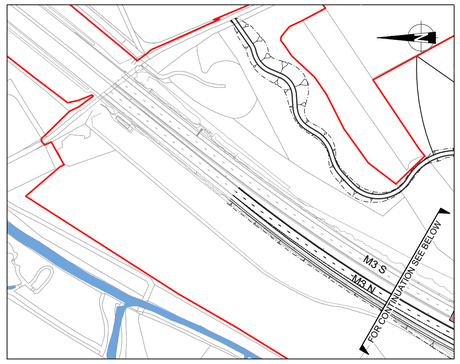
Location | Type | Role | Number

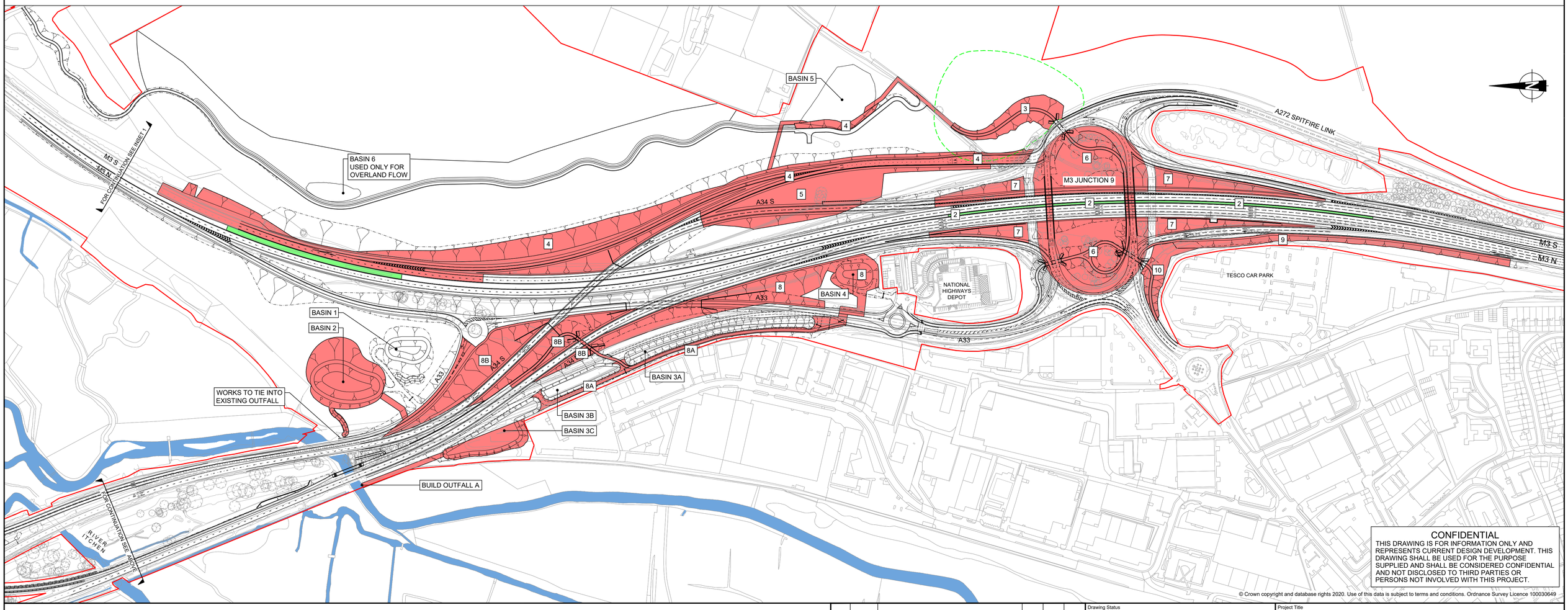
Project Ref. No.: 48176

Revision: P01





INSET 1: M3 NORTHBOUND CONTINUATION EXTRACT



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10. FOR OVERLAND FLOW CATCHMENT PLAN REFER TO DRAWING NUMBER HE551511-VFK-HDG-X_XXXX_XX-DR-CD-0514.

0 50 100 150 200 250m

SCALE 1:2500

KEY:

- DEVELOPMENT CONSENT ORDER BOUNDARY
- RIVER ITCHEN
- BUILT IN PREVIOUS PHASE
- BUILT IN PREVIOUS & CURRENT PHASE
- BUILT IN CURRENT PHASE
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VolkerFitzpatrick

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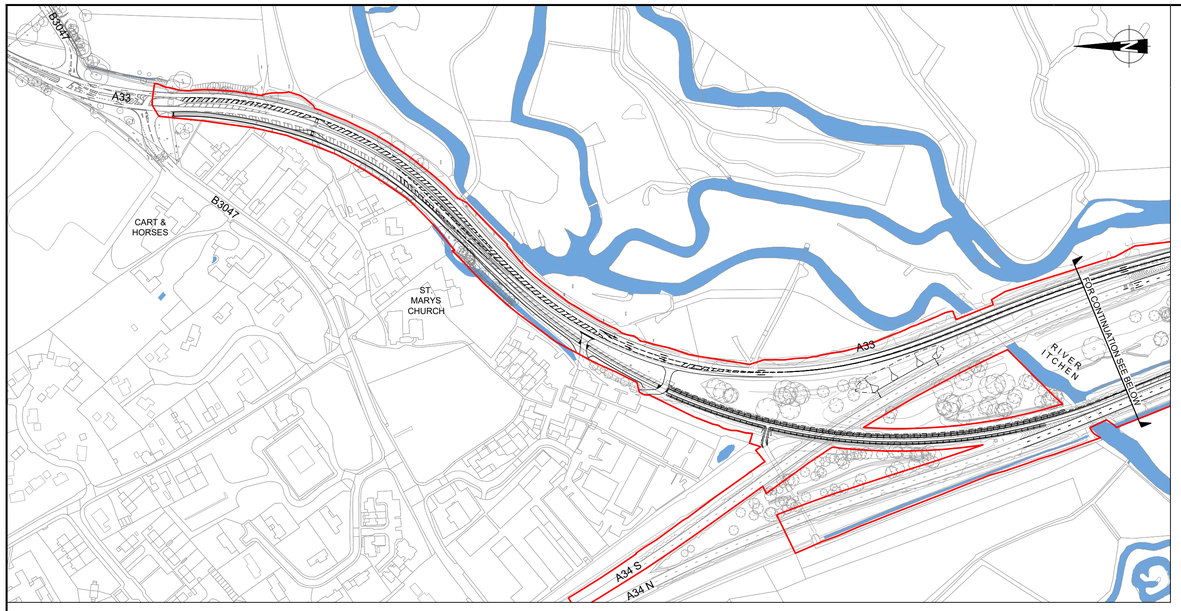

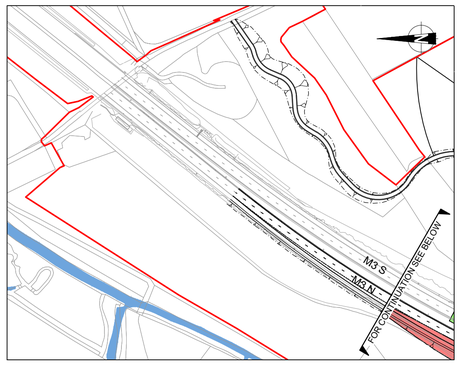

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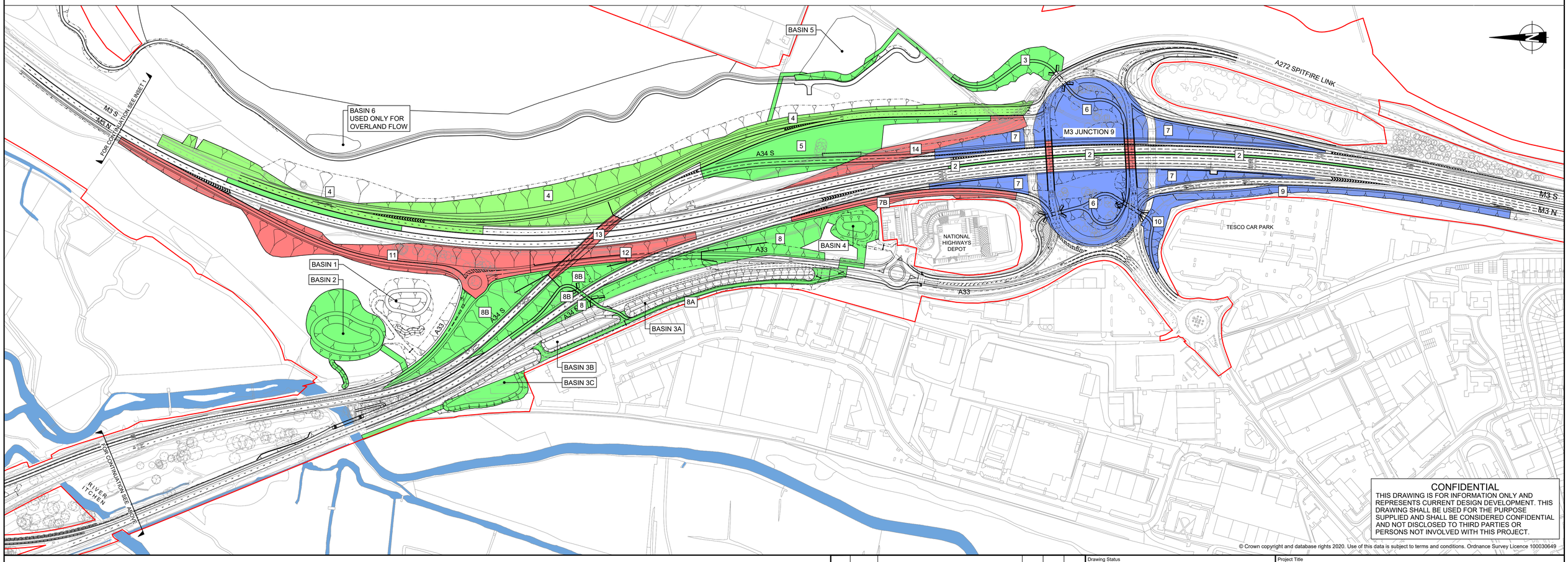

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10. FOR OVERLAND FLOW CATCHMENT PLAN REFER TO DRAWING NUMBER HE551511-VFK-HDG-X_XXXX_XX-DR-CD-0514.

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SCALE 1:2500

KEY:

- DEVELOPMENT CONSENT ORDER BOUNDARY
- RIVER ITCHEN
- BUILT IN PREVIOUS PHASE
- BUILT IN PREVIOUS & CURRENT PHASE
- BUILT IN CURRENT PHASE
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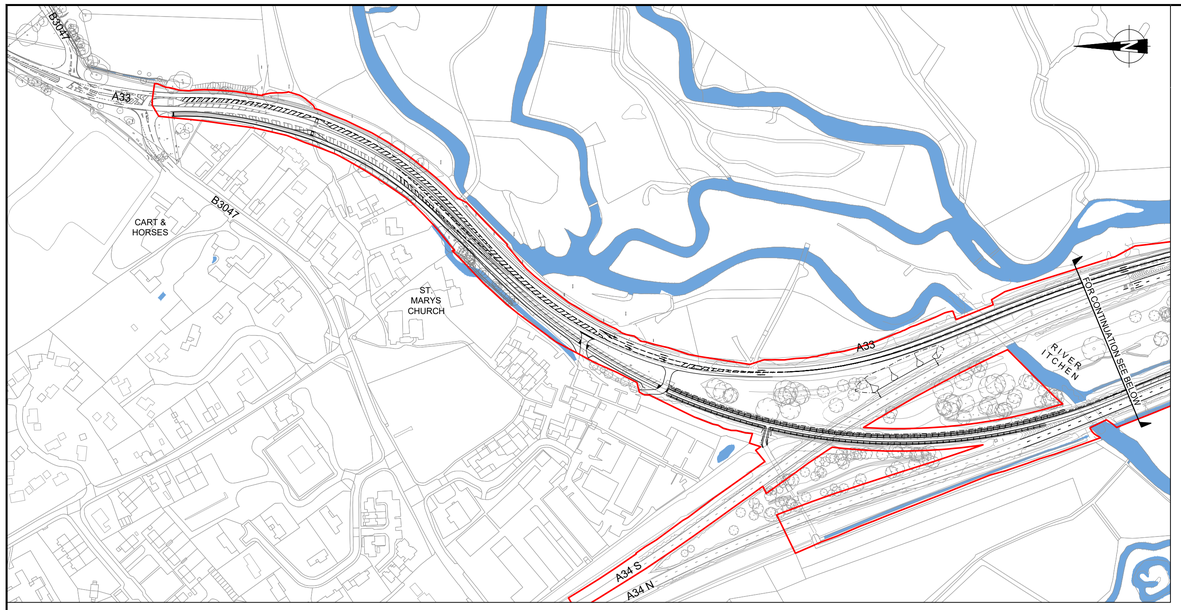
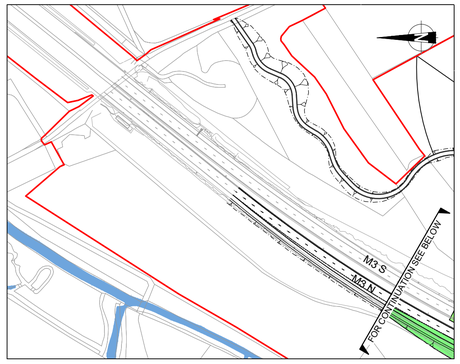
Project Ref. No.: 48176

Revision: P01





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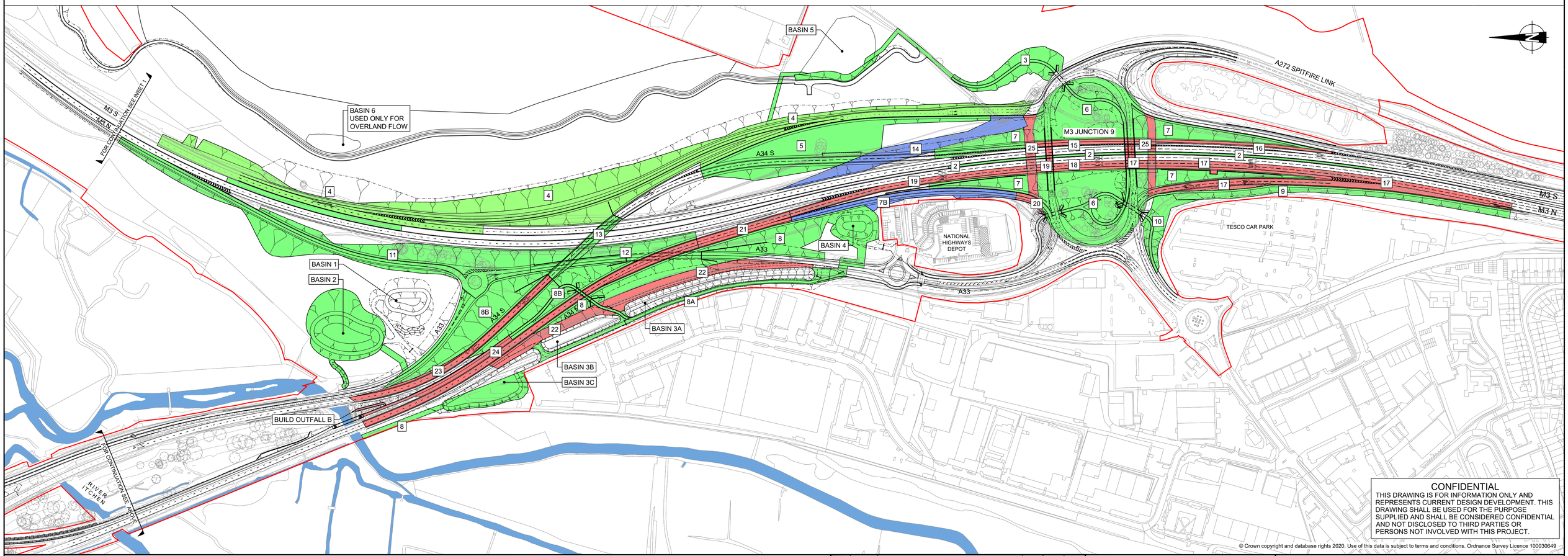

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10. FOR OVERLAND FLOW CATCHMENT PLAN REFER TO DRAWING NUMBER HE551511-VFK-HDG-X_XXXX_XX-DR-CD-0514.

0 50 100 150 200 250m
SCALE 1:2500

KEY:

- DEVELOPMENT CONSENT ORDER BOUNDARY
- RIVER ITCHEN
- BUILT IN PREVIOUS PHASE
- BUILT IN PREVIOUS & CURRENT PHASE
- BUILT IN CURRENT PHASE
- 2 LOCATION REFERENCE NUMBER, REFER TO TDS SCHEDULE OF WORKS

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Drawing Title: PROPOSED TEMPORARY DRAINAGE CONSTRCTION WORKS PHASE 3A

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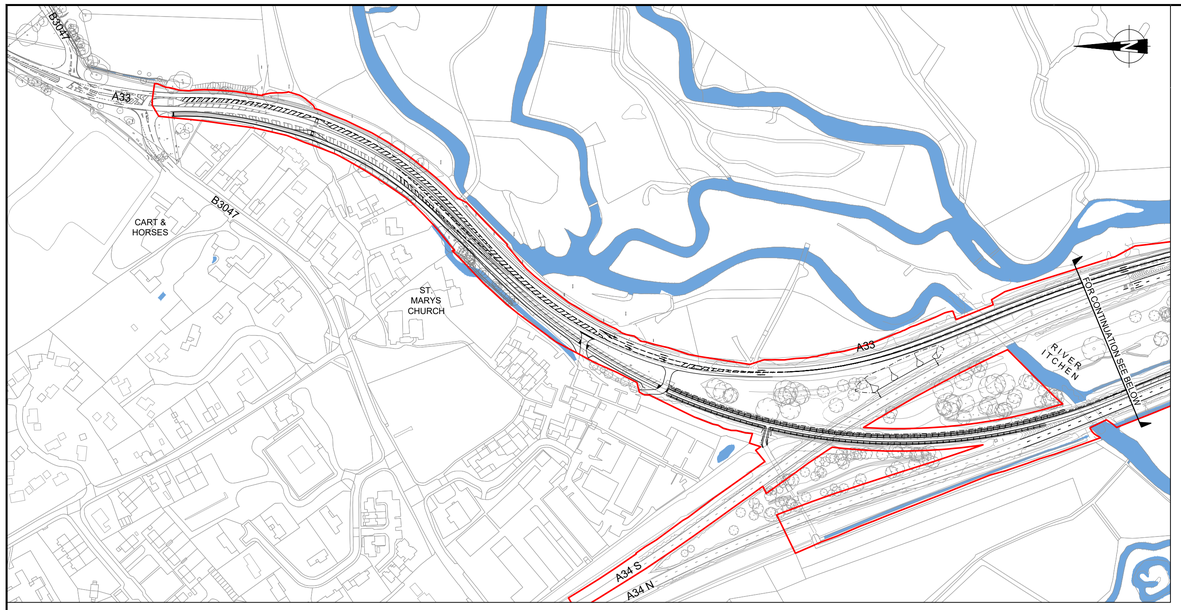
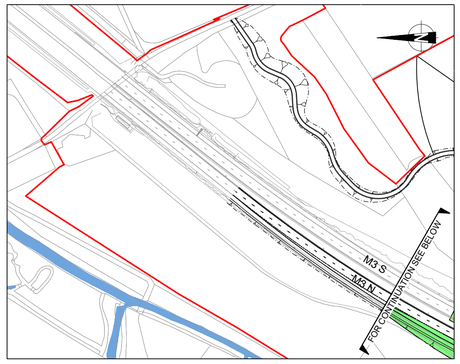
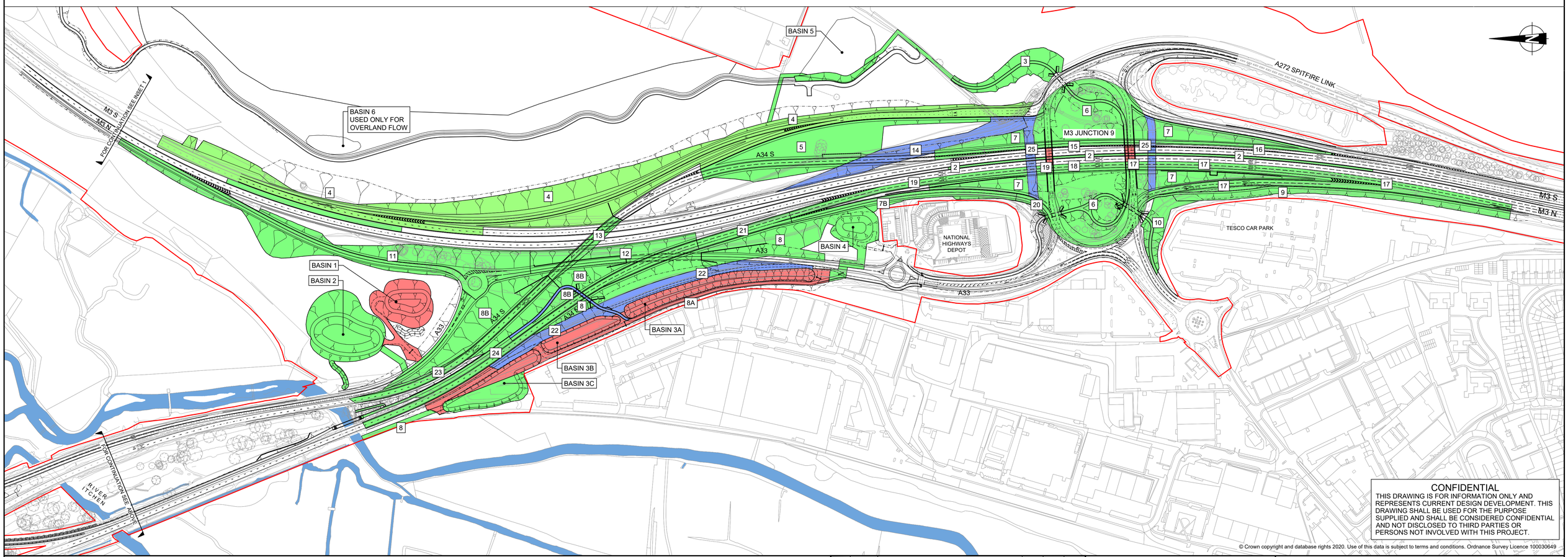




INSET 1: M3 NORTHBOUND CONTINUATION EXTRACT



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0 50 100 150 200 250m

SCALE 1:2500

KEY:

- DEVELOPMENT CONSENT ORDER BOUNDARY
- RIVER ITCHEN
- BUILT IN PREVIOUS PHASE
- BUILT IN PREVIOUS & CURRENT PHASE
- BUILT IN CURRENT PHASE
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Rev.	Date	Description	Drawn	Chk'd	App'd
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VolkerFitzpatrick

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Project Title: M3 JUNCTION 9 IMPROVEMENT

Drawing Title: PROPOSED TEMPORARY DRAINAGE CONSTRUCTION WORKS PHASE 3B

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Original Size	**Date**	**Date**	**Date**	**Date**
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Project Ref. No.: 48176

Revision: P01

Annex B - Temporary Drainage Strategy Table

Phase Number	Drg No.	Activity Location Ref.	Description of Construction Works	Construction Activities	Temporary Drainage Works	Product References	Drains to	Existing or Proposed	Retained or Abandoned	Receiving Controlled Waters	Location of Outfall to Controlled Waters	NH Approvals	LLFA Approvals	EA Approvals	Approval coverage (**Bold purple** indicates the approvals required and the areas a consent application would cover).	Notes
Phase 1	**HE551511-VFK-HDG-X_XXXX_XX-DR-CD-9901**	**1**	Narrow mainline lanes to enable crossover CH1640-1880	Hardening of existing soft central reserve. Install new premanent drainage and connect to existing conveyance network.	Existing central reserve filter drain conveyance pipe to be maintained. During construction protection of construction silt run-off into trench media via sand bags/bunding/run-off flocullant matting. Manual sweep and removal of silts. Installation of new capture tbc (concrete channel/slot drain). Area temporarily drained through surface level filter media at low point and drain run-off into existing network. Removal of sandbag/bunds once construction area swept and cleaned.	Run-off silt matting and flocculant matting	M3 highway drainage	Existing	Retained	Main River, via OWC across floodplain.	M3 Marker 100/6	**CEMP Approval**	**CEMP approval**	n/a	**Area 1**	Approval via DCO approval
		2	Narrow mainline lanes to enable crossover CH350-910				M3 highway drainage	Existing	Retained	Groundwater	Ex Soakway Trench serving M3 (Perm. Consenting location ref: 100)	**CEMP Approval**	**CEMP approval**	n/a	**Area 2**	Approval via DCO approval
		3	Works Compound Area NE of gyratory/WCH	Reprofiling of existing hillside to accommodate construction compound. (VFK to advise of proposed compound detail/requiredments). Any potential fuel store to have sepate spilalge isolation measures.	Perimeter of works compound area to have bunding preventing external run-off. Low point to be pumped into above ground sediment tanks and pollutant separator tanks. Regular monitoring of water quality. Restricted discharge into existing carriageway soakaways within gyratory.	Above ground sediment separator tank	Basin 5	Proposed		Groundwater	Basin 5	incl in 4	incl in 4	n/a	incl in 4	Approval via DCO approval

Phase Number	Drg No.	Activity Location Ref.	Description of Construction Works	Construction Activities	Temporary Drainage Works	Product References	Drains to	Existing or Proposed	Retained or Abandoned	Receiving Controlled Waters	Location of Outfall to Controlled Waters	NH Approvals	LLFA Approvals	EA Approvals	Approval coverage (**Bold purple** indicates the approvals required and the areas a consent application would cover).	Notes
Phase 1B	HE551511-VFK-HDG-X_XXXX_XX-DR-CD-9902	**4**	Perm M3 (MB DIV) offslip up to gyratory	Topsoil and vegetation strip. New earthwork cuttings. Construction of permanent M3 (SB DIV) to gyratory including permanent drainage system. Temporary western bunding to form Basin 5 with natural depression (if prior to PROW Bridleway works).	Cuttings to have flocculant matting at toe to limit fine silt run-off into drainage system. Proposed Catchment 15 drains by gravity to Basin 5. Basin 5 PCD for temporary period is modified to provide sediment treatment.	Run-off silt matting and flocculant matting Pond silt treatment usign silt wattles See PCD detail (TDS/SK01)	Basin 5	Proposed		Groundwater	Basin 5	**CEMP Approval**	**CEMP Approval + SUDS planning approval**	**Subject to EPR 2016, Sch 22. ie via a HgRA/Enviro. permit or via the DCO approval**	**Areas 3, 4 and 5**	Approval via HgRA/EA permit or DCO approval. EA to confirm.
		5	Perm A34 (SB) onslip either side of Extg retained M3 (SB DIV) offslip	Embankment works. Build of permanent carriageway. Valley earthworks infill. Removal and decomissioning of existing soakage trench.	Northern part of item 5 drains to Basin 3C, as this is not online yet it is proposed to be pumped to connect into drainage provided by item 4 and discharge into basin 5. A small area at the southern part of item 5 drains to permanent highway network connecting to Basin 4. After localised sediment interception it may be feasible to connect into Existing highway catchment 12 that drains to existing Soackage Trenches and chambers.	Run-off silt matting and flocculant matting See PCD detail (TDS/SK01) Pump system	Basin 5	Proposed		Groundwater	Basin 5	incl in 4	incl in 4	incl in 4	incl in 4	Approval via permit or DCO approval. EA to confirm.
		3	Works Compound Area NE of gyratory/WCH	Earthworks cutting for WCH Construct permanent drainage network	Cuttings to have flocculant matting at toe to limit fine silt run-off into drainage system. Proposed Catchment 12 drains by gravity to Basin 5. Basin 5 PCD for temporary period is modified to provide sediment treatment.	Run-off silt matting and flocculant matting	Basin 5	Proposed		Groundwater	Basin 5	incl in 4	incl in 4	incl in 4	incl in 4	Approval via DCO approval
		6	Works within existing gyratory, including new bridges	Earthworks cutting for WCH Construct permanent drainage network Mainline earthworks cutting FW/CW earthworks cutting Construct FW/CW permanent drainage	WCH part of Eastern gyratory see 3 above. Remainder of item 6 (Proposed Catchments 7 & 13) drain to mainline drainage (not built yet) that discharges into future Basin 4, in interim bunding flocculant matting to be provided at toe of slope adjacent to widened H/S. Run-off area to discharge into existing M3 mainline drainage.	Run-off silt matting and flocculant matting	M3 highway drainage	Existing	Retained until Phase 3A	Main River, via highway drainage to TB3C	Basin 3C (Groundwater) & Outfall A (Main River)	incl in 26	incl in 26	incl in 26	incl in 26	Existing discharge maintained to modified highway drainage
		7	Perm Mainline earthworks for existing 2 no. offslips and 2 no. onslips	Earthworks cuttings to new mainline. Building permanent onslip carriageway.			M3 highway drainage	Proposed		Main River, via highway drainage to TB3C	Basin 3C (Groundwater) & Outfall A (Main River)	incl in 26	incl in 26	incl in 26	incl in 26	Existing discharge maintained to modified highway drainage
		8	Perm works between Depot and existing A33/A34.	Removal and decomissioning of part of existing soakage trench. Topsoil and Vegetation clearance Earthworks Cuttings and Embankments to suit multiple alignments. Permanent road and drainage construction. Build Basin 4, PCD and penstock and connections to existing A33/A34 soakage trenches.	1/2 of main soakaway trench removed by works to item 8, mainline M3 connections into southern half of soakage trench to be diverted within proposed mainline verge into northern half of existing soakage trench. Provide Basin 4 for attenuation and controlled discharge.	Run-off silt matting and flocculant matting Pond silt treatment See PCD detail (TDS/SK01)	Basin 4	Proposed		Groundwater + Main River	Basin TB3C (Groundwater) + Outfall A (Main River)	incl in 26	incl in 26	incl in 26	incl in 26	New discharge to new outfall A to R Itchen + new dischage to groundwater
		8A		Amendment works to existing A33/A34 Soakage Trenches. Connections to and build of temporary Basin 3C, PCD, penstock, outfall swale and new outfall A into River Itchen.	Amendment works to existing soakage ditches adjacent to A33/A34. Provision of temporary Basin 3C.	Run-off silt matting and flocculant matting Pond silt treatment See PCD detail (TDS/SK01)	A33/A34highway soakage drainage	Existing	Replaced by Basin 3A (lined)	Main River	Outfall A	incl in 26	incl in 26	incl in 26	incl in 26	New discharge to new outfall A to R Itchen + new dischage to groundwater
		8B		Build Basin 2, PCD, penstock, outfall swale and connection to existing PCD.	Provide Basin 2 for attenuation and controlled discharge.	Run-off silt matting and flocculant matting Pond silt treatment See PCD detail (TDS/SK01)	Outfall 8	Existing	Retained	Groundwater = Main River	Outfall 8	incl in 23	incl in 23	incl in 23	incl in 23	New highway and cutting runoff to existing outfall to r. Itchen
		9	Perm M3 (NB DIV) offslip Earthworks	Earthworks cutting to new M3 (NB) offslip	Proposed Catchment 10 drains to existing Soakaways being retained. Bunding at toe of slope to be provided to intercept sediment locally. Outfall into existing drainage system. Existing Soakaways to be inspected and refurbished post Item 9 works completed.	Run-off flocculant matting	M3 highway drainage	Existing		Groundwater	Extg. Soakage trench: Perm. Consenting location ref: 24.	incl in 17	incl in 17	n/a	incl in 17	Maintain existing runoff to soakage feature in western verge
		10	Perm WCH Easton Lane (West) to Tesco subway	Earthworks cutting to WCH Construct permanent drainage	Drains into item 6 temporary provision		M3 highway drainage	Proposed		Main River, via highway drainage to TB3C	Basin 3C (Groundwater) & Outfall A (Main River)	incl in 26	incl in 26	incl in 26	incl in 26	Existing discharge maintained to modified highway drainage

Phase Number	Drg No.	Activity Location Ref.	Description of Construction Works	Construction Activities	Temporary Drainage Works	Product References	Drains to	Existing or Proposed	Retained or Abandoned	Receiving Controlled Waters	Location of Outfall to Controlled Waters	NH Approvals	LLFA Approvals	EA Approvals	Approval coverage (**Bold purple** indicates the approvals required and the areas a consent application would cover).	Notes
Phase 2	HE551511-VFK-HDG-X_XXXX_XX-DR-CD-9903	6	Works within existing gyratory, including new bridges	Earthworks cutting for WCH Construct permanent drainage network Mainline earthworks cutting FW/CW earthworks cutting Construct FW/CW permanent drainage	Drains into item 6 temporary provision	Run-off silt matting and flocculant matting Pond silt treatment usting silt wattles See PCD detail (TDS/SK01)	M3 highway drainage	Existing	Retained until Phase 3A	Main River, via highway drainage to TB3C	Basin 3C (Groundwater) & Outfall A (Main River)	incl in 26	incl in 26	incl in 26	incl in 26	New discharge to new outfall A to R Itchen + new dischage to groundwater
		7	Perm Mainline earthworks for existing 2 no. offslips and 2 no. onslips	Earthworks cuttings to new mainline. Building permanent onslip carriageway.	Drains into item 6 temporary provision		M3 highway drainage	Proposed		Main River, via highway drainage to TB3C	Basin 3C (Groundwater) & Outfall A (Main River)	incl in 26	incl in 26	incl in 26	incl in 26	Existing discharge maintained to modified highway drainage
		14	Remove Extg M3 (SB DIV) offslip	Break up and removal of existing highway including drainage	During construction protection of construction silt run-off onto new carriageway drainage via sand bags/bunding at low points. Manual sweep and removal of silts.		M3 highway drainage	Proposed		Main River, via highway drainage to TB3C		incl in 26	incl in 26	incl in 26	incl in 26	Existing discharge maintained to modified highway drainage
		7B	Perm J9 to A34 (NB MER) onslip	Construction of new carriageway construction of new permanent drainage	Permanent catchment to be sealed until downstream system is online. Channel run-off via flocculant matting into existing mainline drainsge network		Basin 4	Proposed		Groundwater + Main River	Basin TB3C (Groundwater) + Outfall A (Main River)	incl in 26	incl in 26	incl in 26	incl in 26	New discharge to new outfall A to R Itchen + new dischage to groundwater
		9	Perm M3 (NB DIV) offslip Earthworks	Earthworks cutting to new M3 (NB) offslip	Proposed Catchment 10 drains to existing Soakaways being retained. Bunding at toe of slope to be provided to intercept sediment locally. Outfall into existing drainage system. Existing Soakaways to be inspected and refurbished post Item 9 works completed.		M3 highway drainage	Existing	Retained	Groundwater	Extg. Soakage trench: Perm. Consenting location ref: 24.	incl in 17	incl in 17	n/a	incl in 17	Maintain existing runoff to soakage feature in western verge
		10	Perm WCH Easton Lane (West) to Tesco subway	Earthworks cutting to WCH Construct permanent drainage	Drains into item 6 temporary provision		M3 highway drainage	Proposed		Main River, via highway drainage to TB3C	Basin 3C (Groundwater) & Outfall A (Main River)	incl in 26	incl in 26	incl in 26	incl in 26	Existing discharge maintained to modified highway drainage
		11	Perm M3 (NB MER) onslip	Earthworks cutting Permanent road construction and drainage	Permanent Catchment 1 drains to Basin 1, re-route connection to Basin 2 PCD prior to discharging into Basin 2.		Basin 2	Proposed		Groundwater & Main River	Basin 2 (Groundwater) & Ex. Outfall 8 (Main /River)	incl in 23	incl in 23	incl in 23	incl in 23	New highway and cutting runoff to existing outfall to r. Itchen
		12	Perm A33 between roundabouts	A34(NB) Underpass Construction	Permanent Catchment 5 drains to permanent basin 3B. This is not built until Phase 3B. Temporarily drain to existing A33/A34 soakage ditches as conveyance to TB3C.		Ex. A33/A34 ditch, then TB3C	Via Existing, to Proposed	Existing to be abandoned,, after temp re-use	Groundwater + Main River	TB3C (Groundwater) & Outfall A (Main /River)	incl in 26	incl in 26	incl in 26	incl in 26	New discharge to new outfall to R Itchen + new dischage to groundwater
		13	M3 Underpass	M3 Underpass Construction Temporary drainage route required as A34(SB) pipework not built until phase 3A (see 23) Build Temporary basin 3C	Permanent Catchment 4 drains to permanent basin 3C. This is not built until Phase 3B. Temporarily drain to existing A33/A34 soakage ditches and temporary Basin 3C.		Basin TB3C	Proposed		Groundwater + Main River	Basin TB3C (Groundwater) + Outfall A (Main River)	incl in 26	incl in 26	incl in 26	incl in 26	New discharge to new outfall A to R Itchen + new dischage to groundwater

Phase Number	Drg No.	Activity Location Ref.	Description of Construction Works	Construction Activities	Temporary Drainage Works	Product References	Drains to	Existing or Proposed	Retained or Abandoned	Receiving Controlled Waters	Location of Outfall to Controlled Waters	NH Approvals	LLFA Approvals	EA Approvals	Approval coverage (**Bold purple indicates the approvals required and the areas a consent application would cover).**	Notes
Phase 3A	HE551511-VFK-HDG-X_XXXX_XX-DR-CD-9904	**7B**	Perm J9 to A34 (NB MER) onslip	Construction of new carriageway construction of new permanent drainage	Permanent catchment to be sealed until downstream system is online. Channel run-off via flocculant matting into existing mainline drainsge network	Run-off silt matting and flocculant matting	Basin 4	Proposed		Groundwater + Main River	Basin TB3C (Groundwater) + Outfall A (Main River)	incl in 26	incl in 26	incl in 26	incl in 26	New discharge to new outfall A to R Itchen + new dischage to groundwater
		14	Removal Extg M3 (SB DIV) offslip	Break up and removal of existing highway including drainage	During construction protection of construction silt run-off onto new carriageway drainage via sand bags/bunding at low points. Manual sweep and removal of silts.		M3 highway drainage	Proposed		Main River, via highway drainage to TB3C		incl in 26	incl in 26	incl in 26	incl in 26	Existing discharge maintained to modified highway drainage
		15	Widen M3 SB under gyratory	Construction of permanent Hard Shoulder and Lane 1. Construction of permanent drainage system.	Proposed Catchment 7 drains mainline drainage which discharges into Basin 4 for attenuation provision. Basin 4 outfalls into Basins 3A, 3B and 3C which are not built until Phase 3B. Temporarily drain to existing A33/A34 soakage ditches.	Run-off silt matting and flocculant matting See PCD detail (TDS/SK01)	M3 highway drainage	Proposed		Main River, via highway drainage to TB3C	Basin 3C (Groundwater) & Outfall A (Main River)	incl in 26	incl in 26	incl in 26	incl in 26	Existing discharge maintained to modified highway drainage
		16	Widen M3 SB south of gyratory adjacent to M3 (SB) onslip													
		17	Widen M3 NB adjacent to M3 (NB DIV) up to gyratory													
		18	Widen M3 NB under gyratory													
		19	Widen M3NB north of gyratory adjacent to M3 (A34 NB DIV)													
		20	Perm gyratory link to A34 NB	Permanent Road and Drainage	Proposed Catchment 6 discharges into Basin 3A. Basin 3A not provided until Phase 3B. In interim period bunding of run-off and intercept silts and connect to existing drainage network 11.	Run-off silt matting and flocculant matting	TB3C	Proposed		Groundwater + Main River	Basin 3C (Groundwater) & Outfall A (Main River)	incl in 26	incl in 26	incl in 26	incl in 26	New discharge to new outfall to R Itchen + new dischage to groundwater
		21	Perm A34 NB	Permanent Road and Drainage	Proposed Catchment 7 drains mainline drainage which discharges into Basin 4 for attenuation provision. Re Proposed Catchment 4 refer to Item 13 above.		TB3C	Proposed		Groundwater + Main River	Outfall B (Main River)	**CEMP Approval**	**CEMP Approval + SUDS planning approval**	**FRAP for proposed Outfall B.**	**Areas 23, 24**	New discharge to new outfall to R Itchen
		22	Remove Extg A33/A34	Break up and removal of existing highway . Decomissioning of existing soakage trench	Bunding and protection of existing catchment 9 capture inlets. Management of silt prior to discharge into existing soakaway trenches and chambers.		Ex. A33/A34 ditch, then TB3C	Via Existing, to Proposed	Existing to be abandoned,, after temp re-use	Groundwater + Main River	TB3C (Groundwater) & Outfall A (Main /River)	incl in 26	incl in 26	incl in 26	incl in 26	New discharge to new outfall to R Itchen + new dischage to groundwater
		23	Perm A34 SB up to underpass	Permanent Road and Drainage (earthworks provided in item 8 above)	Permanent Catchment 4 drains to permanent basin 3C. This is not built until Phase 3B. Temporarily drain to existing A33/A34 soakage ditches and temporary Basin 3C. Proposed Catchment 3 drains to proposed outfall B .	Run-off silt matting and flocculant matting Pump system	Basin 2	Proposed		Groundwater + Main River	Basin 2 (Groundwater) & Ex. Outfall 8 (Main /River)	**CEMP Approval**	**CEMP Approval + SUDS planning approval**	**FRAP for propsoed Outfall 8.**	**Areas 8B, 11, 23, 24**	New highway and cutting runoff to existing outfall to r. Itchen
		24	Footway/Cycleway Depot to River Itchen	Footway construction and surfacing works. Permanent Drainage	Proposed catchment 3 drains to proposed outfall B. Permanent Catchment 4 drains to permanent basin 3C. This is not built until Phase 3B. Temporarily drain to existing A33/A34 soakage ditches and temporary Basin 3C.		Basin 2	Proposed		Groundwater + Main River	Basin 2 (Groundwater) & Ex. Outfall 8 (Main /River)	incl in 23	incl in 23	incl in 23	incl in 23	New highway and cutting runoff to existing outfall to r. Itchen
		25	Remove existing gyratory bridges	Deconstruction of existing bridges and foundations (details to be confirmed by Structures team) Removal and decommissioning of redundant soakaways.	Proposed Catchment 7 drains mainline drainage which discharges into Basin 4 for attenuation provision.	Run-off flocculant matting	Ex. A33/A34 ditch, then TB3C	Via Existing, to Proposed	Existing to be abandoned,, after temp re-use	Groundwater + Main River	TB3C (Groundwater) & Outfall A (Main /River)	incl in 26	incl in 26	n/a	incl in 26	Existing overpass drainage removed from modified highway drainage

Phase Number	Drg No.	Activity Location Ref.	Description of Construction Works	Construction Activities	Temporary Drainage Works	Product References	Drains to	Existing or Proposed	Retained or Abandoned	Receiving Controlled Waters	Location of Outfall to Controlled Waters	NH Approvals	LLFA Approvals	EA Approvals	Approval coverage (**Bold purple** indicates the approvals required and the areas a consent application would cover).	Notes
Phase 3B	HE551511-VFK-HDG-X_XXXX_XX-DR-CD-9905	14	Removal Extg M3 (SB DIV) offslip	Break up and removal of existing highway including drainage	During construction protection of construction silt run-off onto new carriageway drainage via sand bags/bunding at low points. Manual sweep and removal of silts.	Run-off silt matting and flocculant matting and Silt Wattles	M3 highway drainage	Proposed		Main River, via highway drainage to TB3C		incl in 26	incl in 26	incl in 26	incl in 26	Existing discharge maintained to modified highway drainage
		22	Remove Extg A33/A34	Break up and removal of existing highway . Decomissioning of existing soakage trench	Bunding and protection of existing catchment 9 capture inlets. Management of silt prior to discharge into existing soakaway trenches and chambers.		Ex. A33/A34 ditch, then Basins 3A, 3B & 3C when built	Via Existing, to Proposed	Existing to be abandoned,, after temp re-use	Groundwater + Main River	TB3C (Groundwater) & Outfall A (Main /River)	incl in 26	incl in 26	incl in 26	incl in 26	New discharge to new outfall to R Itchen + new dischage to groundwater
		25	Removal of Extg Gyratory bridges	Deconstruction of existing bridges and foundations (details to be confirmed by Structures team) Removal and decommissioning of redundant soakaways.	Proposed Catchment 7 drains mainline drainage which discharges into Basin 4 for attenuation provision.		Ex. A33/A34 ditch, then Basins 3A, 3B & 3C when built	Via Existing, to Proposed	Existing to be abandoned,, after temp re-use	Groundwater + Main River	TB3C (Groundwater) & Outfall A (Main /River)	incl in 26	incl in 26	n/a	incl in 26	Existing overpass drainage removed from modified highway drainage
		26	Remove/Modify Extg A33/A34	Construction of Basins 3A, 3B and 3C including maintenance accesses. Build new outfall B.	Building of remaining basins and amending any temporary provisions to switch to permanent connections.	Run-off silt matting and flocculant matting Pond silt treatment See PCD detail (TDS/SK01)	Basin 3C	Proposed		Groundwater + Main River	Basin 3C (Groundwater) & Outfall A (Main River)	**CEMP Approval**	**CEMP Approval + SUDS planning approval**	**FRAP for proposed Outfall A.**	**Areas 6,7,8,8A,9,10,14,7B,12,13,15, 16,17,18,19,20,21,22,25,26**	New discharge to new outfall to R Itchen + new dischage to groundwater

Appendix K Draft Reptile Mitigation Strategy

Infrastructure Planning

Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

M3 Junction 9 Improvement
Development Consent Order 202[x]

7.3 FIRST ITERATION ENVIRONMENTAL MANAGEMENT PLAN - APPENDIX K: DRAFT REPTILE MITIGATION STRATEGY

Regulation Number:	Regulation 5(2)(q)
Planning Inspectorate Scheme Reference:	TR010055
Application Document Reference:	7.3
BIM Document Reference:	HE551511-VFK-EGN-XXXX_XX-RP-LE-40002
Author:	M3 Junction 9 Improvement Project Team, Highways England

Version	Date	Status of Version
Rev 0	15 June 2023	Deadline 2 Submission

Contents

1 Introduction

1.1 Objective

1.1.1 The objective of the Reptile Mitigation Strategy is to provide a record of the strategies employed to avoid killing and/or injury of reptiles on this the M3 Junction 9 Improvement Scheme (the 'Scheme').

1.1.2 The purpose of this essay plan is to provide a framework on which a detailed Reptile Mitigation Strategy can be developed through future iterations and highlights key issues for the project that must be the subject of controls, in accordance with the commitments set out in the **first iteration Environmental Management Plan (fiEMP) (7.3, Rev 2).**

1.2 Background

1.2.1 The Reptile Mitigation Strategy (the Strategy) will be updated as required up to construction commencement to reflect any new, relevant information provided by the project team, National Highways or other statutory consultees (e.g., further pre-construction survey results, further consent conditions, landowner agreements) or through design development, or construction phasing etc.

1.2.2 Updates and completion of the Strategy will be undertaken by a suitably qualified specialist.

1.2.3 Prior to construction, a detailed Reptile Mitigation Strategy will be produced and implemented to allow reptiles to be safeguarded throughout the construction and operational phases. The Strategy will include trapping and translocation of reptiles, as well as habitat manipulation and displacement of reptiles (this method has been successfully utilised on road schemes in the region and was supported by Natural England[1]).

1.2.4 Prior to translocation, receptor sites will be enhanced to increase their carrying capacity for reptiles. Receptor sites will be within National Highway landholding, or with the agreement of landowner, and will be managed in the long term to maintain suitability for reptiles.

1.3 Legislation, policy and guidance

1.3.1 This section of the Strategy will present relevant legislation, policy and guidance used to inform the detailed mitigation measures and approach, including but not limited to:

[1] Case study: A338 Major Maintenance Scheme A new approach for ensuring road schemes avoid harm to reptiles, including European Protected Species (EPS), while securing significant wildlife gains (Natural England, Dorset County Council)

- Wildlife and Countryside Act 1981 (as amended)
- Natural England – Reptiles: advice for making planning decisions (January 2022)

1.4 Key roles and responsibilities

1.4.1 The Principal Contractor is responsible for approving the appointment of the Environmental Specialists (e.g. Environmental Manager, Ecological Clerk of Works, sub-contractors, etc.). These specialist roles will be identified, and contact details and individual responsibilities provided.

1.4.2 Responsibilities of each specialist will be specified.

1.4.3 The Principal Contractor will obtain and monitor all relevant consents, permit and licenses and manage the requirements of such.

1.5 Baseline surveys

1.5.1 Field surveys in 2017 recorded two species of reptile within the study area; slow worm and common lizard. Reptile populations were associated with road verge grasslands and field margins, and populations within the study area varied from 'exceptional' to 'low'. **Appendix 8.1j (Reptile survey report 2017)** of the **ES (Document Reference 6.3)** presents the results.

1.5.2 Habitat assessment undertaken in 2020 did not identify significant changes to habitats and value to reptiles.

1.5.3 Due to the mobility of species and potential for changes in habitats, to make certain the ecological baseline is up-to-date and suitable to inform the detail of required mitigation measures at construction phase, baseline reptile surveys are being updated in 2023 to inform the Reptile Mitigation Strategy.

1.6 Consultation and communication

1.6.1 The Strategy will be subject to consultation with relevant local authorities and agencies.

1.6.2 Any improvements or deviations relating to the Reptile Mitigation Strategy shall be approved by the Principal Contractor Environmental Manager and will be subject to National Highways consent where required. The Principal Contractor will provide regular feedback and information to the National Highways Project Manager and Principal Contractor Environmental Manager on the progress and success in delivering all mitigation and commitments on site.

1.6.3 Toolbox talks will be given to the vegetation clearance contractors; this will include:

- A brief introduction to the widespread reptile species which potentially may be discovered on site.
- Working methods to be employed and permitted equipment types (e.g. hand tools).

1.7 Reptile mitigation strategy

1.7.1 This section of the Reptile Mitigation Strategy will outline all appropriate protective measures and mitigation for reptiles at risk of harm from activities associated with site clearance and construction. It will also present proposals for ongoing monitoring.

1.7.2 The mitigation strategy will consist of a phased methodology for reptile exclusion and translocation at the site.

1.7.3 A programme for works will be prepared that details timings for all elements, including:

- Controlled site vegetation clearance
- Habitat enhancement
- Reptile trapping and translocation
- Habitat management and maintenance
- Monitoring.

Habitat enhancement

1.7.4 Prior to translocation, receptor sites will be enhanced to increase their carrying capacity for reptiles through:

- creating mosaics of habitats including scrub, grassland and open areas; and
- creating reptile refuges and hibernacula.

1.7.5 Receptor sites will be within National Highway landholding, or with the agreement of the landowner, and will be managed in the long term to maintain suitability for reptiles.

1.7.6 Areas for enhancement will be identified and presented on **Figure 2.3** of **Chapter 2 (The Scheme and its Surroundings – Figures (Part 2 of 4))** of the **ES (6.2, Rev 1)**. Detailed design planting proposals for these areas will be developed in accordance with *Manual of Contract Documents for Highway Works* (MCDHW) Volume 1, Series 3000 Landscape and Ecology (Highways Agency, 2001).

1.7.7 Creation of artificial hibernacula will be at locations as presented on **Figure 2.3** of **Chapter 2 (The Scheme and its Surroundings – Figures (Part 2 of 4))** of the **ES (6.2, Rev 1)**. Specification for their construction will be detailed in the Strategy.

Trapping and translocation

1.7.8 Suitable receptor habitat will be identified, and enhancements will be made to ensure additional individuals can be supported within the habitat area available.

1.7.9 Enhancements will be in accordance with the Strategy, programme and Series 3000 Landscape and Ecology plans and specifications.

1.7.10 Before translocation starts, reptile exclusion fencing will be installed to prevent new individuals entering/returning to the site. The location and specification of the fencing will be agreed and presented in the Strategy.

1.7.11 During the active reptile season refugia will be placed in locations that are most attractive to reptiles. Details of the specific locations and density, timings, visits and capture techniques will be presented in the Strategy.

Habitat manipulation/displacement

1.7.12 In some areas reptiles will be persuaded to leave the area through habitat manipulation/displacement. The steps to achieve this are likely to include, but not be limited to the following.

- Clearance to 200mm level using hand tools (these can include mechanised hand tools such as brush cutters or chainsaws)
- Vegetation clearance must move towards retained habitat
- Hand search by ecologist for reptiles within vegetation to be cleared
- Re-inspection of vegetation by ecologist
- Clearance to ground level (or as close as is practicable)
- Any active reptiles found must be captured by the suitably qualified ecologist and placed into a soft cloth bag before being moved to the receptor site or adjacent suitable habitat lying outside the working area. To reduce the chances of predation, any captured animals must be placed under suitable natural or artificial refugia.
- Vegetation to be maintained at ground level until works in area commence.

Habitat management and maintenance

1.7.13 There is potential for operational impacts to reptiles from direct mortality during routine management of habitats within the Scheme, such as mowing and scrub clearance.

1.7.14 The **Appendix 7.6 (Outline Landscape and Ecological Management Plan)** of the **ES (7.6, APP-102)** sets out measures to protect reptiles during routine habitat maintenance, which would avoid impacts to reptiles during the operational phase.

Monitoring

1.7.15 A monitoring regime will be developed and included within the Reptile Mitigation Strategy to:

- ensure the proposed habitats achieve their intended objective
- monitor reptile populations post-construction within the receptor sites used for reptile translocations, and
- present corrective actions to be taken if monitoring identifies failure.

1.8 References

1.8.1 References used to inform the Strategy will be listed in this section.

Appendix L Outline Noise and Vibration Management Plan [Detailed version to be included as part of the siEMP]

Infrastructure Planning

Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

M3 Junction 9 Improvement
Development Consent Order 202[x]

7.3 First Iteration Environmental Management Plan - Appendix L: Outline Noise and Vibration Management Plan

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Author:	M3 Junction 9 Improvement Project Team, National Highways

Version	Date	Status of Version
Rev 0	18 August 2023	Deadline 4 Submission

Contents

Tables

1 Outline Noise and Vibration Management Plan

1.1 Introduction

1.1.1 The purpose of this Outline Noise and Vibration Management Plan (NVMP) is to describe how construction noise and vibration will be managed (and monitored) throughout the construction of the M3 Junction 9 Improvement Scheme.

1.1.2 This Outline NVMP seeks to protect noise and vibration sensitive receptors by considering the impact of noise and vibration and the control measures that will be employed to mitigate the risks by reducing and minimising adverse effects. These will be supported through monitoring procedures. The complaints management procedure is also addressed.

1.1.3 A more detailed NVMP will be prepared by the Principal Contractor during the detailed design stage and prior to construction commencing. This will form Appendix L of the second iteration Environmental Management Plan (siEMP) and will be subject to stakeholder engagement and approval by Winchester City Council.

1.2 Section 61 Consent

1.2.1 The Principal Contractor (PC) will determine whether applications under Section 61 of the Control of Pollution Act 1974 (CoPA) are appropriate or required in relation to noise and vibration management.

1.2.2 Should applications be required, they will be submitted to the Environmental Health Officers (EHO) at the relevant local authorities. Contact details for the relevant Environmental Health Officer(s) will be confirmed prior to the start of the relevant construction phase as set out in **Paragraph 2.8.9** of **Chapter 2 (The Scheme and its Surroundings)** of the **Environmental Statement (ES) (6.1, APP-043)**.

1.2.3 The Principal Contractor Noise and Vibration Specialist will prepare applications for ‘Section 61’ Consent if and where required. The applications will detail the activities and methods to be utilised in addition to a prediction of noise and vibration levels at appropriate receptors, agreed with the relevant EHO. Details of construction activities, prediction methods, locations of sensitive receptors, noise and vibration monitoring and mitigation (if required) should also be presented within the Section 61 application.

1.2.4 Where Section 61 consent is obtained, all works will be undertaken in accordance with the approved consent and any changes required made through the variation or dispensation process as deemed appropriate.

1.2.5 Applications will be made to the relevant local authority at least 28 days before the relevant work is due to start or earlier if reasonably practicable and consent specifics will be documented within the Environmental Management Plan.

1.3 Working Hours

1.3.1 The Principal Contractor shall adhere to the core working hours for the Scheme. Working hours would be restricted to:

- 07.00 to 19.00 Monday to Friday
- 07.00 to 13.00 Saturday
- No Sunday or Bank Holiday working

1.3.2 Works outside of the core working hours are likely to be required to enable safe working and / or minimum disruption to road users. These out of hours activities will only be carried out following consultation with Winchester City Council and South Downs National Park Authority as appropriate.

1.3.3 These works are currently envisaged to comprise:

- Lifting of gantry and large signs onto concrete bases due to the need for a larger working area to ensure the safety of the workforce and minimize disruption to traffic.
- Works predominantly within the M3 and A34 corridors which would be similar to maintenance works e.g. planing, resurfacing, painting road markings.
- Closing of gyratory slip roads to allow re-alignment works to take place.
- Installation and removal of barriers to allow traffic management switches to take place.

1.3.4 There may also be circumstances where works would continue outside of core working hours. Such activities will only be permitted to continue where sound engineering or safety reasons dictate. Examples of these would be to complete a concrete pour or to complete an excavation to a safe completion point.

1.3.5 Should out of hours working be required due to unforeseen circumstances, the Principal Contractor will notify the relevant local authority via phone or email. The communication will outline the activity that will extend beyond normal working hours, the reason for this and contact details for the on-site supervisor.

1.4 Best Practicable Means

1.4.1 The principles of Best Practicable Means (BPM) will be used to minimise noise and vibration levels during construction. The relevant recommendations for the control of noise and vibration on construction sites in the approved Code of

Practice BS 5228 will be adopted. Additionally, general mitigation measures are outlined in **Table 3.2 (Register of Environmental Actions and Commitments)** of the **first iteration Environmental Management Plan (fiEMP) (7.3, Rev 4)** and these are reproduced below:

- Site access routes will be in good condition and well maintained with no potholes or other significant surface irregularities
- Silenced equipment will be used where possible, in particular silenced power generators and pumps
- Plant and equipment covers / hatches will be properly secured and there will be no loose fixings causing rattling
- On-site speed limits will be in place to reduce the effect of construction traffic noise with a 10mph restriction enforceable within the main works sites
- Monthly condition assessments to inspect for defects such as potholes will be undertaken
- The number of plant items used at any one time will be restricted
- Noisy plant and equipment will be set back a suitable distance away from sensitive receptors where possible
- Where practicable, loading and unloading activities will be carried out at a suitable distance from sensitive receptors
- Compressor, generator and engine compartment doors will be closed when in use
- Materials and equipment will be carefully lowered, minimising drop heights where possible
- Proactive communication with local residents will be undertaken by the Principal Contractor Community Liaison Officer, and
- There will be compliance with standard working hours, unless otherwise agreed with the relevant local planning authorities.

1.4.2 The Principal Contractor's method statements and risk assessments will be reviewed, and suitable noise and vibration control measures identified.

1.5 Noise and Vibration Sensitive Receptors

1.5.1 The residential receptors in the below table are identified within **Chapter 11 (Noise and Vibration)** of the **Environmental Statement (ES) (6.1, APP-052)** as potentially experiencing moderate noise impacts during construction and

will therefore specifically be referenced within the Noise and Vibration Management Plan.

Table L.1: List of receptors where construction phases impacts are anticipated

Property	Construction Phase	Potential Mitigation Measures
2, Dairy Cottages, Easton Lane, SO21 1DG	Phase 1 and Phase 1a	Localised screening close to works or property Construction noise monitoring*
White Hill Cottage, Easton Lane, SO21 1DQ	Phase 1, Phase 1a and Phase 3b	Localised screening close to works or property Construction noise monitoring*
Easton Manor Farm, Easton Lane, SO21 1DG	Phase 1a	Localised screening close to works or property Construction noise monitoring*
Easton Cottage Farm, Easton Lane, SO21 1DG	Phase 1a	Localised screening close to works or property Construction noise monitoring*
68 Longfield Road, SO23 0NT	Phase 2	Appears to be the only property on Longfield Road with major impacts anticipated. This will be reviewed during further assessments.
1, New Cottages, St Marys Close, SO23 7QL	Phase 2	Localised screening close to works or property Construction noise monitoring*
2, New Cottages, St Marys Close, SO23 7QL	Phase 2	Localised screening close to works or property Construction noise monitoring*
East Willow, St Marys Close, SO23 7QL	Phase 2	Localised screening close to works or property Construction noise monitoring*
Riversmead, London Road, SO23 7QL	Phase 2	Localised screening close to works or property Construction noise monitoring*

Property	Construction Phase	Potential Mitigation Measures
1, Victoria Cottages, London Road, SO23 7QN	Phase 2	Localised screening close to works or property Construction noise monitoring*
2, Victoria Cottages, London Road, SO23 7QN	Phase 2	Localised screening close to works or property Construction noise monitoring*
Ambury, St Marys Close, SO23 7QN	Phase 2	Localised screening close to works or property Construction noise monitoring*
Flat, The Rod Box, London Road, SO23 7QN	Phase 2	Localised screening close to works or property Construction noise monitoring*
The Reading Room, London Road, SO23 7QN	Phase 2	Localised screening close to works or property Construction noise monitoring*
Wistaria, London Road, SO23 7QN	Phase 2	Localised screening close to works or property Construction noise monitoring*

*Construction noise monitoring may not be required at all of the identified properties as it may be possible to monitor at locations considered to be representative of multiple properties. Monitoring would only be necessary during periods when works during the relevant phase are anticipated to take place near to the property.

1.5.2 The noise impacts during Phase 1 works are predominantly related to bulk earthworks within the central and eastern areas of the Scheme. The noise impacts during Phase 1a works are predominantly related to bulk earthworks within the central area of the Scheme, whilst the noise impacts during Phase 2 works are predominantly related to construction and demolition of the M3 Junction 9 gyratory and bulk earthworks within the central area of the Scheme.

1.6 Noise and Vibration Monitoring

1.6.1 The noise and vibration monitoring strategy will be outlined within the Noise and Vibration Management Plan. However it is anticipated that the monitoring methods will include observational checks by the Principal Contractor

Environmental Manager and the construction team. These are likely to be supplemented by physical measurements, subject to consultation and agreement with the relevant local authorities.

1.6.2 Monitoring locations will be agreed with the relevant local authorities and these locations may vary depending on phasing and type of construction activity. The regularity of monitoring will be agreed with the relevant local authorities.

1.6.3 Prior to construction works commencing of the relevant construction phase as set out in **Paragraph 2.8.9** of **Chapter 2 (The Scheme and its Surroundings)** of the **Environmental Statement (ES) (6.1, APP-043)**, any requirement for baseline noise monitoring will be agreed with the relevant local authorities. Design Manual for Roads and Bridges (DMRB) LA 111 Noise and Vibration (Highways England, 2020) advises that baseline noise conditions for construction noise impact assessments should be determined via one or more of the following methods:

- Noise measurements, based on survey data
- Predicted noise levels (noise model outputs)
- Existing noise mapping undertaken by public bodies or part of other developments

1.6.4 As part of the baseline noise model validation, noise measurements were undertaken in 2019 and 2021 at the following three measurement locations:

- 70 Longfield Road, SO23 0NT
- Fulling Mill Cottage, SO21 1DG
- 24 Willis Waye, SO23 7QT

1.6.5 Additional baseline noise measurements at these locations, or other properties that these represent, are therefore not anticipated to be required.

1.6.6 Construction noise monitoring will be agreed with the relevant local authorities.

1.6.7 The following will also be considered:

- The sound level meter shall be class 1 following the specification in IEC 61672 (International Electrotechnical Commission. International Electrotechnical Commission. IEC 61672, 'Electroacoustics - Sound level meters - Part 1: Specifications) as stated in DMRB LA 111 Noise and Vibration (Highways England, 2020).
- The microphone will be positioned at least 1.5m from ground level.
- Monitoring will either be continuous and unattended, or where deemed necessary, short-term attended monitoring may be undertaken, which

would be a minimum of 15 minutes. This period may be extended to an hour or beyond if levels stated in the section 61 consent are exceeded.

- Data obtained during continuous monitoring will include audio recordings of high noise level events and will be available for the relevant local authorities to review via an online platform.

- The noise meter will be field calibrated before and after use and in accordance with the manufacturer's instructions.

1.6.8 Where necessary, results of noise and vibration monitoring will be compared against predictions in the Section 61 consent. Any readings that are significantly greater than predicted levels or noise levels stipulated in the Section 61 consent will trigger a review of the construction process and implementation of remedial action. The level will be reported to the relevant EHOs as soon as reasonably practicable. The relevant prediction calculations will be reviewed if exceedance levels are considered to be significant.

1.6.9 Any noise monitoring results will be recorded and made available to the relevant local authorities upon request. All noise monitoring records will be managed in accordance with the Control of Records requirements of the Environmental Management System (EMS).

1.7 Notification of Construction Activities with the Potential to Cause Impact

1.7.1 A Principal Contractor Community Liaison Officer will be appointed for the Scheme. They will be responsible for developing a Stakeholder Communications Plan and leading engagement with affected communities. This involves notifying residents that may be affected by potential disruptive activities, for example night-time working.

1.7.2 During construction, appropriate mechanisms to communicate with local residents will be set up to highlight potential periods of disruption for both noise and vibration, for example via the Scheme website.

1.7.3 The Scheme website will be kept up to date to reflect construction and community liaison requirements. The website will provide information on the progress of the construction works, and describe areas affected by construction, mitigation in place to reduce adverse effects, information regarding planned construction works (including any proposed works outside normal hours and diversion routes).

1.8 Complaints

1.8.1 The Stakeholder Communications Plan will minimise the likelihood of complaints in relation to the Scheme. Local residents will be provided with a point of contact for the Principal Contractor Community Liaison Officer for any queries or complaints. In addition, the National Highways Customer Contact Centre (NHCCC) will also be available to deal with queries from the public.

This includes an information line staffed by National Highways which will be open for 24 hours of the day 7 days a week.

1.8.2 A complaints log will be developed and updated throughout the construction phase. Any noise and vibration complaints will be investigated, and appropriate action taken as required. The complainant and the relevant local planning authority will be provided with a response outlining the results of the investigation and any action taken.

1.8.3 The relevant local planning authorities will be able to visit the site to view and validate the success or otherwise of the mitigation measures. Should further mitigation be appropriate to prevent a re-occurrence, this will be consulted on with the relevant local planning authorities and implemented accordingly.

1.9 Noise Nuisance Complaints

1.9.1 Where works have not sought prior consent under Section 61 of the CoPA or where works do not take place in-line with the Section 61, the Local Planning Authority can serve a notice under Section 60 of CoPA or Section 80 of the Environmental Protection Act on the construction or demolition works if a noise nuisance is identified. The notice could specify:

- acceptable noise levels.
- the plant or machinery that can be used.
- the hours when work can be done.
- the steps which need to be taken to minimise noise.

1.9.2 Failure to comply with the notice could result in prosecution and fines.

1.10 Considerate Constructors Scheme

1.10.1 The Principal Contractor will register and adhere to the requirements of the Considerate Constructors Scheme.

1.10.2 Organisations, contractors, and suppliers who register with the Scheme are committing to observe and implement the Code of Considerate Practice. It focuses on three key sections: respecting the community, caring for the environment, and valuing the workforce — essential and key areas required to effectively raise standards within the industry and build trust with the public.

1.10.3 The Code embodies the high standards the industry can and should achieve. The clear, attainable guidelines in the Code exist to help constructors make positive changes to the way they work and to operate more responsibly and respectfully.

Appendix M Foundation Works Risk Assessment [To be included as part of the siEMP]

Appendix N Environmental Method Statements [To be included as part of the siEMP]

Appendix O Emergency Procedures and Record of any Environmental Incidents [To be included as part of the siEMP]

Appendix P Copy of Evaluation of Change Register [To be included as part of the siEMP]

Appendix Q Final Environmental Investigation and Monitoring Reports [To be included as part of the siEMP]

Appendix R Green Travel Plan [To be included as part of the siEMP]